abhishar

VOL 5.0

"FRIENDS, FUN & DREAMS"

TEAM PATRON

Prof. S.G. Deshmukh, Director, ABV-IIITM
Mr. Sanjay Bhatnagar, Registrar, ABV-IIITM

EDITORIAL

Dr. Joydip Dhar(Faculty In charge)
Rohit Retnakaran(Student, IPG-2012)

Featured Writers

Sidharth Singh(IPG-2008)
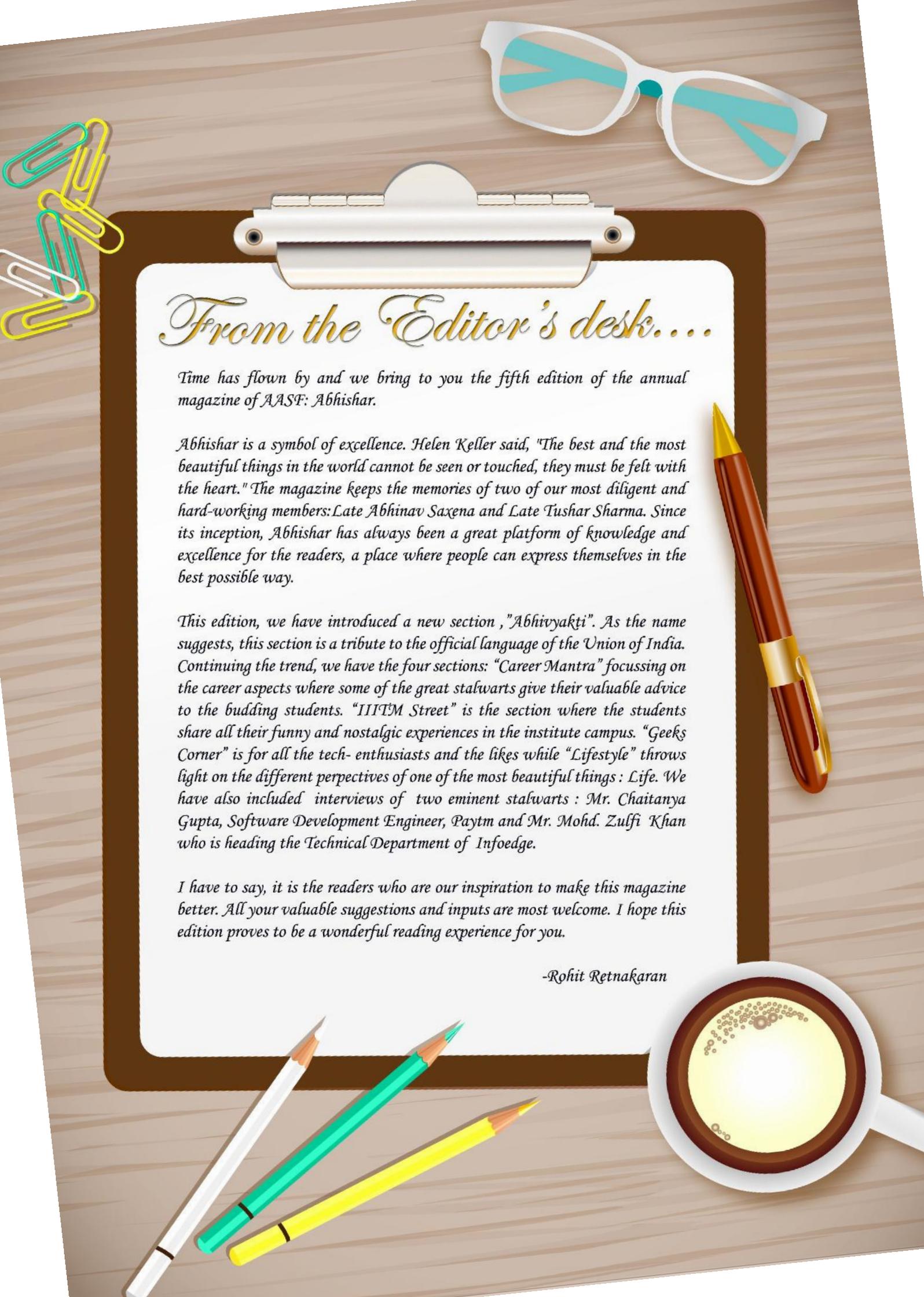Mudit Jaju(IPG-2009)
Yeshoda Bhargava(IPG-2009)
Naivedya Jain(IPG-2010)
Nanda Kumar Ambati(IPG-2010)
Priyam Bajaj(IPG-2010)
Rajesh Kumar(IPG-2010)
Sachin Acharya(IPG-2010)

From the Editor's desk....

Time has flown by and we bring to you the fifth edition of the annual magazine of AASF: Abhishar.

Abhishar is a symbol of excellence. Helen Keller said, "The best and the most beautiful things in the world cannot be seen or touched, they must be felt with the heart." The magazine keeps the memories of two of our most diligent and hard-working members: Late Abhinav Saxena and Late Tushar Sharma. Since its inception, Abhishar has always been a great platform of knowledge and excellence for the readers, a place where people can express themselves in the best possible way.

This edition, we have introduced a new section ,"Abhivyakti". As the name suggests, this section is a tribute to the official language of the Union of India. Continuing the trend, we have the four sections: "Career Mantra" focussing on the career aspects where some of the great stalwarts give their valuable advice to the budding students. "IIITM Street" is the section where the students share all their funny and nostalgic experiences in the institute campus. "Geeks Corner" is for all the tech- enthusiasts and the likes while "Lifestyle" throws light on the different perpectives of one of the most beautiful things : Life. We have also included interviews of two eminent stalwarts : Mr. Chaitanya Gupta, Software Development Engineer, Paytm and Mr. Mohd. Zulfi Khan who is heading the Technical Department of Infoedge.

I have to say, it is the readers who are our inspiration to make this magazine better. All your valuable suggestions and inputs are most welcome. I hope this edition proves to be a wonderful reading experience for you.

-Rohit Retnakaran

First of all, I would like to congratulate team AASF for this brand new edition of Abhishar. With this unique peer-to-peer platform, ABV-IIITM students' community reflects their other side of creativity. I strongly believe that after the overwhelming success of the last four editions, version 5.0 is going to exhibit fresh ideas from day to day life experience of our campus. As you are aware, team AASF has played a significant role in shaping the young minds.

The theme of this year's ABHISHAR: Smart Cities is quite inspirational and much needed as it is one of the crucial factors that needs to be taken care of in the present scenario I wish team AASF for the grand success for this new edition and looking forward to read exciting write ups.

Prof. S.G.Deshmukh
Director, ABV-IIITM

Consistency exhibited by Abhigyan Abhikaushalam Students' Forum in extending their arms out to guide the novices to adapt to the techno-managerial environment is commendable. The peer to peer methodology, promoted by AASF is the most practical approach to comprehensive learning as it helps to create a competitive spirit.

Abhishar is a decent endeavour by AASF, which along with commemorating our students Abhinav and Tushar, also provides a medium to the IIITM fraternity to get their views, opinions penned down in a and spread to all others.

Mr., Sanjay Bhatnagar
Registrar, ABV-IIITM

FACULTY SPEAKS

I am happy to know that the fifth edition of Abhishar is being published. The introduction of the new section, "Abhivyakti" is appreciable it will further expand the channelisation of the ideas. It will provide a peep into the thoughts and minds of the students. It is a platform for sharing knowledge and information about the past, present and future activities in our institute campus. I wish all my warm wishes for the success of the student's magazine.

Dr.Joydip Dhar
Associate Professor, ABV-IIITM

I have an emotional attachment with "Abhishar" as it commemorates the two excellent students of the institute. Tushar completed his B.Tech project under me and was an outstanding student. Moreover, Abhishar to me comes across as a completely resourceful magazine due to its multi-dimensional structure consisting from geeky to motivational articles. I wish team AASF all the best for their future endeavours.

Dr.Ritu Tiwari
Associate Professor, ABV-IIITM

AASF brings the student community to the main stream of current technology. It has always promoted peer to peer learning in the best way possible. The members are hard-working and show utmost dedication. I hope it continues to do so and uplift our institute to newer heights.

Dr.Pankaj Shrivastava
Associate Professor, ABV-IIITM

I congratulate the editorial team of "Abhishar", which has crossed another milestone and entered its fifth edition. Abhishar provides an opportunity for the students to speak their mind; perception and experiences about various aspects. Over the years it has progressed significantly and I wish the editorial team and the contributors to keep marching towards the sweet spot.

Dr.K.K.Pattanaik
Associate Professor, ABV-IIITM

CONTENTS

TECHNICAL SECTION

Windows Basics, Linux and Hardware :Workshop upskilling the basic concepts of integral operating systems -Windows , Linux and also hardware information.
MS Office : Structural knowledge of integral MS Office Modules- MS Word,MS Excel, MS Access, MS PowerPoint.
Photoshop :Knowledge of inducing the pleasing effects using the functional tools.
Programming Languages :Constitutional knowledge of the essential programming including C,C++,JAVA,PYTHON,DOT NET.
Web Designing Week :Acquaintance to basal and advanced web development technologies that is, HTML,CSS,PHP,SQL,JAVASCRIPT.
Ethical Hacking and Networking :Information about the networking modes and the tips to build a safe computer environment system.

AASF-ICPC : A Programming contest conducted on the format of ACM-ICPC to provide them a platform to judge their coding skills by competing with their peers.

Contests :
--Programming Contests
---Webkriti .
--Overnight Software Contest
--Aakriti

LITERARY SECTION

JAM : An amusing and challenging buzz event in which participants have to speak without hesitation, deviation and repetition and are challenged by their opponents.

Group Discussion : An event involving a lot of group dynamics to enhance the students literal charm and issue analysis skils.

Extempore : On the spot speech preparation on the topic, memorisation and speaking.

Block and Tackle : An event consisting of keeping a topic at the centre of consideration and discussing both its pros and cons.

Composition del' Image: This event involves formation, narration and enaction of stories entrenched in the pictures.

ABOUT AASF and EVENTS

Being in an ever changing world with technology galloping at a pace never seen before in the history,the forum is laboriously engaged in organizing a variety of formal and informal events every year, which guide the students to adapt better in techno-managerial world. Activities like hIQs are organized prominently based on the concept of peer to peer learning, help one to discover his interests and excel in the trade. The events help the students to brush up their technical, oratory and managerial skills .

MANAGERIAL SECTION

Case Study hiQ : Managerial concepts to handle stories which present realistic, complex, and contexually rich situations that often involve a dilemma and conflicts.
Case Study Contest : Aimed at improvising the ability of analysing, exploring ,innovating and thus rendering applicable solutions to a point at issue.
Brand Aid Contest : Event to provide an opportunity to blend creativity with originality and endorsing a product by elaborating its attributes and infuencing the folks.
Quizzes : Quizzing events to help students remain updated to the recent advancements in the fields of business, IT and Sports.

EVENTS AND hIQs

The devolution of IIITM Canteen

Sachin Acharya

As they say, a canteen witnesses many batches come and go,but in our institute, a batch witnesses many canteens come and go! So let me give you a brief history of the IIITM Canteen. Canteen, the one place that has so many memories, the crappy food but amazing company. Who can forget those times when we ran there to grab a pack of chips and soda in between lectures? But how many of you have kept a track on how the canteen evolved, or should I say "devolved over time"?

I joined IIITM in 2010, so I won't be of any use for the times before that, but for now let us go back to 2010. The location being the same,but people different. As one entered the canteen, there were small tables and chairs for if you wanted to sit inside the canteen and eat (This is the middle area where guys just stand and hangout while placing the order now). On the right were the usual required items for any hostler, bucket and mugs, elastic hanging wires, broomstick and washing soap/powder (The granite slab where single guys sit these days!). They were kept in such a way that I feared a Smeagol lived in there. Who knows what would happen if you tried to take something out on your own. The place behind the canteen had a lot of tables and chairs for all to sit, and it was a 'lively' place compared to the front-side of the canteen. Food options were limited, but well they had "Atta Maggie" which was Rs.10 costlier than "Saada Maggie". Aloo Paratha was still there, don't worry. Aloo Paratha has a thing with our institute, it'll never leave. The canteen was run by the mysterious "aunty" and her Rahul. Aunty had an Uncle with her who helped her sometimes, rest all was managed by Rahul. Aunty would take the orders and Rahul would deliver it to you. They were the only two points of contact. Anything you wanted, you had to ask them. The one character none can forget was Rahul. Rahul was this guy who was always broke. He would randomly come up to people and ask for money ranging from Rs.150 to Rs.300. He made that 'poor guy, let's give him some money' face, but well he never returned the money he owed. If you find him, please call me.

Soon their tender expired or something, and they had to close down. I remember a few days, or weeks in 2011 without canteen because they were yet to get a "tender" for a new canteen. Then came the rotation canteen. This was dubbed as the experimental canteen system, and to check which vendor does the best job. Frankly speaking, none did well. So the tender was split between the 3 major players who played with our food daily. Jain, Sonpal and the GH-wala (cuz we never knew who managed the GH mess!). It started with the GH-wala running the canteen for a month. They came up with competitive prices, and introduced the "Paneer Paratha". It was on demand those days because it had Paneer. If you ate Paneer Paratha, then you were considered cooler than those eating Aloo Paratha. After a month, it was the Sonpal canteen. They came with their own set of branding. You knew who ran the canteen by looking at the things at sale. They had realised that Paneer Paratha had become #PaneerParatha-CoolDudes and they had to adopt it. They didn't introduce any new invention though. Then came the Jain Canteen. Jain had a tradition of keeping a family member (I guess) as the cashier, who had an assistant who carried out all his orders. Jain Canteen introduced the Burger. It looked like Jain and his cousin Gaurav Jain (Gaurav-nasal-Jain) once went to McDonalds in the Mall and ordered one McAlooTikki to be shared between them. At first, they were disappointed that it was not cut into two pieces so that it could be shared. Moving on, one of the Jain took a bite, and felt something which he had never felt while eating the

Mess Food. The burger seemed more edible than the Kadi-Chawal with the raw papad served every Thursday afternoon. They felt the need to find out how it is made, and they opened the burger to see the contents inside. Imagining their conversation, one Jain told the other, "Isme aloo tikki hai, pyaaz hai, and yeh santra colour ka chutney hai". They planned to reinvent it in the canteen and hoped for it to go trending #JainAlooTikki just like McAlooTikki. They called upon their chief chef, who always cooked with one hand, while the other had a beedi. The chef re-invented the McAlooTikki, but a really screwed up version. He took local Burger buns, spread an orange coloured sauce, which I guess was nothing but corn flour in water, with salt and chilli and orange colouring in it, added the aloo tikki and lots of oil on top and served it with ketchup. He made sure to cut it into two pieces so that people can share it! Even though it didn't go trending, folks loved it (I don't know why, it's taste still disgusts me!). This cycle went on for a few months, and without any notice, it was decided that the tender be handed over to Jain to run the canteen.

Not many may remember Gaurav Jain from Jain canteen (2012-2013). He was the nasal Jain in their family. Ask him what's on the menu and he starts "AlooParatha Paneer-Paratha BhejMaggi Anda-Maggi ChawMein" (To be read nasally). Not understanding a word, we would resort to either a Paratha or Maggie. Jain also introduced Lachcha Paratha, with oily aloo pyaaz sabzi, and Phried Rice. He had two assistants who were the localized versions of Salman Khan from Tere Naam. One in his hair style, and the other in his dressing sense. The hairstyle dude (tere_naam_dude_1) was more like Heart-break-kid. Looked like he had a bitter break-up due to which he had concluded that all girls are evil. The other dude (tere_naam_dude_2) had a thing for guys. It was a very weird combination though. The tere_naam_dude_1 was always pissed off and while comp-leting the order and calling out for the people whose order is ready by yelling out the order, and he ensured that his screaming of "AlooParatha-aaa" would result in a layer of his mouth secretions on the paratha. The same applied for all parathas, rice and maggie. It was very disgusting to see that. The tere_naam_dude_2 was never bothered about running the canteen. He had a very fancy phone, and always roamed around smiling at guys and saying "kaise ho". Very weird people.
This is when the entry of Quasi, or famously known as Sanju happen-ed. If you are wondering who Sanju is, go to BH-3 mess in the morning and you'll see a dude serving tea and smiling at you. Thats him. Still don't know? Then head over to the canteen for lunch and you'll see a dude creepily walking towards you saying "Palate Bhaiiya..Palate Bhaiiya" pointing at your plate. That's him. Still confused? Then take a girl to the canteen and make her stand near the Ice cream area and you'll hear a dude with a lot of plates sshh-ing people to ask them to move and then creepily smiling at the girl. That's him. He was lowest in their food chain and did all sorts of work. We'll talk more about him.

The era of nasal-Gaurav with his two side-kicks ended soon, and in 2014 came in the "8085". 8085 was an old uncle who was super slow, had issues with understanding your instructions and frequently had problems of memory overflow (Give too many orders in little time and Error pops out!). Everyone had a difficult time placing an order with 8085. The other issue with 8085 was the introduction of Jain Currency around the same time. The Jain currency concept was something like this: Get the Indian Rupees and go to the receptionist dude (the one who sits at the entrance with a

table) and tell him what you want to eat. He will calculate the value in Jain Currency. You are required to give the corresponding Indian Rupees which he will convert to Jain Currency and give you the Jain Currency, which has to be taken to 8085 and used to place the order. 8085 always ended up in confusion because of this. And the Jain Canteen had progressed from Indian Rupees to Jain Currency. Meanwhile, Sanju managed to creep out almost everyone in IIITM.

Going to 2015, my final year. Interstellar was released, and apparently Sanju seemed to be inspired by it. He was usually seen wearing a plastic cover space suit and roaming around the canteen. Only God knows which planet he was trying to go to. I guessed he was trying to go back to his home planet! As the time passed, 8085 got an assistant, who is now the male receptionist at the canteen and Jain improved his currency system, by printing the product name on each coin. As I approached the end of my 5 year long stay, out of which 3 years were with a false hope that the new canteen would open up. Nothing happened, except the degrading quality of the mess food and the devolution of the Canteen. And watch out for Sanju! XD ◆

Sachin Acharya (2010IPG) is presently working as a Game Developer at Mech Mocha, Bengaluru.

Message

Shubham Shukla

A new message which my life confab,
Defeated instincts and emotions were stabbed,
The adoration towards feeling were disposed to trash,
my proximity to dreams had a stumbling crash,
The thoughts kidnapped,actions were hijacked;
The bolster of my sound sleep was displaced with a rash;
all my legacy was ruthlessly thrashed;
Destroyed, shattered I had no options to opt;
But life motivated me "Chill dude Let's rock"....

Datasaurus – Tame the beast!!!
Sidharth Singh

This may not be the finest of articles that you may read in Abhishar but it still has some juice as a primer for those who consider "Big Data" as some humongous, revolutionary and weird field that is being served as a hot cake in the IT industry today. It's perilous but perils may cast wonders. Caution: Beware of those who use the "Big Data" catch-phrase to showcase that they are working with some alien thing unknown to you and you collapse into a cocoon. Let's tame this Datasaurus!!!

Data and Analytics have long been friends in the past decade or so. Information is skimmed out from data, translated into Metrics, formulated into Key Performance Indicators (KPIs) or in other ways translated to drive business processes ahead. But today just as humans are grappling with handling waste and emissions, analytics industry and businesses are grappling with the huge data being generated today and how to put it to use. Big Data is not just Analytics, as it requires better tools and technology to play with it.

"Big Data" is just the voluminous amount of online and offline data generated in the universe (explored so far) from sources as simple as a faculty's lecture, a research paper, lab experiment to cell phones, internet, satellites, exploration telescopes i.e. in essence everything. IBM study says that 2.5 Exabyte of data was generated per day in 2012. This Datasaurus is no easy beast to handle but careful surgical explorations may yield parameters that may impact processes and even predict results. This much data is being captured today at all levels of business transactions ranging from a billing counter at 200+ Big Bazaar stores in India to the data being transmitted by a single Hubble Telescope.

This data is so huge that it cannot make its way to relation database tables or be analysed by traditional tools like MS Office, My SQL etc. with ease. As TechTarget.com mentions in its article the 3Vs of Big Data namely volume, variety and velocity make it tremendously expensive and difficult to use such big amounts of data. This has resulted in identifying new techniques and algorithms that can use, process and deliver information from Big Data.

Based on the concept of distributed storage and processing instead of centralized storage and processing which makes it easier to divide Big Data and process it in a simpler way, many open-source platforms are again leading the way to analyse Big Data like Hadoop, MapReduce, Storm and plethora of others. Hadoop, developed on Java, by the Apache Software Foundation, still remains as the most popular platform to analyse Big Data as it is free, scalable, fault-tolerant and reliable. Hadoop is just an evolution over RDBM, SQL and thus syntactical similarities can be traced to coding in HiveQL which replaces traditional SQL databases. The time is ripe for Big Data analysis to be taken up for study by budding engineers, to tame and ride on the back of Datasaurus.

Happy riding!!! ◆

Siddharth Singh (2008IPG) is presently working as Lecturer, Department of Management at Rajiv Gandhi University of Knowledge Technologies, Andhra Pradesh.

SELFIE-ISH

Udit Hunawat

Selfie – "A photograph that one has taken of oneself, typically one taken with a smartphone or webcam and uploaded to a social media website." – Oxford Dictionary

Well, Oxford people have made it easy for those who don't know what it really is. Selfie was an art till the time 'front' cameras didn't exist. Once they were invented, people went crazy. 'Selfie' is quite an impressive word, which has a very metaphorical ring to it, relating it to the nasty word --SELFISH.

We all have taken 'selfies' in our lives, we all own smart-phones and cameras, and we all know how cool it is to do the job yourself, than ask for a favour from someone else. Whenever we were on a vacation, we used to hunt for free people first who would agree to take our pictures and sometimes even pay for it!

We all remember taking our first selfie as well. A single click has never been successful in taking the most satisfying image, isn't it? We always clicked the camera button like maniacs to produce that one photo that we liked enough to be posted on the social media websites. And the camera roll of all people around us is mostly full of their selfies. Taking selfie is one thing, but being obsessed with it is another. There is an obsession called 'The Selfie Obsession' which has been recognized and termed as a kind of depression, and no, I'm not joking here. A teenager in USA tried to kill himself after he wasn't able to get that perfect shot for his Facebook profile! Here is what he has to say after attending a rehab for months –

"I was constantly in search of taking the perfect selfie and when I realised I couldn't I wanted to die. I lost my friends, my education, my health and almost my life."
– Danny Bowman, 19

As the phones are getting smarter, we are getting dumber. Since when did taking a self-shot become so important that you spoil your routine because of it? Some people skip meals, delay their daily tasks, just so they can first accomplish their mission of posting a selfie on their social-networking accounts.

Taking a selfie is perfectly normal, until you are also focusing on your life! But once you are doing nothing but taking selfies all day, and posting pictures every two minutes on your ID, you've got a problem, mate.

It is important that we understand the limits of everything we do. Multiple likes on self-shots no doubt enhance the confidence in you, but low amount of Facebook likes are also reported to be inducing suicidal tendencies in people, especially youngsters, who are totally obsessed with Facebook, Twitter and Instagram. Just like the Selfie Obsession, even Facebook Addiction Disorder (FAD) is a recognized term, and many are suffering from it too. Ever felt depressed if you posted something with all your heart and it didn't get as good response as you hoped for? Well, my friend you're walking the FAD path!

Everything that you're doing, or thinking 'has to' be uploaded on Facebook, no matter if it's stupid or even illegal!

If you're one of them, you've got to mend your ways before you lose it all! There are some ways of starting this as a rehab, at your own convenience.

1. Go offline one day in a week. Did you feel suffocated just by reading it? Well, then you strictly need to do it!

2. Mark a day in a week in which you don't use your phone's camera at all! Even if the cutest squirrel of the planet decides to sit with you that day, you will 'not' use the camera and click pictures. Learn to 'feel' some things, than capturing everything.

3. Once a month, you will watch 'all' the photos you have uploaded on your Facebook, Instagram or Twitter and even the ones saved in your phone or laptop. Watch them ALL and get to know about the horror your friends/relatives have to go through while scrolling down their timeline every day!

You will yourself feel that so many photos were unnecessary and so many would look so bad that maybe you regret posting them online, which may trigger a thought in your mind every time you decide to post a selfie after that.

4. Repeat the above steps again and again, and make sure you have mastered point number 1, so that if you're planning a trekking trip to some far off hilly area which has no internet network, you're not 'out of breath'!

Your life is too precious to be wasted in activities that you may term useless in the future. Do charities, spend time with your family, do something prod -uctive, work on something, take up projects, read, write, watch movies, but don't keep looking at your face which isn't going to change in a day or a week! Remember, you haven't got a plastic surgery or facial reconstruction that you need to post a picture every second for your friends to recognize you the next time they see you.

You look the same, just like you did yesterday, and a day before that, nothing has changed, and so a selfie won't help much! Even if you make a pout or a wink or stick your tongue out, you will be the same old 'you'! If nothing is going to change with a photo, why waste so much time, energy and even your phone's battery in clicking self-shots every minute?

Feel the nature, the first rainfall,the spring break,bloom -ing flowers, don't Instagram them! There are still some things that man hasn't been able to master, and one of them is preserving fragrance. Even if you watch a photograph of the first rain from last year, will you be able to smell it, or feel the droplets drizzling on your face? No, you can't. So that photo is already half-dead. You will only be able to recollect some faded memories, and if you spend all that time in taking the perfect selfie, God forbid, you won't even have a memory to cherish!

You have got one life to live, remember YOLO? And you don't want to give away that life in photos that might do no good to the generations to come.What will your grandchildren do with so many selfies of their grandparents? Throw them in the trash! And believe me, which will happen right in front of you someday. Ask yourself, how many photos of your grandparents do you have? A dozen of them may be. The same will be the case with our children and grandchildren, who will have no time to keep our photos, because they'd be busy with theirs, then why waste so many resources to produce an utterly useless thing? Do something that your offspring appreciate you for, and not something that they term as a 'futile memory occupation'.So, feel more and 'click' less. ◆

FACTS ABOUT SELFIE AND HEALTH

• A study conducted by the researchers at Ohio State University found that men who tend to post more selfies, tend to have higher levels of narcissism, psychopathy and self-objectification.

• According to a study, British people are a bit different when it comes to selfies.
34 percent of British men retouched photo before posting while only 13 percent women did so.

• Russian men aren't into selfies (only 18 percent of the population take selfies frequently). Another thing about Russians is that they smile much less than others while posing for selfies.

• According to another study, taking too many selfies trigger Body Dysmorphic Disorder.

Lessons through the years

Naivedya Jain

You get success not if you are destined to but when you are determined to.

A few years back I got admitted to the institute. IPG2010-113 was the number labelled to a young fat kid out of school. After five gruel some rounds of counselling frankly it was the only institution fitting my lame 17K plus AIR.

And I was determined not to waste another year in this petty rat race. The first year began on not so high note, ragged and bullied by seniors and of course later loved too. It was a lesson learnt the hard way for me. I had a whopping weight of 101 kgs and my looks resembled the name which I was entitled by my friends "Hatti kaa Pilla". Motivated by petty looks from seniors and of course girls I decided to transform and I started with 200 mts walk a day. In another 60 days I was running close to 5 kilometres a day without a halt and the results came back as a big surprise to everyone and frankly even I was awestruck at what I did, the weighing machine read 58 kilos and there I was from a giant mammoth to a chiselled dude. **Lesson learnt**: Determination is more important than speed because it doesn't have any limit.

Second Year: Was a dream come true for me, no ragging, cool clothes and lots of girl attention. Wow!!! I loved it all, it was also a turning point of my life as I fell in love with a pretty girl called "Economics" and started my journey by giving some NSE exams.

It was tough, as I had to travel all across the country to give them but I cleared a few of them.I received a certificate: NCMP Youngest National Stock Exchange Certified Market Professional. This hugely inspired me to keep going on in subsequent years.

2nd year also saw the birth of my friend's venture Gwalior7. We started with a seed of INR 50000 and to keep customers engaged we were even providing milk inside the campus.

We saw it all from developing technology to failure in operations and that was frankly the best thing that has ever happened to me.

At barely 20 we knew business is not only about writing a piece of code its more about perfecting that code and getting the shit done from operations to supply chain to finance. But, we failed in all corners initially.

Lesson learnt: Your failures teach you more than your successes.

Third Year: Was an academi -cally fulfilling one I started taking mathematics seriously and by the end of it I cleared the prestigious CFA Level 1 exam. It was tough though on a personal front I experienced lots of breakups and stuff but I wish to relive that.

Fourth year: This was the deciding point. On one hand I had an option to take M.tech, my credentials could have easily landed me a decent job on any day and on the other hand MBA. That was something I loved but chances of getting a job seemed bleak. Then I met the man I will always admire, Dr. Deshmukh, Director IIITM. He told me if you wish to be the best then you have to cope with the worst.

I chose MBA blindly as I always knew somewhere I am doing the right thing.

And it did happen. I met Dr. Vishal Vyas who is probably the most underrated and possibly the smartest professor in Computational Finance, that's right, he teaches in a class next to you.

There I was studying subjects I loved, from the best teacher, in the most academically light campus.

I started with flare and started preparing for my CFA Level 2. I did clear it. I had all the credentials on the planet Earth to succeed in FinTech domain yet the only problem was the campus.

Our campus had no companies coming for internship but I wanted to be an Investment Banker which is a distinct

dream for people even at IIMs and yes I was not from one.

I shot close to 10000 mails to possibly every company internet could help me find in the investment domain.

Fortune favours the brave and there I was placed as an intern at bankerbay.com world's Fastest growing Investment Platform. The location was Bengaluru and I had a 40 day-stint. I was lucky to meet some of the brightest people including some from Harvard, Yale and IIMA. I got a chance to work on a deal valued 6 crores.

Lesson learnt: Perseverance wins.

I came back to the campus and the nasty part began.

For MBA not even a single company was lined up and all I could do was run around the placement cell where every MBA kid is made fun of. "Jaake CCD mein coffee becha karo" was something I heard from our placement co-ordinator. I was heartbroken and stuck, yet I looked back upon myself. Call me narcissist, but I always believe that on a given day I can beat the shit out of a Wharton Grad on an even playing field, Wharton is the best business school on the planet. Sundar Pichai once went there and yes I still believe that.

I started using the power of technology, Linkedin and there I was talking to the stalwarts of Paytm, Vijay Sharma to Flipkart's founder for the role of an analyst.

I got rejected by some and it wasn't easy to face it. But yes at least I was getting some kicks.

Lesson learnt: It's what you are made of, not the circumstances that make you a champion.

Fifth year was a hectic one. I got an internship with one of the best finance firms in Wall Street: Indus Valley Partners. I never imagined I will ever get a chance to experience a consulting life. I had a dream to work for Mckinsey which became my first client. It was hard though, 13 hours at office. Saturday and Sunday, I was in the institute campus comp-leting my thesis. Yet when after 6 months I got a PPO and an A-Grade, all I could think of was my parents, my friends and my professor. I haven't done anything extraordinary nor I have awesome faddu skills but yes I do have something many lack "Extreme determination and a Razor Focus". Guys there will be many cases when C's will try to stop you but if you know that you are the best and you are willing to bow down and work trust me there is only one person better than you.

YOU YOURSELF
Yourself ! ◆

Naivedya Jain (2010IPG) is presently working as a consultant at Indus Valley Partners.

"I am not a product of my circumstances. I am a product of my decisions."
- Stephen Covey

"The real opportunity for success lies within the person and not in the job."
- Zig Ziglar

"Luck is a dividend of sweat. The more you sweat, the luckier you get."
- Ray Kroc

"Some men see things as they are and say why – I dream things that never were and say why not."
- George Bernard Shaw

AASF HIGHLIGHTS

2003

Inauguration of IETE Student's Forum on 9th September, 2003

2014

Composition del' Image and Robotics workshop. Hardware workshop re-introduced.

2004

Paper Presentation Contest, Abhigyanam renamed Abhigyan.

2013

AASF-ICPC organised for the first time.

2005

Hardware Workshop conducted and saw a wonderful response.

2012

First volume of Abhishar launched, Online Programming Contest for the first years.

2006

IETE tag removed. Now known as IIITM's Student's Forum.

2011

Event Googly organised, First Sports Quiz organised, Aakriti-the poster making contest.

2007

AASF conceptualised "coalescence of knowledge and skills"

2010

Sessions on german language, Android, Flash, JAM

2008

Logo of AASF designed, and first Overnight Software Contest held.

2009

Pragyanki-the magazine of AASF and the launch of our website.

Puzzle Zone

What does this message say?
G T Y O R J O T E O U I A B G T

There is a place on Earth where wind blows North and then suddenly blows South. Where is this place ?

Complete the sequence . And it's not 6.
1 3 5
2 4 ?

Find the next number in the sequence.
81 87 69 82 84 ?

A bear falls from a height of 10 metres in square root 2 seconds. What is the color of the bear?

A man says about her daughters,"They are all blondes but two, all bruenette but two, and all redheads but two." How many daughters did he have?

Solve the number series by identyifing the last number.
1 4 5 6 7 9 11.

Answers are in this issue.

ब्रह्मा जैसे अंश

प्रियम बजाज

हम सब ब्रह्मा के अंश नहीं अपितु ब्रह्मा जैसे अंश हैं। हाँ सही ही तो है, हमेशा से यही तो सुनते आये हैं कि हम सब में भगवान हैं और हम सब मैं स्वयं भगवान जैसा बनने की शक्ति है। फिर हम में और भगवान में अंतर क्यों ? क्यों पूजा अर्चना करने के लिए हम मंदिर जाते हैं ? अगर स्वयं में ही भगवान है तो दर्पण में खुद की ही पूजा क्यों नहीं कर लेते ? बल्कि हम पूजा करे ही क्यों ? हम तो स्वयं भगवान हैं! और अगर हम स्वयं भगवान हैं तो हमें भगवान की तरह ही सर्वशक्तिमान, सर्वव्यापी व सर्वज्ञ भी होना चाहिए किन्तु फिर क्यों हम कुछ घंटे काम करके ही थक जाते हैं और अल्पबुद्धि के कारणवश असफल भी हो जाते हैं। भगवान तो सर्वशक्तिमान और सर्वज्ञ होते हैं और यदि हम में स्वयं भगवान हैं फिर तो हम कोई भी काम चुटकियों में बिना थके कर सकते हैं पर नहीं ऐसा नहीं होता। क्या इसका अर्थ यह समझना चाहिए कि हमारी आत्मा में भगवान् बनने की शक्ति तो है परन्तु अभी तक हम भगवान् बने नहीं ? हम सभी में भगवान् की तरह ही अनन्त दर्शन है जो अनेक रज्जुओं में फैले इस सम्पूर्ण लोक के समस्त द्रव्यों के गुण एवं पर्याय देखने का सामर्थ्य रखते हैं, अनंत ज्ञान है जो लोक के समस्त द्रव्यों के परिणमन को ज्ञात करने में समर्थ है तथा अनेक गुण वाले हैं। परन्तु यह सब हमारी आत्मा के अनन्त गुण अभी उजागर नहीं है अर्थात वे आच्छादित है। जिस प्रकार अंधेरे में कमरे को प्रकाशित करने वाले दीपक को ढक देने से प्रकाश आच्छादित हो जाता है

उसी प्रकार हमारे भीतर ही अनन्त गुणों के विद्यमान होते हुए भी हम उन गुणों से अपरिचित हैं, जैसे कि उनको भी किसी आवरण ने ढका हुआ है। भगवान जैसे बनने की उस शक्ति को जो हम सब के भीतर है उसे प्रकट नहीं होने दे रहा है। आखिर कौन है वह जो मुझे भगवान बनने से रोक रहा है ? उस अनंत शक्ति को उजागर नहीं होने दे रहा ? मैं स्वयं ! हाँ भई ! वह मैं खुद ही तो हूँ जो प्रतिकूल संयोगों में क्रोधित, भाव, हिंसा, राग, द्वेष आदि करके और अनुकूल परिस्थितियों में जीव हिंसा, मान, माया और लोभ करके उस आवरण को और गहरा एवं कुटिल करता जा रहा हूँ। जब हम स्वार्थवश होकर जीवों को मौत के घाट उतार देते हैं, झूठ बोलकर भाव हिंसा रचते हैं और अनावश्यक परिग्रह करते हैं, जरा सोचो हमारे इन कृत, कारित, अनुमोदनों से ही हमारा वह आवरण और कुटिल होकर हमें हमारे ही अनंत दर्शन और अनंत ज्ञान आदि गुणों से कितना दूर ले गया होगा और जब तक यह आवरण हमारी आत्मा को आच्छादित करे रहेगा तब तक हम भगवान् कैसे बनेंगे ? अगर भगवान सर्वशक्तिमान, सर्वज्ञ तथा सर्वव्यापी हैं तो वे ऐसे बने कैसे ? क्या वे भी भगवान बनने से पहले हमारी तरह ही नहीं थे ? तब उन्होंने ऐसा क्या किया कि वे तो भगवान बन गए और हम वहीं के वहीं रह गए। हम तो इस संसार में मनुष्य, तिरियंच आदि गतियों में अनंत भावों से परिभ्रमण कर रहे हैं और भगवान् इस संसार भ्रमण से हमेशा के लिए मुक्त होकर परमात्म पद में स्थित हो गए और लोकांत में

जाकर ऐसे विराजमान है कि अब कभी वे संसार में किसी भी अवतार में नहीं आयेंगे। अतः अंतर तो स्पष्ट है वे भगवान् इसीलिए हैं क्योंकि उन्होंने अपनी इस जटिल आवरण को पूर्णतः हटा दिया है और सम्पूर्ण ज्ञान, दर्शानादी गुणों के साथ परमात्म पद में स्थित हुए हैं। हम भगवान् की पूजा करने मंदिर भी इसीलिए ही जाते हैं जिससे कि प्रतिदिन दर्पण में अपने प्रतिबिम्ब को देखने के समान ही हम अपने वास्तविक स्वरुप को भगवान् के मूर्तिक रूप में देखकर अपने अमूर्तिक आत्मा को पहचाने जिसमें स्वयं भगवान् बनने की शक्ति है और संसार के विषयों में न उलझ कर प्रतिदिन उस आवरण को हटाने का प्रयास करें जो हमें स्वयं भगवान् की तरह बनने से रोक रहा है। अब प्रश्न यह उठता है कि उस आवरण को हटाने की विधि क्या है ? ऐसा क्या करें कि उस आवरण को पूर्णतः हटाकर हम भी उस महान पद की प्राप्ति करें जो स्वयं भगवान ने की है। अगर हिंसा, झूठ, चोरी, कुशील, परिग्रह, मोह, राग, द्वेष आदि से वह आवरण गहरा और कुटिल होता जाता है तो इससे अतिरिक्त कार्यों से तो अवश्य वह आवरण काम हो जाएगा। अर्थात् अहिंसा, सत्य, अचौर्य, क्षमा–भाव, मार्दव, आर्जव, संयम, आकिंचन्य आदि का आचरण करने से हम धीरे–धीरे उस जटिल आवरण को हटाकर भगवान् की तरह ही अनंत गुणों के धारक बन सकते हैं तो क्या इसीलिए बचपन से ही हमें सत्य और अहिंसा के पथ पर चलने के लिए प्रेरित किया जाता है ? समझाया जाता है कि चोरी करना बुरी बात है, झूठ बोलना पाप है, द्रव्य हिंसा तथा भाव हिंसा से

बचना चाहिए। तुम्हें खुद थप्पड खाने से अगर पीड़ा पहुँचती है तो उन जीवों को कितनी पीड़ा पहुँचती होगी, जिनको तुम हिंसा तथा क्रूर भाव से दुःख पहुंचाते हों, ऐसे अनेक कथनों से हमें बचपन से ही सन्मार्ग पर चलने के लिए प्रेरित किया जाता है ताकि हम भी अपने भीतर कि अनंत शक्ति को उजागर कर भगवान् की तरह ही पूज्य बनें। परन्तु यदि भगवान स्वयं भी ज्ञान, दर्शन आदि आवरण को हटाकर पूज्य हुए हैं फिर तो कभी वे भी अवश्य उस आवरण से ढके हुए होंगे अर्थात हमारी तरह ही वे भी होंगे, तब तो यह मानना उचित नहीं होगा कि इस लोक को भगवान् चलाता है। अगर यह कल्पना भी करें कि भगवान् से पहले किसी सर्वव्यापी दिव्य शक्ति ने इस सृष्टि का निर्माण किया तो ऐसी दुखमय, दुखद और अव्यवस्थित सृष्टि ही क्यों ? इतने सुन्दर–रंग–बिरंगे सुगन्धित पुष्पों से भरे बाग बनाए तो उन्हें कांटों और कीट पतंगों से क्यूं भर दिया ? चन्दन के सुगन्धित पेड बनाए तो विषधर नागों से क्यों लपेट दिया ? सेवाभावी सर्वांग सुन्दर नारियां बनायी तो उन्हें अबला क्यों बना दिया ? धन–धान्य बनाए तो उनके चोर–लुटेरे और अतिवृष्टि–अनावृष्टि इत्यादि बर्बादी के साधन क्यों रच डाले ? जब एक प्रभावी राजा के शासन में चोर, डाकू, हत्यारे, परस्त्री लम्पट आदि नहीं टिक सकते तो सर्वशक्तिमान उस दिव्य शक्ति के शासन में यह सब दुष्कृत्य कार्य कैसे हो सकते हैं ? क्या सचमुच ये रंग बिरंगी मछलियाँ, मुर्गे–मुर्गियां, बकरे–बकरियां, गाय–भैंस जैसे घास–फूस पर जीने वाले भोले भाले प्राणी इस मानव जाति के खाने के लिए बनाए हैं ? इन्हें तड़पता,

रोता–बिलखता और संकट में पडा देख उस सर्वशक्तिमान दिव्यशक्ति को क्या जरा भी दया नहीं आती ? हो सकता है कोई अन्धभक्त इन कृत्यों को 'प्रभु लीला' कहकर समाधान कर ले पर यह कैसी लीला है जो दूसरों की जानलेवा और प्राणपीडा का कारण हो ? कुछ अन्धभक्त भले ही ऐसे सृष्टि को भगवान मान ले पर पढे–लिखे विचारवान और वैज्ञानिक दृष्टि वाले व्यक्तियों का तो ऐसी सत्ता पर से विश्वास ही उठ जाएगा। जब अधिकांश व्यक्ति स्व–संचालित विश्वव्यवस्था में ही अपना विश्वास पोषक तर्क, युक्तियाँ पूर्वक एवं वैज्ञानिक समर्थन द्वारा व्यक्त करते हैं तब तो ईश्वर को इस सृष्टि का कृतार्थ समझना कदापि उचित नहीं है। अर्थात यह सृष्टि अनादि व अकृत्रिम है। किसी ने इसका निर्माण नहीं किया और कोई इसका संचालन नहीं करता। सभी जीव अपने–अपने स्वभाव एवं गुण के अनुरूप ही परिणमन को प्राप्त होते हैं। इसके अतिरिक्त ईश्वर कर्तृत्व के सम्बन्ध में कुछ प्रश्न ऐसे भी हैं जिनके कोई युक्तिसंगत व संतोषजनक समाधान नहीं है, जैसे किः– अनुरूप ही परिणमन को प्राप्त होते है । इसके अतिरिक्त ईश्वर कर्तृत्व के सम्बन्ध में कुछ प्रश्न ऐसे भी हैं जिनके कोई युक्तिसंगत व संतोषजनक समाधान नहीं हैं, जैसे किः–

1.सृष्टि से पहले जब सृष्टि थी नहीं तो ईश्वर ने यह सृष्टि कहां बैठकर बनायी होगी?

2.सृष्टि के अभाव में ईश्वर ये विशाल नदियां, ये ऊँचे–ऊँचे पहाड, अथाह समुद्र और नगर आदि बनाने के लिए सामग्री कहां से लाये होंगे ?

3.सृष्टि के पूर्व जब सृष्टि निर्माण के

साधन ही नहीं थे तो सृष्टि का निर्माण कार्य कहां से/कैसे किया ?

4. यदि किसी कारण सामग्री अपने आप बन जाती है, तो कार्य अपने आप क्यूं नहीं हो सकता ?

5. ईश्वर भी तो एक कार्य है, उस ईश्वर का करता भी तो कोई अन्य ईश्वर होना चाहिए। फिर उसका भी कोई अन्य ईश्वर होगा– इस तरह तो अव्यवस्था दोष आएगा, कोई व्यवस्था ही नहीं बन सकेगी।

6. यदि ईश्वर स्वतः सिध्द है तो सृष्टि सिध्द क्यों नहीं हो सकती ?

इसलिए यही मानना ही उचित होगा कि यह लोक अकृत्रिम ही है। अनादिनिधन है एवं स्व–संचालित है। न इसे कोई बना सकता है और न ही इसका संहार किया जा सकता है। अतः सृष्टि के निर्माता का विचार कल्पनामात्र ही मानना उचित होगा।

जब यह सृष्टि ही स्व–संचालित है तब अपने भाग्य का निर्णायक भगवान् को मानना किस तर्क से यथार्थ होगा ? भगवान् से सांसरिक सुखों की याचना करना तो मूर्खता ही होगी। हम ये क्यों नहीं समझते कि हमारे कर्मों का फल ही हमें नैमित्तिक रूप में मिलता है। बबूल के बीज बोकर आम के फल को पाने की इच्छा रखना मूर्खता नहीं तो क्या होगी ? और तो और भगवान से यह प्रार्थना करना कि बबूल के पेड से आम के फल की ही मुझे प्राप्ति हो, तब तो भगवान भी तुम्हारी मदद नहीं कर पायेंगे क्योंकि भगवान तो स्वयं भी अपने पुरूषार्थ से ही कर्मरूपी आवरण को हटाकर पूज्य हुए हैं और हमें भी यही उपदेश देते हैं कि हमारे कर्म

ही हमें छोटा बनाते हैं। परन्तु हम हैं कि अपने जीवन निर्वाह के कार्य जैसे धनोपार्जन, कुटुम्ब का पालन–पोषण आदि को तो स्वयंकृत मानकर श्रेय लेना चाहते हैं और जो काम नहीं बनता उसको ईश्वर की इच्छा के विपरीत मानकर ईश्वर के माथे मढकर खीर में साँझा और महेरी में न्यारा लोकोक्ति को चरितार्थ करते हैं। अर्थात हम यह समझ लें कि भगवान तो सिर्फ हमें उनके जैसा बनने का उपदेश दे सकते हैं, न तो वे हमें सुख के विषय प्रदान करते हैं और न ही दुःख के। हमारे साथ घटित होने वाले किसी भी काम में उनका कोई हाथ नहीं है। जो भी हुआ है, हो रहा है या होगा, इन सबके जिम्मेदार हम स्वयं ही हैं। अतः भगवान से अपेक्षा करने के अतिरिक्त अगर हम स्वयं अच्छे कर्म करें और पूर्व में किये हुए दुष्कर्मों का फल समता भाव से सहन करें तो हम निश्चित ही ब्रह्मा जैसे अंश से स्वयं ब्रह्मा बन सकते हैं।◆

''पर्चा कल ही है''
गतिज जैन

था मैं दसवी कक्षा का छात्र,
नाटक के पढ़ रहा था पात्र,
नाटक बड़ा विचित्र था वो,
बिना पढ़े हम तो गए सो।

लगे सोचने सपने में फिर,
फाल्गुन का क्या महीना आया,
त्योहारो के रंग है लाया,
होली खूब मनाएंगे,
सबको खूब छकायेंगे।

फिर हमने करवट थी बदली,
माहौल हो गया पूरा गजलि,
सोचा सबको भांग खिलानी है,
खाने में भी मिलवानी हैं।
और जो स्मार्ट कहीं के
खाने में नही खाएंगे,
इनको तो हम डायरेक्ट,
ठंडाई में पिलाएंगे।

अबकी छोरी नही बाटेगी,
इसकी ये रही, उसकी वो रही,
ऐसी बातें नही चलेगी,

मुझको तो हर प्यारी लड़की को,
बस धीरे से गले लगाना है,
उसके गोरे गालों पर
नरमी से हाथ फिराना है।

माना की हम है सांवले,
पर नही है इतने बांवरे,
जे दूर–दूर से गोपी को
बस देख निहार निपट जाएँ,
हम तो कान्हा के वो चेले है,
जो मौका देख लिपट जाएँ।

बस मिल जाये कोई गोपी,
और पहना दें उसको टोपी,
हम उसको रंग लगायेंगे,
और कान्हा के उस नेक रास में
हम भी हाथ बटायंगे।

होकर खुश मेरी भक्ति से,
प्रभु नैया पार लगा देंगे,
मुझ जैसे नादान खिलाड़ी का,
वो टांका भिड़ा देंगे।

तभी अचानक नींद थी टूटी,
फिर हमारी किस्मत भी फूटी,
मम्मी जी थी हम से रूठी,
बोली कल हिंदी का परचा करना है,
उसमें भी तो कुछ भरना है
तभी थमा दी चाय की प्याली,
दी साथ में सैंकड़ों गाली
गायब होली के रंग हो गए,
सपने अब सब भंग हो गए।

लेकिन पढाई भी तो करनी थी,
पुस्तक लड़ाई भी तो लड़नी थी,
पढने से बढ गया विश्वास,
और गलती से मैं हो गया पास।

Perception of Success

Shreya Sahu

I am just a mild thinker, not talking about something new or extraordinary.

Was pondering over the definition of success. As felt from my observation of the surroundings, success comes from satisfaction, from being faced by problems that you like to solve.

As a 3rd year IT student, success for me might be having my PHP code run on a single go, or to get involved in a good intern, or a good placement. These are from academic point of view, but thinking more, life is much beyond this. Success is there when you feel the goodness of people around you, and knowing that you have earned such good friends. Success is being in company of good people, it's watching the night sky and having the feel of an awesome life ahead.Being in campus, up to a large level my mind is restricted to think in the same way as the mass thinks. But on going out, by meeting the people outside, each time I expand my understanding of the word 'success'.

For a golgappe wala, success is his customers' liking of his product, and he will keep searching for ways to make his golgappe even better. For us, making golgappe might seem not a very productive task, but for him, making his customers happy is satisfaction. And by doing so, I'm sure he feels equally content as a top class businessman after gaining profit in business.

We just enjoy listening to music, but for someone involved in it, music means life. He keeps on trying to find ways to brush up his skills further. For him, success means music. He feels on the top if people value his music and appreciate it. Ranging from a man residing in a posh colony to someone living in a slum, all have got their ways of finding happiness. And with happiness comes the feel of success. Each time we recommend a restaurant to someone,that is success for the restaurant owner because he has earned that what we are doing for him.If you are listening old songs and you smile being reminded of something, that smile is success, because you have earned it. Those moments are treasures,which no one can ever take away from you. Having those moments with you is success.

As I conclude, success has nothing, nothing to do with materialistic possessions. Success is a feeling, how we evaluate ourselves. Success is just a feeling, which comes from satisfaction. It's an internal motivation to move ahead.

I don't have a B-plan or something, but as I think personally, if we have to make our market, we have to enter the hearts of people. To make them trust us, we have to make them feel successful. Success for a businessman is not a short term profit; it's his product or his brand's ability to enter the heart of people, its ability to make them feel involved. Success is just an internal feeling, and if we learn a way to generate this feeling, we can get anything…..anything done. ◆

Meaningless Goals

A farmer had a dog who used to sit by the roadside waiting for vehicles to come around. As soon as one came he would run down the road, barking and trying to overtake it. One day a neighbor asked the farmer "Do you think your dog is ever going to catch a car?" The farmer replied, "That is not what bothers me. What bothers me is what he would do if he ever caught one." Many people in life behave like that dog who are pursuing meaningless goals.

Directi Interview Experience

Gaurav Khewal

An interview for a job is an experience that most of us will go through at some point of our lives. Everybody has their 'first time' but it is always advantageous enough if we have a prior knowledge of how it went for others. So, here I write about my experience as I progressed through various round at Directi.

All the rounds were highly algorithm intensive.The quality (both breadth and depth) of questions were good. They were mainly the type of problems that you would encounter in various OJs and competitive programming contests.

Overall, the guys interviewing you will be super-friendly. They'll make sure that you understand the questions and don't have any confusions. Feel free to ask them for hints and they'll be more than happy to guide you towards the solution.From what I learnt, the one thing that differentiates a Directi interview is that Directi is more interested in your thought process and your approach to problem solving and they need the optimized solution rather than the correct answer.You have to solve the questions within strict time limits which were like you have to tell about the approach in first 15 minutes otherwise interviewer will say I think you wouldn't be able to solve and

interview will end in just 15 minutes.

As far as preparation was concerned, I used to solve problems on online judges as many I could find and at the same time read up on algorithm tutorials (TopCoder has an excellent collection). Regular practice before the interview is a must because it reduces the time lag between thinking-up an algorithm and converting the same to code. Due to the strict time constraints of an interview, efficiency in converting your ideas to code is of paramount importance! Make sure you are well-versed with some advanced DS/Algorithm concepts like segment trees, suffix arrays etc and have solved enough problems pertaining to each of these topics so that you can recognize a problem when you see one.

System design problems are quite important and you can expect at least one during your interview. Another very important strategy is to always keep communicating with your interviewer. As stated earlier, system design questions do not have a 0-1 answer. Whatever solution you prefer, there is always scope for optimizations. In such a scenario, it is imperative to let your interviewer have a glimpse of your thought process. Following this has the added benefit of the fact that the interviewer would be able

to correct you if you are not on the intended path and he may have some ideas that you can further build upon your solution.

I will suggest to do competitive programming as much as you can and at the same time do some cool projects. Don't forget to take part in codeforces contests. These contests will give you the experience of online coding test which you guys will face in future.

First Round: Online coding test:

It was an online coding test. They had given the problem statements and time complexity of the required program. We had to write the code and compile it successfully. There were language options given like Java,PHP etc. And we had to submit the code online. There were 3 questions. Students who solved two out of three questions got selected for the next round.

1) You are given two strings, say A and B, of the same length, say N. You can swap A[i] and B[i] for all i between 1 and N, inclusive. You cannot swap two characters within A, or within B. Also, you can only swap a character in A with the character at the same index in B, and with no other character. You can perform this operation zero or more times.
You wish to modify the strings

through the operations in such a way that the number of unique characters in the strings is small. In fact if n(A) is the number of unique characters in A and n(B) is the number of unique characters in B; you wish to perform the operations such that max(n(A),n(B)) is as small as possible.

Print the value of max(n(A),n(B)) after all the operations.

Input:
3
7
directi
itcerid
5
ababa
babab
5
abaaa
baabb
Output:
4
1
2

2) A probabilitic preorder traversal is generated for a binary search tree from the following pseudo-code

```
function preorder(u) {
  if u is null then return
  print u.label
  r = either 0 or 1 with 50%
probability
  if r == 0
    preorder(u.left_child)
    preorder(u.right_child)
  if r == 1
    preorder(u.right_child)
    preorder(u.left_child)
}
```

Given the preorder traversals of a binary search tree you can always uniquely construct the binary search tree. Since, the inorder traversal of a binary search tree is of course, the sorted list of labels.

Given one of the probabilistic preorder traversals of some binary search tree, print the number of different probabilitic preorder traversals that the above algorithm might generate. See the explanation section for clarity.

Input:
3
3
2 1 3
3
1 2 3
5
2 4 3 5 1
Output:
2
1
4

3) You are given a string S. Each character of S is either 'a', or 'b'. You wish to reverse exactly one sub-string of S such that the new string is lexicographically smaller than all the other strings that you can get by reversing exactly one sub-string.

For example, given 'abab', you may choose to reverse the substring 'ab' that starts from index 2 (0-based). This gives you the string 'abba'. But, if you choose the reverse the substring 'ba' starting from index 1, you will get 'aabb'.

There is no way of getting a smaller string, hence reversing the substring in the range [1, 2] is optimal.

Input:
5
abab
abba
bbaa
aaaa
babaabba
Output:
1,2
1,3
0,3
0,0
0,4

Round 2: Algo Rounds (3 rounds)-
You need to clear 2 rounds out of 3 to move to next round.

The interviewer wanted actual code that would compile (not just logic or pseudo code).It was difficult to write the code like that. You have to write code on collabedit.

First algo round:
1) There are n transmitters in a line which are transmitting radiations at different speeds.You have to find out the ranges in which radiations are from atleast k transmitters.

Second algo round:
1) You are given a word. You can perform the only operation to this word: swap two adjacent letters. Your

task is to make a palindrome from the original word using the minimal number of swaps. The palindrome is a word which is spelled the same way when reading from left to right and from right to left. For example, the word ABBYY can be transformed to the palindrome YBABY using 4 swaps: ABBYY => BABYY => BAYBY => BYABY => YBABY

Third algo round:

1) A Perfect Hill is a sequence of integers. It has some interesting properties.

• Perfect Hill is of odd length i.e. L = 2*n + 1.

• The first (n+1) integers of the Perfect Hill sequence make a strictly increasing sequence.

• The last (n+1) integers of the Perfect Hill sequence make a strictly

decreasing sequence.

• No two adjacent integers are same in a Perfect Hill sequence.

For example 1, 2, 3, 4, 5, 4, 3, 2, 0 is a Perfect Hill sequence of length 9. But 1, 2, 3, 4, 5, 4, 3, 2, 2 is not a valid Perfect Hill sequence. In this problem, you will be given a sequence of integers. You have to find out the length of the longest Perfect Hill sequence which is a subsequence of the given sequence.

Example: Consider the sequence 1 2 3 2 1 2 3 4 3 2 1 5 4 1 2 3 2 2 1.

Here the longest Perfect Hill sequence is: 1 2 3 4 5 4 3 2 1. So, the output will be 9.

Round 3: Tech Round:

Technical questions from DBMS, Computer network, Operating system and data structure were asked in this round. Questions asked in the interview were:

Basic os concepts, practical implementation of Operating System concepts (synchronization, file handling, deadlocks etc)

Basic DBMS questions (SQL queries, indexing, B tree, B-tree, normal forms)

CN questions (questions related to load balancing, practical questions on OSI layers and protocols used on each layers, Session, cookies.

Round 4: Final round:

Final round was an our discussion round with CTO. The interviewer asked me to choose one of my best project and started asking question related to that project. This was the toughest of all the rounds.

The whole screening process was a great learning experience and hope this writeup helps my juniors in future.◆

"You describe yourself as a 'free thinker'. That's good, because we can't afford to pay you."

Where do we lag??
Shubhankar Mohan

IIT an institute where we all dream of studying once in our life. It's like a final resting place for all wanna be engineers. So, what's the difference between all those who achieved their dreams and those who were left a little behind, 'a little'? We too are in an Indian Institute. Are they more intelligent than us, do they have faster processing or are they gifted? I will say the answer is attitude.

I scored a very large rank in Advance, it was about 9k so I was unable to enter in any IIT but all my friends secured ranks below 2k and so were admitted to IITs. To be frank, there was not much difference between us all. I was left behind because of my own mistakes, and not because I lacked intelligence. We were in touch through the first year and I found out that initially we were on the same level. Then gradually they started to get out of my reach and I was very worried that time. But at this moment, I find out that the reason is somewhere in the fine line between an IIT and my institute. It's my humble request not to take the problems that I am going to describe in a negative way. I strongly believe that the best time to learn and explore is First Year, but in our first

year we all are so busy in other stuff that exploring what engineering means comes at the last place in everybody's ToDo list. Our college has only a single branch, so we have 100 students per batch and in total around 800 students, so if I need to organize anything means either technical, managerial, cultural or sports events I need full support of the entire batch. Here we are, busy in something that never should have bothered me at once. Being interested in robotics, why am I working in Corna (an event in our cultural fest) is a question I am never able to answer myself. Here comes the difference between us and students of IIT's, they work in their fields and devote rest of their time in exploring.

I am very passionate about robotics and so are my friends. They all entered in robotics societies in their respective colleges and I was like 'yaar kahan sai padhu, man to bahut hai'. Our college lags when we talk about technical groups and societies. Talking about managerial activities, we have E-cell, for social service we have Rotaract, for media club we have Uthaan and a forum which helps in development we have AASF, whose magazine you are reading. But in a technical college what

we need are core technical societies like coding and development clubs, robotics society, AI society which help students to excel and work in advance fields. In such clubs, students can work on projects under much less pressure than they face in the professional environment or directly under any professor, so it's easier to learn as there is no sword over his head. But unfortunately we don't have anything as such.

'Priorities' are of prime importance which we need to set very carefully. I am in my third year and for the third time I have witnessed students setting them wrong.

We have all facilities and resources that an IIT can offer, we have funds which our institute is ready to spend, we have faculty who is ready to guide us, so why we are wasting it all, anything other than coding is not a waste of time, this is what we need to understand, because anything other than coding in our college is a taboo. All we need is the right attitude to learn and explore. ◆

Go! Challenge yourself!

Jayant Mundhra
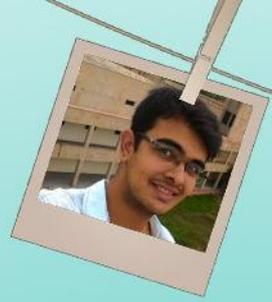
It was Alam Sir's class. A September morning. Clock showed about 9:30 am. I was standing before the whole batch and I was going to speak in front of such a large audience for the first time. And, I spoke fine. Although, my shirt was nearly wet and I was shivering as hell. That was a day!!!

And then on the evening of AASF-PDC 2015 event, I was asked to come to the stage to share my experience regarding AASF with everyone. There was my whole batch, a number of seniors and the Director Sir and a bunch of faculty members as the audience. This time the crowd was definitely much larger than my first instance.

But, this time my shirt didn't turn wet. Neither the sweat nor the shivering was accompanying me this time. I spoke well and was confident enough. In fact, the silver lining was that after the event, Director Sir himself told me that I spoke very confidently. Now that was a day again.

This transformation from an anxiety ridden boy to a confident person who doesn't care about the size of the audience didn't happen overnight. It happened over-time. I saw this video on YouTube that stated that the only way to evolve and to overcome any challenge is by challenging yourself. I took that statement very seriously and that one statement turned my persona 180 degrees around.

After whatever happened in Alam Sir's class, I started participating in every single event that involved public speaking or public engagement in one way or the other. Be it AASF competitions like JAM or events under the aegis of Hindi Pakhwada (14 Sep - 28 Sep 2014), or various other miscellaneous events, I was there. And, the experience was always enriching. I always observed how people speak and present themselves and their ideas.Those experiences provided me tons of tweaks for my presentation and oratory skils.I won a few times. I lost way more number of times. But, I never stopped and kept moving on. The opportunities that these events provided were seamless. And, now after the end of my first year, I am an entirely different and confident person. I have got a long-long way to go. There are numerous highly profound personalities out there. I stand nowhere when compared to them. But, even they weren't born like that. They carved out their personalities themselves. They evolved over time. Nothing is going to change if you are planning to sit idle on your couch, cursing how dull your personality and your life is. And, the best part! It's never too late to begin. Be it 60 or 16, age is just a number if you are determined. So, go for the change and challenge yourselves to bloom into a vibrant flower which everyone desires!

◆

Ways to Approach Your Challenges!!!

1. Start with WHY
2. The power of human adaptation
3. Learn from small experiences
4. Learn from regrets
5. Life hits everybody

Abhishar & Me

It was a great opportunity to design the volume -1 of ABHISHAR so as to pay my tribute to our late seniors. As I was very emotionally connected to one of them, I realised how important it is in my life and I dedicated myself towards the motive of the magazine. It's been a wonderful time with AASF in my IIITM life, which has actually paved a way to my aspirations. Educate yourself to educate others is what I learnt and taught.

--Sai Vivek

Abhishar every year recreates the lovely impression of our two super seniors. The magazine is a great path that links all of us through each of its corners ranging from techy to experiences of all kinds. Every year Abhishar launches its innovative corners clearly showing the dedication put through in by team AASF. I am sure this platform will keep on motivating students and alumini to be associated forever through it and will keep up the spirit of IIITM alive in us.

--Vaishali Kulshreshtha

Abhishar has proven to be a channel of connection between students. I eagerly wait for the magazine. We get to hear not only from the student community but also from alumni. Their experience and skills motivate us. Abhishar is something that keeps me connected with AASF.

--Jayant Singh

Abhishar has been one of the eminent resources which gave me an outlook of experiences of our seniors. It helps to keep our institute's alumni in touch. Sections like career mantra and geeks corner provide us a good exposure to tech world. I highly appreciate the teamwork of AASF and their spirit Team AASF has played a promising role in my college life as they have guided us through out our first year about different techno-managerial concepts.

--Prachie Gupta

I appreciate the efforts of AASF to present Abhishar magazine for the students of IIITM. Apart from technical and career oriented articles, it contains the experiences of my seniors and batchmates which is obviously interesting to read. I like to read the views of students over some sensitive issues and tips/tricks to make our life comfortable in this institute(like How to kill time in overly boring classes :P)

--Amandeep Sachan

Node.js on the Rise

Sumant Bagade

The best way to know about a new technology is to visit its official web page. However this doesn't seem to help in case of Node .js. The description on nodejs.org definitely doesn't help. Kept in three words – Node.js is Java-Script on server. JavaScript is eating the world, with new tools arriving at a breakneck pace .There have been endeavours at server-side JavaScript previously,and none has apparently caught as much energy as Node.js.

Here are some things you should know about it.

• JavaScript on the server? What is this witchcraft?

Server-side code is usually written in PHP, or Python. Well, as it turns out, JavaScript is getting awesome by the day. So some clever chap thought that it might be cool to write server-side code in JavaScript too, and that's how server-side JavaScript was born. That means the same type of code that powers awesome Ajax applications like Gmail will now power its servers, too. It also turns out that the current standard JavaScript interpreter V8 (by Google, thank the Lord for them) is blazing fast, and makes JavaScript on the server around three times faster than Python 3 and around ten times faster than PHP.But the real awesome thing about JavaScript on the server is that you can use the same code that you use in the browser (for example, form validation) in your server too. You can get a solid web app ready to be deployed in half the time.

• Asynchronous is the new black

What's a really common thing to do in a web application? Database access, of course. Too bad database I/O is one of the slowest things a web app has to deal with.

Node.js is driven by asynchronous design. That means that it doesn't have to wait for slow file I/O or database operations to continue processing, which makes it really damn fast (by that I mean faster than most other popular server languages / platforms).
 So if you have:

```
data = readFromDatabase();
printData(data);
doSomethingUnrelated();
```

doSomethingUnrelated is gonna have to wait for the slow readFromDatabase to finish in a normal language like PHP. And that's where asynchronous JavaScript comes in.

```
readFromDatabase(function(data) {
    printData(data);
})
doSomethingUnrelated();
```

Now, doSomethingUnrelated is gonna be called immediately after readFromDatabase blunders off to do its work, and the function call back given to it will be executed to print the data only when it's done reading from the database.

Now, there is no blocking of code, no wastage of CPU cycles, and everything runs in parallel.

• Node Package Manager works broadly

Node.js is open-source and has a strong and passionate community. It is the second most Popular Starred repository on GitHub. Speaking of managing dependencies, the Node Package Manager deserves to be called out. NPM is the root of almost all deployment systems for Node.js.

NPM is used to install node programs. The NPM is included with Node.js and has grown to a repository of nearly 50,000 packages, making it likely that another developer has already packaged up a solution to your problem.

• Node's Event Driven Concurrency

Node.js unravels concurrency by replacing the Java platform's standard, multithreaded methodology with single-threaded, event driven I/O.Instead of holding up for costly I/O exercises to finish, a Node application issues a callback. While you're waiting for the database to return results Node can process more requests. This allows you to handle thousands of concurrent connections with very little overhead, compared to creating a separate thread

for each connection.

How it works under-the-hood is pretty interesting. Compared to traditional web-serving techniques where each connection (request) spawns a new thread, taking up system RAM and eventually maxing-out at the amount of RAM available, Node.js operates on a single-thread, using non-blocking I/O calls, allowing it to support tens of thousands of concurrent connections (held in the event loop).

Concurrency just works in Node programs and that makes it accessible to a wider audience of developers.

• Full Stack Development

The Node.js has opened the doors between the rooms of backend and frontend. This means that the differences that existed between frontend developers and backend developers are now broken down, With Node.js it's possible to merge web and backend teams into one unit which makes things much more efficient. Node.js opens the door to a world where full stack developers make life much better by reducing dependencies.

• Adaptation by popular industries

LinkedIn is a prominent user. Their entire mobile stack is built on Node.js. They went from running 15 servers with 15 instances on each physical machine, to just 4 instances – that can handle double the traffic! Walmart re-engineered its mobile app to use Node.js and pushed its JavaScript processing to the server. The Mail Online have implemented Node.js and Netflix are now in the process of implementing Node.js too. Microsoft (Micro soft Azure)-They have extensive support, in fact some of their Azure tools are actually written in Node.js.However, Node.js is not a silver-bullet new platform. You definitely don't want to use Node.js for CPU-intensive operations or with relational database. It was created to solve the I/O scaling problem, which it does really well. It shines in building fast, scalable network applications, as it's capable of handling a huge number of simultaneous connections with high throughput, which equates to high scalability. Head over to the official website for Node, and get crackin'. Welcome to real-time web. ◆

Rank of top languages on GitHub.com over time
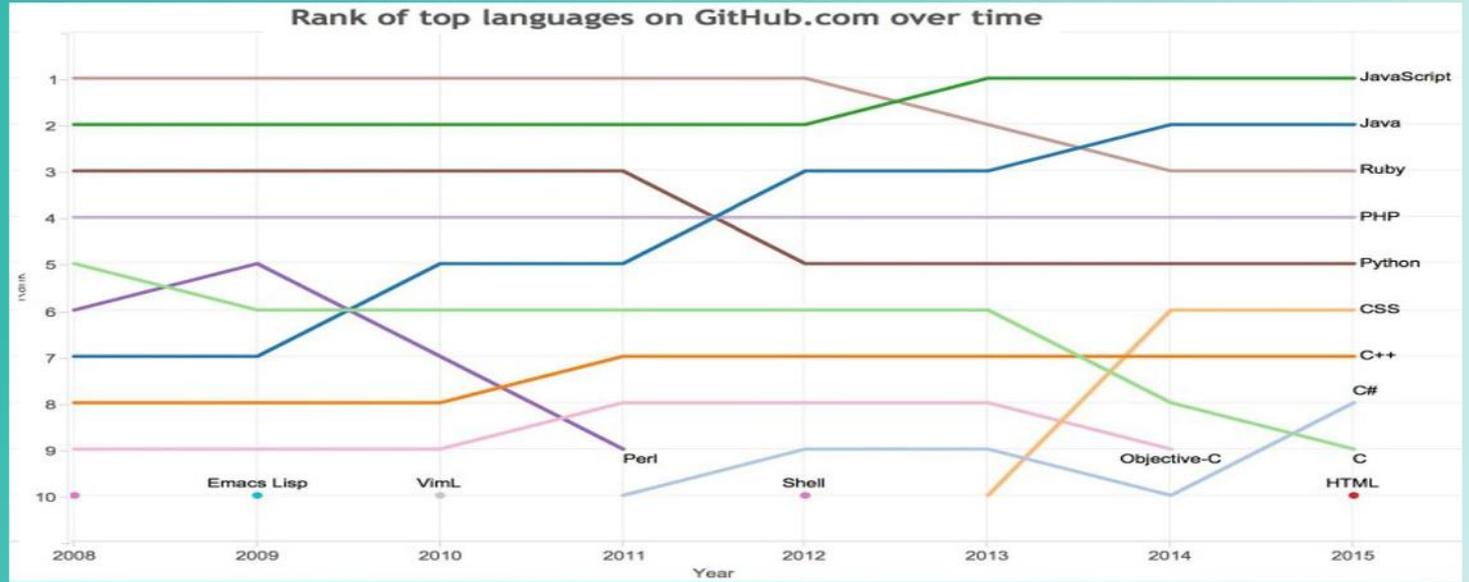
Actually who you are?

Sharad Mishra

In the 19th century a famous English writer Robert Louis Stevenson, wrote a novel titled Dr Jekyll and Mr Hyde. He believed that most of the people on this planet live their life with more than one personality in them. So, he created a character with two sides to his personality. Dr. Jekyll made up a potion for himself and drank it. The lethal mixture set free the evil half of his personality and transformed him into Mr. Hyde who had no good in him.

You might have observed a few who do not change physically but their actions, at times, are contrary to their usual behavior. It does come as a shock. But as I wrote earlier you would find only a few, who will give this shock to you. A lot of people live in our societies who have more than one personality inside them, but they normally don't let it come out in public.. They have developed such kind of things with them to adjust their frequency at different places.

In their homes, they behave differently, at their workplace, they again become a different human being & with friends, their behavior is unbelievable. Normally, when the change in behavior is slight, then it is okay, but if the change in personality at different places is exceptionally different, then the situation is not normal.

European psychologists have discovered a lot of psychological diseases, one of them: 'schizophrenia'. It is a split personality disorder, means having teeth different to show and different to eat. But it is an extreme case of our topic of discussion. If the personality is more complex, then just not only in two, it breaks into many parts. From where, a person adopts this complexity.Psychia-trists answer that due to adoption of wrong social values, this complexity comes in a person's nature. A child finds it adventurous to break social rules & and also it seems difficult for her/him to carry so many social values. From here he/she starts breaking rules &

and starts hiding this truth from his/her parents, teachers and society. It is the root of split personality. My friends say to me that it is their talent that how beautifully they are managing their families, friends and other society. Then I share with them a point given by Osho that this is hypocrisy that you are showing yourself a person that you are actually not. It is forgivable that you cheat someone else by this hypocrisy but the problem is different. Continually wearing many masks may bring the situation in your life that even you may forget that WHO YOU ACTUALLY ARE!! It is the time when you are cheated by your own self in realizing your real and exact personality. So, my friends don't make yourself like Raavan having ten faces. Be authentic and have an original identity as Lord Ram. Just use your mind in achieving your goals instead of splitting your personality in many pieces. ◆

ANSWERS TO PUZZLES

(1) G T Y O
R J O T
E O U I
A B G T
'Great Job You Got It'

2) It is at the North Pole.
The winds are blowing towards the north till they reach the pole. The moment the pole is crossed, they are blowing towards south.

(3) 7: common sense

(4) ASCII CODE OF Y
Q W E R T Y-81 87 69 82 84 89

(5) Brown

(6) Three- one blonde, one brunette and one redhead.

(7) 100
Series of number that do not contain albhabet 'T'

We meet a lot of people in our lives, but only some manage to remain in our memories forever.

Late Abhinav Saxena and Late Tushar Sharma were among the most diligent members in AASF. More than their utmost dedication and hard-working attitude, it was their friendly demeanor that made them special. It has been five years since their unfortunate demise, but they are still alive in our

MEMORIES...
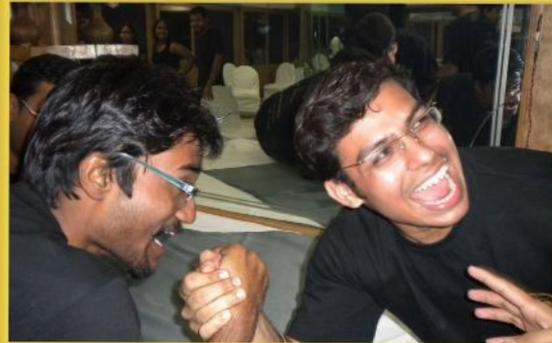
Adieu...

Someday many years from now , We'll sit beside the candles glow.
Exchanging tales about our past , And laughing as the memories flow.
And when that distant day arrives ,
you'll know you're missing your college lives.

-Abhishek Yadav

Don't be dismayed at Goodbyes,A farewell is necessary before you can meet again. And meting again after moments or lifetime is certain for those who are friends.

-Arunabh Chaudhary

Work brought four of us very opposites together; and as a matter of fact gave us a chance to enjoy each others company a lot... Its the fifth year of being together and our pranks never end and the taunts never die :) :P :D. So as a matter of fact if you get a chance to get along with people other than your type: give it a go coz being skeptical may deprive you a chance of a wonderful journey with some people...

-Riya Naval

It's been a wonderful journey of five years which made us build ourselves capable of facing any difficulties in life together. We were never perfect as an individual but together we made a perfect life. Stay together, Stay blessed :)

-Sai Vivek

Five years of friendship.... a beautiful relationship that has a deep impact on me; not every-one who once got along will stay forever as a close friend but it will never change a fact that they were a valuable asset of your life and they loved you too. So, to all the juniors: enjoy and cherish your friendship with others; each one of those will add something important in you as a person.. :)

-Saumya Choudhary

LIfe at IIITM was a wonderful journey indeed. I have a lot of memories to cherish, I have made friends who will be there for me through thick and thin. I have learnt the lessons of life the hard way. All I want to say is enjoy your college life to the fullest and work hard now so that you can enjoy in the future.

-Gaurav Yadav

Can anyone be lazy, smart, crazy, naughty, irresponsible and do mischieves at the same time?
Yes and this is called college life. You are here not only to get a degree but memories also, so enjoy it to your fullest.

-Suraj Mishra

When I entered this college, within one month I was sure that I would not be able to survive here even a single year without my family, but thanks to some friends, who bear my weeping, cared for me and helped me to become an independent self.
These 5 years taught me almost everything, from doing an online ticket reservation to staying alone in any corner of this world. They have given me the memories which will be with me always; the late night "bakar" session or 3A.M. wali Maggie(RIP).
In the end I would say, "Each and every moment of college life is special so enjoy it to the fullest".

-Chitranjali Banjare

What is a Smart City?

There is no definition of Smart City as such. However, it can be presumed that these cities would mobilize the Information and Communication technology to deliver better services, reduce the carbon foot print, create a sustainable environment, provide better job opportunities and living conditions. Here are some of the concepts on which smart cities can be based:

1. SMART CITIZEN

The goal is to achieve the concept of smart cities through citizen consultations, including active participation of groups of people. During consultations, issues, needs and priorities of citizens and groups of people will be identified, solutions generated. Moreover, the spread of the awareness and knowledge to the citizens, so that they possess the adequate information to utilise the available amenities, and thus the evolution of "Smart Citizenry".

2. SMART TECHNOLOGY

The rise of new Internet technologies promoting cloud based services, the Internet of Things, real-world user interfaces, use of smart phones and smart meters, networks of sensors and, and more accurate communication based on the semantic web, thus providing online collaborative sensor based data management and many more other aids.

3. SMART BUILDING AND INFRASTRUCTURE

Proposed redevelopment of Greenfield models of Smart Cities, most of the buildings should be energy efficient and green buildings. Modern buildings to contain complex mechanical devices, sophisticated control systems and a suite of features to improve the safety, comfort and productivity of occupants.

4. SMART HEALTHCARE

The idea of a systematic framework for conceptualizing data-driven and mobile- and cloud-enabled smart healthcare systems. Adoption of smart healthcare systems by organizations in order to provide cost-effective quality healthcare services with reduced risk.

5. SMART ENERGY

Reduced Energy Consumption would not alone suffice for the achievement of goal. Thus, we would need to have the Smart technologies like Batteries / Invertors / UPS Combined heat and power (CHP), Energy saving devices, Energy storage, Led lights, Rooftop solar systems, Smart grid, Smart meters, Solar heaters, Street lighting, Thermostats, Voltage regulators to promote smart energy.

6. SMART MOBILITY

Geospatial-enabled efficient transportation system to provide periodic traffic forecast, journey planning mobile applications based on real-time data, GPS-based tracking and route information of public transport increasing the reliability of transportation. Integrated transit hubs connecting multiple modes of transportation like bus, metro.

7. Gwalior an overview*

Population:- 2,032,036 (**Male:** 1,090,327 and **Female:** 941,709)
Population Growth:- 24.50%
Sex Ratio (per 1000):- 864
Average Literacy:- 76.55%
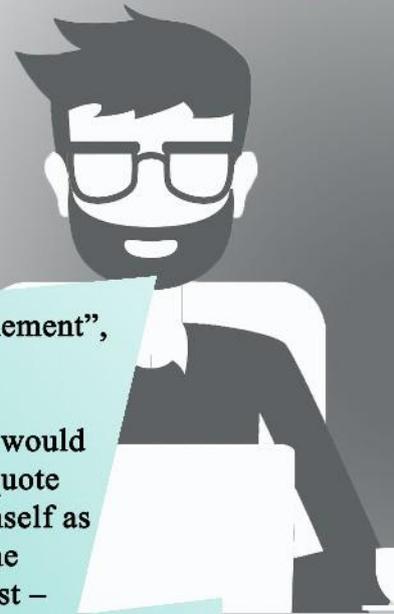**Female Literacy:-** 67.38%
Male Literates:- 803,114
Female Literates:- 554,096

*According to 2011 Census

Alphabet – Explained

Pranay Verma

With Google taking a new massive step by reorganizing things and coining Alphabet, things might sound a little confusing. So, let us get into the specifics as what has happened is truly a pretty big deal in tech.

Alphabet took three major steps:
1. Corporate Re-structuring
2. Career Re-organization
3. Purpose Refinement

All those "Re's" make complete sense as Alphabet is the only new thing that seems to occur in this organization. Another way to look at Alphabet is to look at it as a company refreshed. Nothing much seems to be changing.
First let us take a look at "Corporate Re-structuring". Earlier Google was responsible for pretty much everything that had to do with the company like Google Maps, Youtube, Chrome and Android. It also handled some of the lesser known parts like Google X, Google Ventures, Nest etc.

But with the advent of Alphabet, now Google is restricted to handling the first four and rest of the parts have become independent companies with their own CEO's.

Coming next to "Career Re-organization", a lot of switching around has been done with the positions of employees in Google. Now, Larry Page has taken the post of CEO of Alphabet, Sergey Brin-- The President of Alphabet, Susan Wojcicki will stay as the CEO of Youtube and most importantly Sundar Pichai has taken the post of CEO of Google. It was a much expected release that the future of Google is with Sundar Pichai but with this it has turned out to be official.

The third part of "Purpose Refinement", turns out to be conceptual stuff. Well we would find it best to quote Larry Page himself as it represents the scenario the best – As Sergey and I wrote in the original founder's letter 11 years ago, "Google is not a conventional company. We do not intend to become one." As part of that, we also said that you could expect us to make "smaller bets in areas that might seem very speculative or even strange when compared to our current businesses." From the start, we've always strived to do more, and to do important and meaningful things with the resources we have."
This is keeping in mind that the great companies of today like Google, Youtube and Android had humble beginnings. This initiative by Google is more to find such projects and invest in them rather than to obtain cruise control of the tech market. Hope it pays off. ◆

The Name "Alphabet" and What it Signifies

The founders of Google chose the name Alphabet after a lot of deliberation. It has two interpretations;
• The first one is the obvious one wherein Alphabet signifies the collection of letters which create a language, the most important innovation of mankind.
• The second connotation is slightly more subtle where in Alpha stands for a higher than benchmark return and bet is just that a bet. The cheeky name reflects the ground breaking work that the firm would be involved in.

Minimum Viable Product

Mudit Jaju

MVP stands for Minimum Viable Product and is a typical startup / entrepreneur jargon. Actually an MVP is something a college student creates at least 3 times every semester -during their Minors and Major exams. Confused? Well I bet 99% of the students start studying the night before the exams and know there is no point in going through the whole course. Hence they use their statistical and analytical skills (gifts actually) to put together a list of topics which can be achieved in the available timeline and helps get the maximum output (in this case marks!). MVP is such an inherent part of a student's life, they are practically born with it. We just need to understand and improve upon it so that we are well equipped for making products to be used by the masses.

A product will have a few broad topics of concern: (largely talking about tech products)

1. How good is the technology running the product?
2. How many different types of problems the technology can and should cater to?
3. How well does it help the business side of your product in automating thi-ngs?
4. How smooth is the UI / UX or the end user experience?

If you set about to develop that ultimate product which is - top of the line - in all the above points, well surely you will never be able to complete it, because a product should always have scope for improvements and you should always be challenging yourself in making things better!

How then do you decide what your MVP should be?
Well let's take a practical example of my app "Cherish"
Cherish is an app for discovering and booking romantic couple experiences in Delhi / NCR.
(Actually, that's lesson 0 when making an MVP, you should be able to clearly state what your product does in on2e sentence. Only then you can hope to control the scope of your product)

The main feedback we wanted from Cherish's MVP was:
1. How open people are to the idea of romantic dates?
2. Are they ready to pay for the same by just reading the description of the product and not actually visiting the place?
3. We needed to cater to both Android and Apple users, because they have some drastically different outlook towards all things online.(At least that's what we believed in the begining.)
By defining the main need of the MVP I have drastically brought down the scope.

Issue #1, tells me that I need an an app which can help people discover experiences and read more about the same.

Issue #2, clearly states that I need to have an online payment gateway to test if people are ready to pay online.

Issue #3, makes me develop on a technology which is cross platform, as I don't want to go around making 2 different apps for iOS and Android and then realizing there is no future in the product.

So with that in mind our first app was made on Sencha touch (HTML/js) a technology which helped me make an app for both iOS and Android.The main features we cut short and added to the app was a login system, listing of products and an online payment gateway.All our other features - Sharing, Wishlist, Filters, Categories, Coupons, Customizations are now in the pipeline and we keep sending updates as and when we see a need.
On the business side - We started by doing everything manually, from sending invoices to reminding people that they have a booking today. Slowly and gradually we are automating such features but the end user will never know if we have things automated or not and hence business side of the things should be avoided in an MVP.

In the UI/UX of the MVP. I completely avoided any form of animations or UI improvements if they were hard to achieve.

Finally, though I should have mentioned in the start,an MVP not only helps you put your product out in the market quickly, it opens a feedback loop with the whole world being your potential beta users. With good analytics added I learn what people want and keep updating the priorities of our features for the app. Always remember what you have in mind for your product might not be what people want it to be!◆

Mudit Jaju(IPG2009) is a Game Programmer and Entreprenuer at Infinite Eurekas New Delhi ,India.He is a great programmer and a great personality.

Google to provide free Wi-Fi to Indian railway stations

The daily commute of millions of Indians is about to get far more enjoyable, with Google and Indian Railways partnering to roll out super-fast free Wi-Fi to 400 railway stations across the country.

The plan uses Google Fibre technology, which is currently providing speeds of up to 1,000 Mbps in the US - around 10 times faster than basic Internet. The connection will be slower than that when delivered over Wi-Fi, but according to current reports, the new hotspots will still provide users faster-than-normal Internet for the first 34 minutes before slowing down.

The goal is to help the 20 million or so people that travel by train in India each day access the Internet more seamlessly. For perspective, that's pretty close to the entire population of Australia that will suddenly have free Internet while travelling to and from work, or to other parts of the country.

Right now there's some Wi-Fi access in India's train stations thanks to various Internet providers, but it's pretty patchy and not consistent across the entire country. The Google project, which has been named Project Nilgiri, is currently in the pilot stage with a few hotspots already established, and the rest being rolled out over the next four months.

According to IRCTC, an Indian railway news site, download speeds using the pilot hotspots that have already been set up are around 7 Mbps, with upload speeds at around 5 Mbps.The second phase of Project Nilgiri will involve Google establishing Wi-Fi on board moving trains across the country.

संस्कृति में बदलाव या मानवता का अंत

डिंपल सिंह

भारतीय संस्कृति मानवीय मूल्यों और विचारधाराओं से परिपूर्ण मानी गयी है, हमारी संस्कृति हर प्रकार के भोग–विलास और अशुद्ध सामग्री से शुध्दित है, शराब, धुम्रपान, तम्बाकू आदि का सेवन करना हमारी संस्कृति में वर्जित माना गया है, लेकिन हम एक पल रूके और सोचें तो आज हमारी संस्कृति पर पाश्रात्य संस्कृति का प्रभाव ज्यादा है, आज हर भारतीय युवा या युवती विदेशी रहन–सहन और समाज में ऊँचा स्तर चाहता है, सभी एक दुसरे से आगे निकलने की होड़ में भारतीय संस्कृती से दूर होते जा रहे हैं, आज शराब का सेवन करना, धुम्रपान आदि सभी भोग–विलास को समाज में ऊँचे स्तर होने की निशानी मानते हैं, आजकल सभी पर्वो पर, शादी आदि में शराब के लिए अलग से स्थान होता है, जहाँ पर सभी खुले–आम इसका सेवन भी करते हैं, अपने बड़ों की इस तरह की विचारधाराओं को देखकर आजकल बच्चे भी इसी प्रकार की पाश्रात्य संस्कृति की ओर आकर्षित और अग्रसर हो रहें है।

शराब और धुम्रमान आदि का सेवन करना मानवीय शरीर और बुद्धि के लिए भी हानिकारक होता हैं, धुम्रपान के सेवन से इंसान के फेफड़ों पर भी बुरा असर होता है। उन्हें तरह–तरह की बीमारियाँ हो सकती हैं। सिगरेट, बीडी आदि का प्रयोग करने से फेफड़ों का कैंसर होता सकता है। इंसान की प्रतिरक्षा प्रणाली पर विपरीत प्रभाव पड़ता है तथा यह मंद हो जाती है, इंसान का शरीर कमजोर हो जाता है तथा वह बाहरी बिमारियों से नहीं लड़ पाता। सोचने, समझने की सकती क्षीण होने लगती है,

की सकती क्षीण होने लगती है, स्वभाव चिढ–चिढ़ा होने लगता हैं और फिर व्यक्ति को अपनी सारी परेशानियों और मानसिक तनाव का उपाय यही चीजें लगने लगती है।

भारत विकासशील देश है, विकसित होने का अर्थ यह नहीं की हम हमारे अंदर की इंसानियत को ही मार दे। आज सभी लोग एक–दूसरे को गिराकर स्वयं ऊँचा उठना चाहतें हैं, इसके लिए चाहें उन्हें अपनों को ही मारना पड़े। आजकल अगर प्रेम में धोखा हो जाये, या लड़ाई हो जाये, ज्यादा खुशी मिल जाये, या बहुत तनाव हो, सभी का उपाय बस एक शराब और नशा ही दिखाई देता है, कहते हैं की इससे दर्द कम होता है, अगर ऐसा ही होता तो डॉक्टर और चिकित्सा विज्ञान आदि का आविष्कार नहीं होता इस दुनिया में, ये तो सब अपने दिमाग को समझाने के लिए बोला जाता है, ये संस्कृति में बदलाव हमारा विकास नहीं हैं, ये हमारी इंसानियत और मानवता के अंत की शुरूआत है।

हमारी सरकार स्वयं शराब और धुम्रपान जैसी चीजों का समर्थन करती हैं। आज लगभग हर जगह कोई ना कोई शराब की दुकान आसानी से दिखाई दे जाती है, सरकार स्वयं शराब की दुकानों को लाइसेंस देती है, शराब और धुम्रपान जैसी नशे वाली वस्तुओं पर कर सामान्य वस्तुओं से ज्यादा प्राप्त होता है। इसलिए सरकार अपनी आमदनी बढ़ाने के लिए इन्हें रोकने की बजाय बढ़ाने को समर्थन दे रही है। सरकार प्रयास करती है लिकिन आज तक कोई उपाय पता नहीं क्यों नहीं निकाल पाई है? आज लोगों को इसकी इतनी बुरी लत लग चुकी है कि चाहे उनके

कुछ ना हो, लेकिन उन्हें हर रोज़ शराब तो पीनी ही होती है। समाज में लोगों के स्तर में बहुत अंतर दिखाई देने लगा है। आज गरीब और गरीब और अमीर और अमीर होता जा रहा है। ऊपर से इन चीजों की लत ने इंसान को और कमजोर और गरीब बना दिया है।

कई बार देखा गया है कि जब कभी कर्फ्यू लगता है, तो शराब की दुकानें आधी ही बंद होती है शराब दुगुने दामों में "कालाबाजारी" के रूप में बेचीं जाती है, कई बार तो जो पुलिसवाले चार्ज पर होते है वे भी "ब्लैक" में शराब खरीदते हुए पकड़े जाते हैं, क्या विकसित होना यही होता है?

धुम्रपान के विज्ञापनों के अंत में बोला जाता है– "धुम्रपान सेहत के लिए हानिकारक है!" ये कथन इतनी तीव्रता से बोला जाता है की व्यक्ति के सुनने से पहले ही समाप्त हो जाता है। सिर्फ औपचारिकता पूरी की जाती है। इसके लिए भी विज्ञापन कम्पनियों को चेतावनी दी जानी चाहिए।

हम अकेले सरकार और इनको बनाने वाली कंपनियों को ही क्यों दोष दे! हम स्वयं ही अपनी जिम्मेदारियों के प्रति सचेता हो जाये तो इन सब चीजों को रोकने के लिए बाहरी प्रयासों की जरूरत ही नहीं पड़ेगी। दूसरों से कुल प्रयास करने की उम्मीद करने से अच्छा है कि हम खुद के अंदर झांक के देखे कि क्या ये ही हमारी समस्याओं का उपाय हैं? क्या हम खुद इस चीज़ को मिटाना चाहते है? इसलिए ही कबीर दस जी ने भी कहा है कि– "बुरा जो देखन में चला, बुरा ना मिल्या कोये जे मन खोजा अपना, तो मुझसे बुरा ना कोये!!"◆

The science of soul "SPIRITUALITY"
Sakshi Chahal

Well, we all really have no definitive idea about soul, spirit and spirituality. Still there is something, an allusion, in which we all believe in and have faith upon. When a person says "X" is his spirituality, he implies that he has faith in a specific framework "X", shows reverence to the set of principles,doctrines and rituals subsumed under that framework. I still remember my routine at the age of 10. I would wake up, take a bath, read a few hymns and then the day actually started for me. Though there was no specific reason for me to do all that, but there was an internal force that prevented me to have breakfast instantly after bathing and that force was an outcome of the faith, devotion and determination I had in an invisible power.

Considering a very basic example, we are asked not to worry and remain tensed in our tough times, as that omniscient is going to be with us in the harsh phases of life. But as far as practicality is concerned, there comes a question "Is believing in something, not even visible really going to make any difference?". And the question has a very beautiful answer in itself. Yes, it does. No matter what the circumstances may be, the person never feels alone.

I am sure I am not the only one with a desire to comprehend reasons for believing in such invisible entities which have positive impacts on one's life, punctuality,determination,optimism being a few of them. Spirituality on the whole is the science consisting of one's connection with the divine. A sense of sacredness that is experienced when a person attaches himself to a strong faith.

It has always been a general perception that there is no need to find God in the outer materialistic world. He lies within us. With reference to the book 'The truth of reality' "God lies within us and we lie within him. Just as a drop of water is a part of the ocean and the ocean is a collection of drops of water. Without those drops, the ocean too wouldn't exist." Keeping this thing in mind doesn't imply that we need to sit and feel where God is. Well, according to me, the concept should be perceived such that there is an equality sign between trusting in God and trusting on one's own self, having love and respect for one's own existence. And this is what can really make a difference in one's life, rather than being indulged in foolish practices in an attempt of finding God.

If we take a closer look upon some of the rituals that have been followed since years, then we would come to a conclusion that these things are far away from what they call as being closer to God. Application of chandan on one's forehead for it holds good, for it not only is a good coolant, but is also a collection of all cosmic energies on the so called 'hotspot' (the region between and slightly above the two eyebrows). Similarly the logic behind wearing a sacred thread is the development of a sense of confidence that is attained by the person. I don't ask anyone to not follow such rituals, rather, what I try to convey is God can never reside in such things. The concept of God is an abstract noun which can be felt, which can be experienced, but can't be much expressed in words.

"God has no phone, but I still talk to him. He has no facebook, but he is still my friend. He doesn't have twitter, but still I follow him…"◆

"We are not human beings having a spiritual experience, We are spiritual beings having a human experience"

~TEILHARD CHARDIN

Delhi-Agra Chalo

Pratik Dash

On 11th of September, some of my friends and I decided to go on a trip to the glorious Mughal city of Agra. It was a spontaneous decision which was readily accepted by everyone. We decided to set out the very next day. With this thought ensconced in the recesses of our minds, we went to sleep. At 4 am, we sluggishly lift out of our warm beds, quickly brushed and took a bath. We throw in a few essentials and with bated breath, we set off for Agra.

We reach the station by 6 am and climb aboard the first train heading to Agra. The journey is mostly uneventful except for an hour long stop at a small station.

At 9 am, we finally arrive at Agra and look around for transportation and some food to quell our rebellious stomachs.

The first task turns out to be an insurmountable challenge as we find one scoundrel after another, all patiently waiting to pounce on a naive tourist and fleece him for well and good.

Fed up, we finally find a guy who seems to be asking a reasonable price and we get into a decrepit Maruti Omni and head off for breakfast. At great cost, we soon find out how trustworthy our driver is.

True to his colours, the driver takes us to a ramshackle and slightly shady looking restaurant, commanding exorbitant rates for simple food. At this juncture, we are ravenously hungry and hence we reluctantly sit down for a poor substitute of a meal that costs us an arm and a leg.

With a bitter taste in our mouth we head towards the Taj. Adding further salt to our profusely bleeding wounds, the driver leaves us almost 2 kms from the main entrance of the Taj. Red faced with anger, we finally dispense with the guy.

As we enter the Mughal courtyard, we see the beautiful Taj ahead. It is truly a wonder to behold. Its beauty and elegance is almost ethereal in its charm. The Taj is synonymous with India, it is the face that India presents to the world and it's our sworn duty as a citizen of the nation to protect it. Unfortunately, even this jewel isn't immune to the ravages of pollution, which has discoloured the once gleaming white marble and has weakened the structure. When I saw the Taj in this state, I couldn't help but feel ashamed for not being able to do anything to protect this wonder for posterity. It pains me greatly to see my fellow citizens treating our national monuments, our heritage, the last links to a glorious past with such apathy and nonchalance.

A civilization is built on the bedrock of culture, culture survives even when civilization doesn't. The Romans and the Greeks are technically immortal, for so many of their customs, traditions and languages are used even today. But once the culture disintegrates, a civilization withers and dies forever. We Indians, are slowly losing the last vestiges of a once glorious culture which was one of the premier civilizations of the world. We must take proper care of our monuments before they turn to dust in turn, turning our civilization to dust. After the Taj, we catch an auto and ask the driver to take us to an eatery to have lunch. Apparently we hadn't learned our lesson from the previous experience with the glib liars of Agra. As before, the scoundrel drops us off in a hotel with which he has an understanding. We eat a little food, lighten our wallets by a great deal and curse the almighty and the driver for our predicament. The food we had in the diner, is probably the most tasteless lunch I ever had in my life. Even the notoriously insipid mess food in Gwalior tastes better than what we had that day. With feelings of great antipathy towards the denizens of Agra we set off for the Akbar or Red fort of Agra. The fort was surprisingly well maintained.

It was larger than the Gwalior fort and quite beautiful. The scenery from the top was quite picturesque. The throne of Jahangir was imposing and grandiose and the marble domes were very well crafted. With this the trip came to an end. After this, we set off for the bus stop and climbed aboard an ancient looking and highly dilapidated bus. After 3 hours of bumps, humps and quite a few garbage dumps we reach Gwalior, safe and sound and a quite a bit shaken from the arduous journey. Overall, the trip was fine. Agra is a beautiful city plagued with incorrigibile liars and is home to some of the worst restaurants on the earth. If you are going to Agra, do yourself a favour and get some snacks from the hostel itself or eat food from the roadside vendors.◆

The Silent Scream

Shraddha Sachan

I am a girl ,12 years old,
With a luxurious life,'yes' but cold.
A well furnished room,but hollow 'inside',
HE gives me orders and I reluctantly abide.
My mother cries, whenever while playing I bleed,
HE lures me with dark chocolates, yes ' very dark' indeed.
My father invites his friends home , to discuss business and gain,
HE plays to get pleasure and I am left with pain.
My brother promised, he will protect me from the vultures in town,
HE brushes my hair andMy mother is worried , I have attained puberty very soon,
HE secretly gave me 'gift',when he was invited on my birthday on 22nd june.
My teacher says I am confident enough to lead an entire team,
HE clenches his fist inside my mouth when with him I helplessly scream.
I always speak the truth , daddy hate lies,
HE laughs and laughs , ignoring tears in my eyes.
I have heels and dresses plus an iphone-4,
HE makes me sore , yet HE asks for more.
Now my soul lives the monotonous DAYS,
My eyes don't show the smile of my FACE.
It is the outside world which is filthy and dark,
But I suffer from a different CASE.
I am an obedient girl, whatever asked I do,
My parents say they love me and "HE" says this too.
 I shiver deep down.
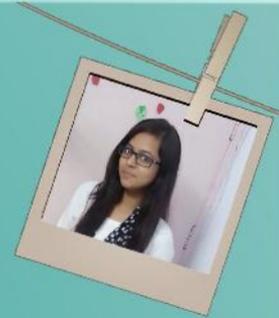
Natural Language Processing

Rajesh Kumar
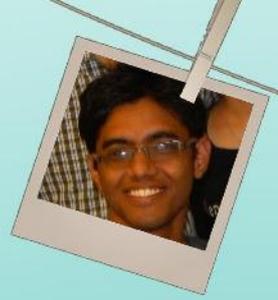
We often come across "similar articles", "read also" and "related articles" segments on different websites. It is an interesting problem of Natural Language Processing where we try to accurately judge the similarity between two articles. News aggregators like Yahoo news, Google News display similar news articles as clusters. I will share my experience, the theory that I read, algorithms tried, the challenges faced on working upon this problem. You can try your own methods after getting some idea on how to start. As we all love to code ;), let me put it to you as a programming challenge. Input – Given N articles each containing title and content. Output – Find out the list of related articles.

Sample Input –

Article 1 -
Title - Vodafone accounts hit by fraudsters in UK
Content - Around 2,000 Vodafone customers have been left vulnerable to fraud after criminals accessed their personal details over the Internet, the UK-based telecom giant has said.

Article 2 -
Title - Vodafone customer accounts hit by hackers
Content - UK customers of Vodafone are the latest victims of a hack attack.

The telecom company said that nearly 2,000 customer accounts had been accessed this week, exposing personal data including phone numbers and bank account details.

Article 3 -
Title - Vodafone allows UK customers to use 4G in more worldwide destinations
Content - Vodafone has added eight worldwide destinations, including the Dominican Republic, Hungary, Kenya , Morocco and the UAE, meaning customers can use 4G in a total of 71 destinations worldwide.

Sample Output –

Article 1 and Article 2 are related.

Start thinking…

Solution Approach -

The solution to this problem can be broken into the following parts (Take a pen and paper and try to apply each part for the given sample input) –

a) **Finding the set of words that are important features of the article (Feature Vector)-**
Two articles are considered similar when they talk about similar entities and similar actions. We can't consider similar entities alone for similarity as we can see in the example above. All the three articles are about Vodafone and its customers, but the action in the articles are different. So it's important to fetch the action related with an article. So this part is about finding the words

that describe an article. So we can divide an article into **Parts of Speech (POS)** by using any NLP toolkit. Parts of Speech is the class of a words like nouns, adjectives, verbs etc. Different NLP toolkits that exist are **Stanford NLP, NLTK, and OpenNLP** etc. I picked the Nouns and Verbs as the most important words in an article. Also we need to convert all the words to their root word by using stemming of the NLP toolkit. For e.g. stemmer will convert hits to hit, accessed to access etc.

b) **Assigning weights to the different features -**
It's important to assign weights to the different words that we extract from an article, based on their importance. Different ways by which we can assign weights to the features -

1) **Term Frequency (TF)** – We can keep the count of all the words in the article.

2) **Weighted Term Frequency** – We can give our own weights to different POS tags like Nouns can have certain weights and verbs can have different weights. Also we can assign a higher weight to the title.

3) **Inverse Document Frequency (IDF)** – It is a measure of how much information the word provides, that is, whether the term is common or rare across all documents. If a word is very common amongst all the documents that we have,

then we can say that it's a common word and have lower weight than others.

IDF = log (N / 1 + T) where N is the number of documents. T is the number of documents where the term appears.

4) TF*IDF – This is a good weighing factor which reflects the importance of a word to the document with respect to the collection of documents. If the TF of a common word is very high in a document it is well adjusted by the IDF. It is a very easy and efficient method to remove stop words and very common words.

c) Calculating similarity between the two feature vectors(similarity metric)-
A real-valued function that quantifies the similarity between two objects is known as similarity metric. There are several similarity metrics that are used in finding articles similarity. I will discuss the ones that I tried and few that I am going to try in future.

1) Jaccard Similarity (JS) – It is a word overlap similarity measure that just uses the similarity between two feature sets. It is defined as the size of the intersection of the words in the two articles compared to the size of the union of the words in the two articles.

$$J(A,B) = \frac{|A \cap B|}{|A \cup B|} = \frac{|A \cap B|}{|A| + |B| - |A \cap B|}.$$

JS is a very good metric to reject dissimilar articles as it considers the direct matching of words. In articles of relatively same content length it can be very useful. It doesn't take care of the common word problem as it treats each word equally.

2) Cosine Similarity (CS) – It is calculated by finding the cosine of the angle between two vectors. In our case we take the dot product of the feature vectors of the articles and divide them with their respective magnitudes. i.e. -

$$\text{similarity} = \cos(\theta) = \frac{A \cdot B}{\|A\|\|B\|} = \frac{\sum_{i=1}^{n} A_i \times B_i}{\sqrt{\sum_{i=1}^{n} (A_i)^2} \times \sqrt{\sum_{i=1}^{n} (B_i)^2}}$$

Cosine Similarity is a very efficient and the common similarity metric that is used in Information retrieval problem. The TF-IDF Vector is mostly used as the vector in calculating the cosine similarity. TF-IDF based cosine similarity works better as compared to the TF based cosine similarity.

Both of these measures consider only bag of words for similarity, they are not concerned about the semantics of the article or the syntactic placement of words. These methods perform decently well in terms of calculating similarity. Especially the Cosine similarity method is a very widely used metric. But there are other linguistic methods that takes care of the semantics and the word ordering. You can understand the problem with just bag of words method by this example – **"the sales manager hits the office worker"** **"the office manager hits the sales worker"** Both these sentences are different in meaning, but they consist of exactly the same set of words. So word ordering also plays an important role in article similarity. So it's worth trying the linguistic methods to better solve this problem.

d) Finding out a similarity threshold which determines whether the two articles are similar :
The problem is not yet over. Just by finding a real value doesn't tell you the real answer, you have to choose a certain threshold above which you declare two articles to be similar. This is an interesting problem as you have to be very accurate in choosing this value. Well this problem is a tough one and I couldn't find any standard solution

other than experimenting. For a good subset of data, manually find out the results. Then for different threshold values compare the results with your manually labelled data. This will help you in determining the best threshold.

e) Clustering of similar articles :

Till now we just found that whether two articles are similar. Now we need to combine all the similar articles into one cluster. It seems like simple connected component problem. Just merge all the articles which are similar to each other transitively. But there's a catch, if an article is similar to two or more different clusters it will merge with both of them. For example - **Cluster 1** - South Africa defeated India by 10 wickets. **Cluster 2** – Bangladesh defeated India by 10 wickets. Suppose these are two trending news. Now if a new article like this appears -
"Top 10 embarrassing defeats of team India" which contains both of the above stories. So this article will merge both the cluster into one.

So to solve this problem we have Hierarchical Aglomerative Clustering algorithm which updates the cluster information whenever two articles merge and then treats the new cluster as a new article. Then again we recalculate the entire similarity matrix. There are . several other different clustering algorithms which we can try out and test ourselves.

Hence, problem solved ;)
After this step we have all the related articles together.
This is an interesting problem and we can try out multiple things in this problem. It can be an interesting thesis project. It might be a very challenging problem to NLP and ML people. If you find any problem while working on this you can always contact me.

Some references that I used -
http://www.cis.drexel.edu/faculty/thu/research-papers/dawak-547.pdf
https://en.wikipedia.org/wiki/Similarity_measure
https://en.wikipedia.org/wiki/Hierarchical_clustering
https://www.quora.com/Which-NLP-library-among-the-ones-below-is-most-mature-and-should-be-used-by-a-startup-for-its-NLP-needs ◆

Rajesh Kumar (2010IPG) is presently working at Directi, Mumbai. He is a great programmer. He was Infotsav Coordinator 2013.

Brain and intelligence trivia

• Studies have shown that children who are breast fed display IQ's up to 10 points higher by the age of three.

• Your brain is full of nerve cells, but it has no pain receptors. Doctors can operate on your brain while you're awake and you won't feel a thing.

• When you are born, your brain weighs about a pound. But by age 6, it weighs three pounds. What happens? Learning to stand, talk, and walk creates a web of connections in your head—two pounds worth!

• People with lower IQ are at greater risk of being concussed.

SGM: A new experience altogether
Kanishk Agarwal

It was May 2015 when everybody went home for the summer holidays, I was stuck up in the hostel due to my intern. It was a good project so I chose to stay. Luckily I had Anshul and Shubhankar to accompany me. It was $45° +$ hot outside, so we used to prefer to stay in our rooms only until night. Early days were a bit hectic because of the new project,testing deadlines,sudden Skype calls etc. As a fortnight passed, pressure reduced and things became normal. So, instead of watching TV series I decided to make better use of my time. In mid-May, I joined the Student's Gyan Movement.

SGM is an initiative by our seniors to educate the underprivileged children from slums. It is a 365- day working forum. Not only the children are taught about school course curriculum, they are inculcated with moral values, they are made aware about current affairs, moreover speaking and reading skills are nurtured. I was given the responsibility to teach Chemistry to class 11th -- 12th Chemistry, being my favorite

subject, I thought it'll be a cakewalk for me to do it. But, life isn't that easy, isn't it!

The medium of instruction had to be Hindi, and I was like I am not going to last more than a day or two! I did my translations well before the class, so that I could face the students with confidence. Translations were like Atom ka Parmaanu, Waves ka tarang and so on. First day was slow as expected, I mumbled somewhere due to the language barrier and communication gap but somehow with my examples I managed to explain them the things in the end. Things started to get better as a week passed. I was getting along with the kids. Kids were quite motivated, that if I can learn, read and write Hindi for them, so definitely they can learn Chemistry for their better future.

I managed to finish their entire syllabus and prepared them for their competitive exams for medical sciences in mid-June. It was time to leave as I also had to head back home for a month. Last day, all of them thanked me individually. They

also brought a pen as a gift which I couldn't refuse. It was such a nice feeling doing something for someone. It was just a little effort from me that meant a lot to them. I felt so special after seeing those genuine smiles on the innocent faces. It was definitely five weeks' time to remember. After my return in July, I continued teaching class 11th. Things are way different in regard that now I am much more fluent with my Hindi, so are the kids with their English as well. We are getting along quite well and I enjoy teaching now. It's not like doing a duty or a job, it's like something I wait in a week's time. Trust me guys, there is nothing more noble than to educate someone. So, if you guys could give a hand for some time in your schedule, it could a give a meaningful life to someone. Cheers.

P.S.: A month ago, a student of mine whom I taught in summers texted me that she cleared her exam, in fact top scored in Chemistry and has got admission in Nursing College in M.P. somewhere.

Digital India Project

Digital India is an initiative of Government of India to integrate the government departments and the people of India. It aims at ensuring that the government services are made available to citizens electron -ically by reducing paperwork . The iniatitive also includes the plan to connect rural areas with the high-speed internet networks.

Knowledge instead of Achievement
Yeshoda Bhargava

Before starting to enunciate my views on the topic that you will get to know soon, I have some-one to thank. I wish to thank Annu Sachan for being insistent that I write for the upcoming AASF magazine. AASF has always been close to my heart, I can never forget the contribution it made to my understanding of technical skills and managerial know-how while I was in the first years of the great institution of ABV IIITM. I wish all the best to AASF, I am sure the team is doing a great job. I think the single best way to come out of your lower self-confidence is to attend the sessions, participate in events and make the best use of it- no exaggeration intended.

The topic of my article today is learning. I see a lot of students studying, gaining new skills, polishing the already acquired ones for something. That something can be a job, a better salaried position, admission into a better college, to impress a faculty, but most of the times particularly in college going students; I have discovered that it is JOB. Bottom line: nothing wrong with that absolutely, I also do that. The number one thing that you need to do is to consistently acquire new skills. What good are your five years of study if you cannot fend for yourself in the end?

I absolutely agree, but something happens when we are maniacally studying for something to acquire something in future. When we are studying while targeting at the end result and not enjoying the process of gaining knowledge then we actually do ill to the learning aspect. I have always looked at animals, dogs, cows, bird; and realized one thing that as a human I am privileged that my parents got me admitted to a school and now I can read, write, express my thoughts. Education is a privilege, really. While learning is bliss, majority tortures it and makes it a drudgery. There is a phenomenon in data mining, called as "p-torturing", where in the researchers torture the data until it regurgitates the desired result. Are you doing that?

Frankly speaking college life has another important aspect coupled with learning and that is "life-skill". We ought to incorporate them into our selves. You know, there are two things that define how successful one is in every part of his life, talking about professional life in particular. Those two words are: Competence and Confidence. Research shows that a confident but less competent person outworks the competent but the reticent or diffident employee. Why not also devote sometime to develop few other skills which are important for us as future professionals? There is no end to learning, it always fascinates me that the more I read, the more I realize that I knew so little. I mean, when there are deadlines in job, no doubt you know JAVA and Android, but if you do not know how to handle pressure, if you do not know how to delegate work within team members, if you do not know how to balance multiple projects which you are involved in owing to your expertise, and more importantly if you do not know how to say a "NO", then what? Your skills, technical are the major backbone of your entry into a career, just like GRE into US universities, but what happens after is solely a game of expansion.

I really would want all of you who are in college to cultivate some skills that your future self will thank you for. For instance in internships I have been or in research projects, it was never about knowing some technology because knowing and understanding is just a game of practice and pressure has this ability to induce in you the knowledge in right amounts. You got it right; we are talking about tenacity here. It's euphoria to work, when our curiosity guides us and not some reward.I know some of you can relate to it. Learning should not be a carrot and stick situation. That boils down to
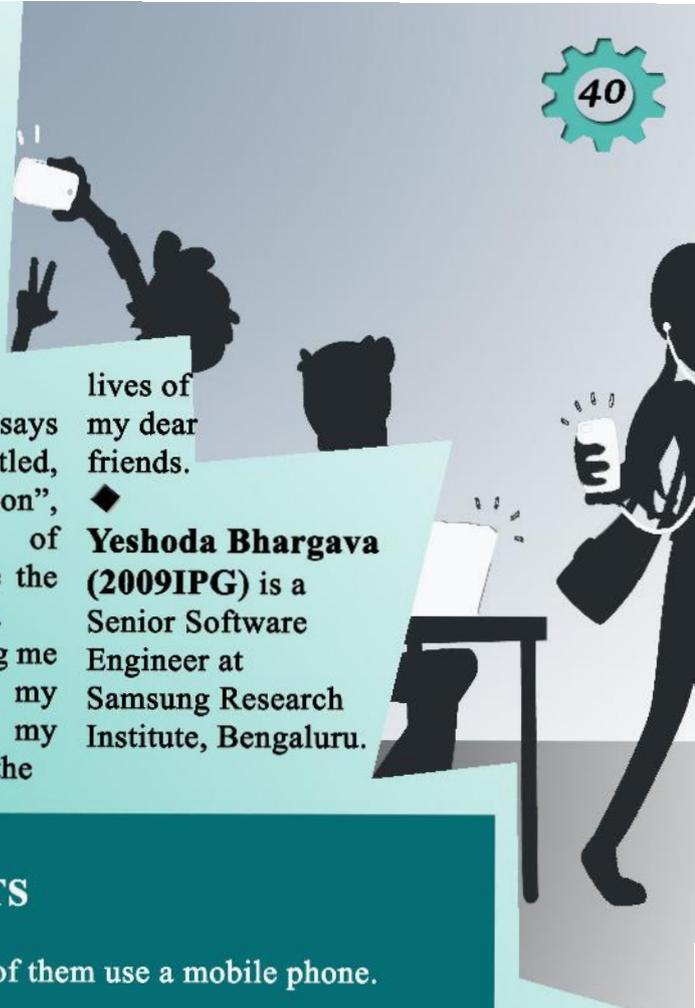
attitude, to cut the long story short.

And as I always stress upon, college is the best time to know your skin. It easy to get lost and then to wake up in 4th year realizing the three years passed by! Be healthy, be sincere, read magazines, cultivate both competence and confidence but most of all cultivate an attitude of optimism.

Dr. Wayne Dyer says beautifully in his lecture titled, "No-Limit Person", "Knowledge instead of Achievement" and I make the title of this article just that.

Thank you AASF for giving me this platform to express my views and to allow my experience to percolate in the lives of my dear friends.

◆

Yeshoda Bhargava (2009IPG) is a Senior Software Engineer at Samsung Research Institute, Bengaluru.

INTERESTING FACTS

1. There are 6.8 billion people on the planet and 4 billion of them use a mobile phone. Only 3.5 billion of them use a toothbrush.
2. Hewlett Packard, Microsoft, as well as Apple have one not so obvious thing in common they were all started in a garage.
3. Every minute, 100 hours of video are uploaded on YouTube by individual users.
4. The average 21 year old has spent 5,000 hours playing video games, sent 250,000 emails, instant messages, and text messages, and has spent 10,000 hours on a mobile phone alone.
5. There are 350 million Snapchat messages sent every day.
6. Since the company's inception, there have been 144.7 million individual visitors to Facebook, making it the most visited social networking site as of June 2013.
7. RadioShack was one of the first companies to start the personal computer revolution, back in 1970, with its TRS-80.
8. The first mouse was invented by Douglas Engelbart in 1963; it consisted of a hard wooden shell and two clunky metal wheels.
9. Of the 60 billion emails that are sent on a daily basis, 97 percent are considered spam.
10. There are 500 apps added each day to the Windows Phone Store.
11. Google handles an estimated 1 billion search queries each and every day, releasing almost 200 tons of CO_2 per day.
12. The man known as the Father of Information Theory, Claude Shannon, invented the digital circuit – the foundation of the magic that provides us all access to the Internet today - during his master's degree program, when he was just 21 years old.
13. Thirty million individuals watch television programming from their mobile phones.

SUMMER SWEAT: Part II

Irita Mishra
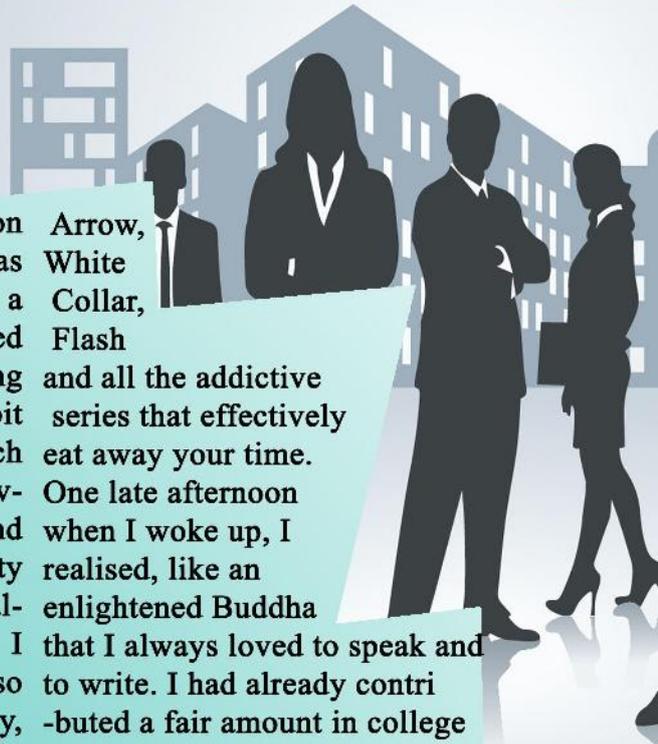
Even if life hands you lemons, you cannot make lemonade without sugar and ice. Some people like their lemonade spicy, some with salt and many others just the way it is, sweet and tangy. I, for one, like all the varieties. It isn't wrong to want more of everything but only if you know how to savour every bit of it, something that took me two years to realise. I remember writing an article in this very section about an internship on web design and search engine optimization that I did in my first year. I also recall encouraging the readers to never underestimate their strengths or hesitate in doing what they wish to do, for everything seems impossible only when we want it to. That's the power of wishful thinking! But this time, I write as a more matured, less naïve individual who has had a little more taste of that lemonade in the past year. The more we want from life, the harder it gets to keep up with what is offered to us. This doesn't mean that we stop aiming high or taking adventurous risks. It simply means that we ought to take measured gulps of the lemonade slowly and carefully. After doing an internship in my first year, I realised that I had set a standard, not just for others around me but also for myself and believe me! You are your own biggest competition. I am not a coder and creativity is my only charm.

This sole talent was the reason I got into web design. It was easy to get an internship with a new start-up but I wanted something different, something more real. After scouring a bit here and there, I got in touch with a firm that handled government contracts and I found myself making a charity funding website for the Jabalpur Municipal Corporation. I was very interested, more so because I was, in a way, helping the unprivileged children of Jabalpur get sponsors for their education. It made me feel better about what I was doing.

I also happened to get a chance to work with two batch mates in another project for IIM Calcutta for website creation for one of their premier marketing clubs. Now I had three internships in my bag, lengthening my CV and giving my career a definite direction. I was not the best but I was good at what I did which made me content, though only for a short while.

When you realise that everything that you ever did for yourself isn't making you happy in the long run, life suddenly becomes dis-interesting and futile. Plus, living in a college that offers you so much free time ends up showering you with existential crisis.. It is a disease that slowly infects your mind and you find yourself watching Friends, Breaking Bad, Dexter, Arrow, White Collar, Flash and all the addictive series that effectively eat away your time. One late afternoon when I woke up, I realised, like an enlightened Buddha that I always loved to speak and to write. I had already contri -buted a fair amount in college fests and events then why was not I doing the same for my own happiness and satisfaction?

A few minutes with Google and I was writing three essays, a book review and half a dozen articles. No wonder I was happy! I had found my solace in my passion, the result of which is that I have a few offers for internships in content handling and analysis.

Today I stand alone, a coloured sheep in the immense flock of white who doesn't aim to bag a technical placement. I feel adventurous because I am breaking the stereotypical rut of coding in our college. But I also feel safe because I am finally doing what pleases me.

"Moral of the story" - Never underestimate your skills, however small they may seem at the moment. Someday you may make a career out of those if you are willing to follow your heart.
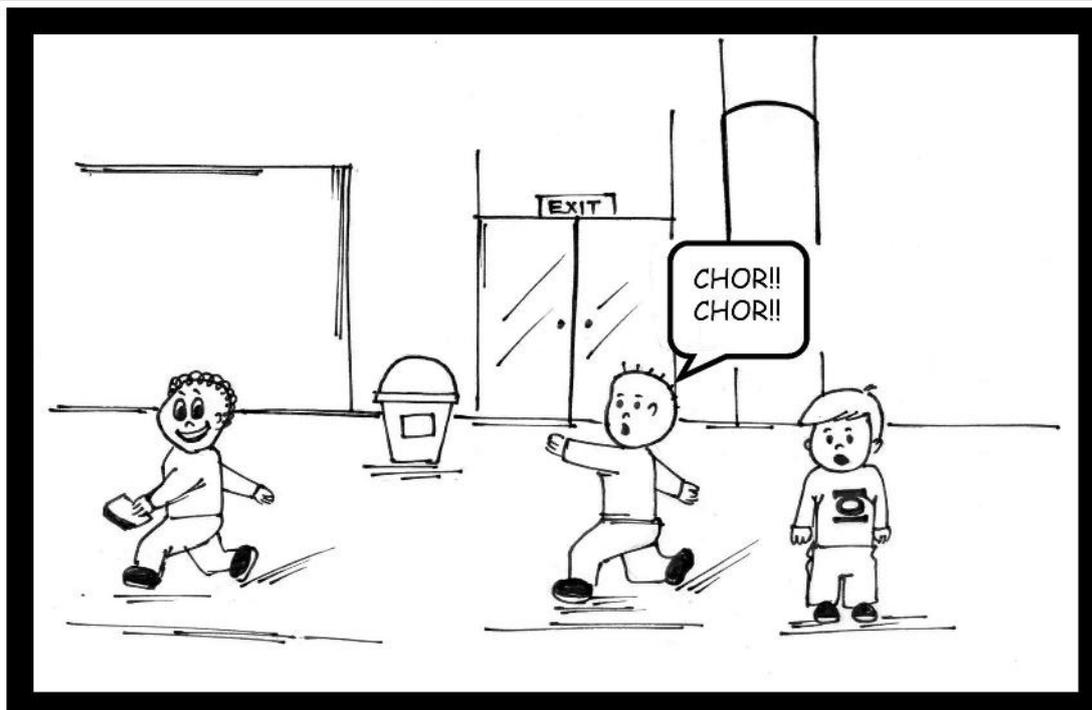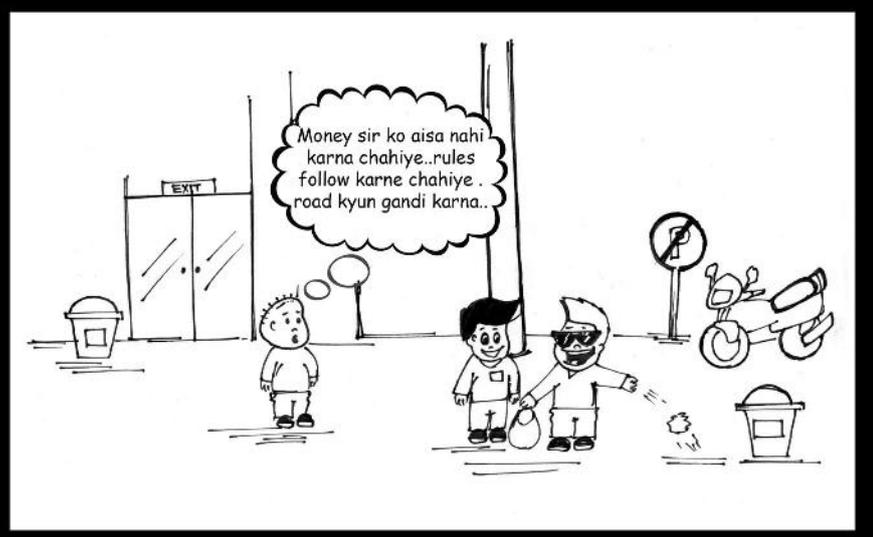
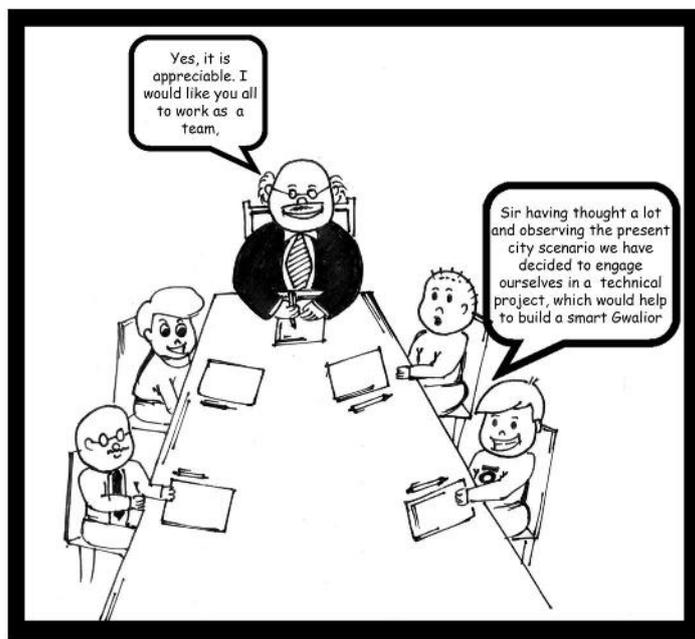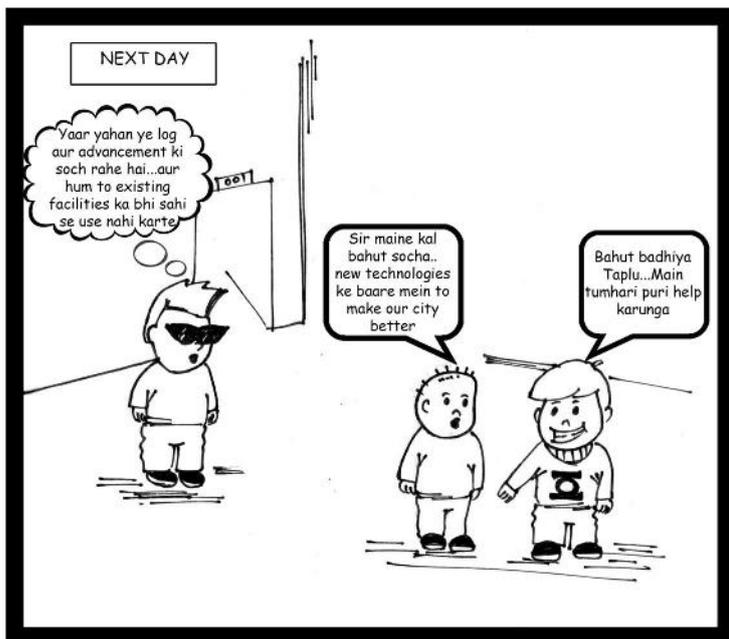**P.S.: I do not plan to drop my skills in web design. You never know when they might come in handy.** ◆
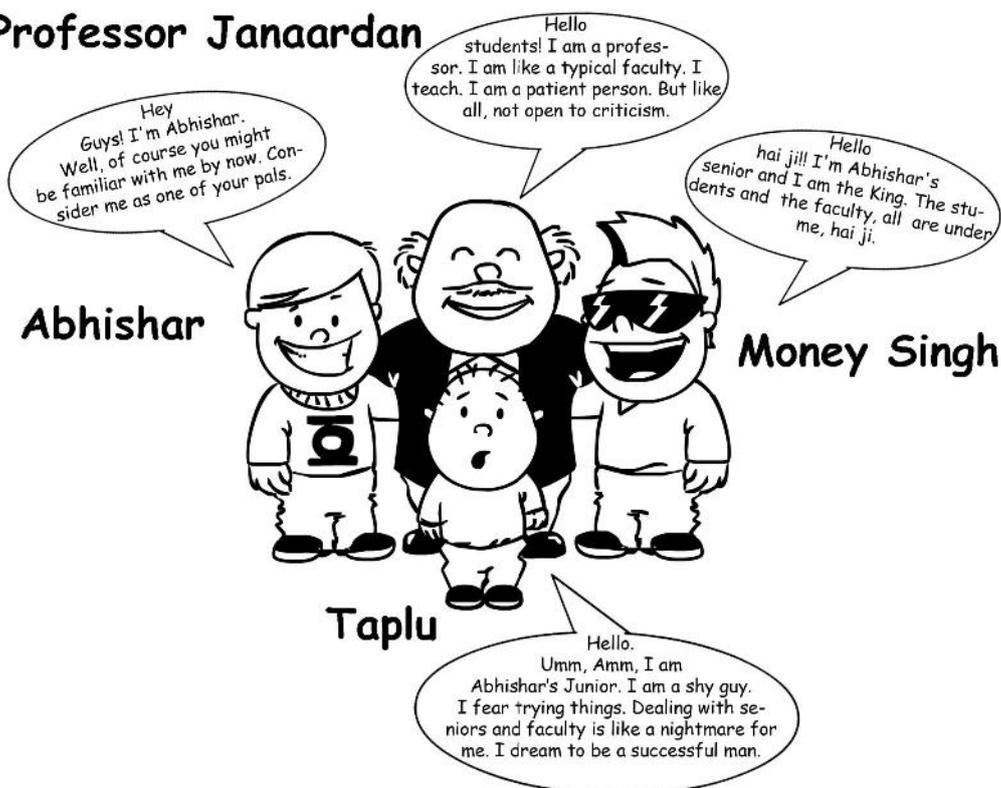
TEAM AASF
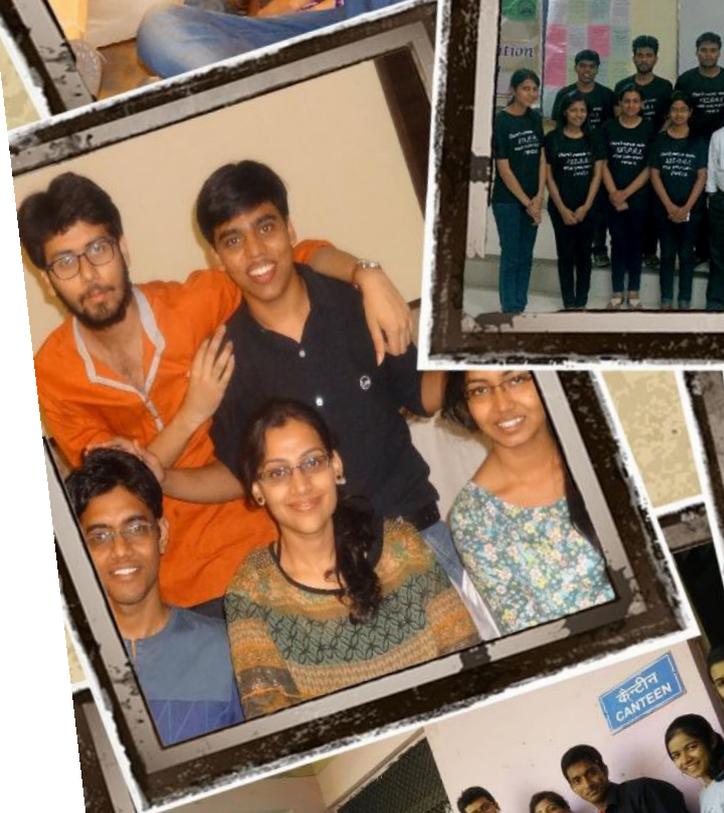
Friends Fun & Dreams

Abhishar is a good friend of students. He listens to their thoughts and experiences. Abhishar tries to chalk out easy solutions for students' problems. They feel motivated on talking to him to showcase their hidden talents. Personally, I feel he carries with him a very positive air and is capable of spreading happiness around. And I'll try and make all possible efforts to help him with this splendid companionship with you.

ग्वालियर स्मार्ट, पर कैसे??

सौरभ शर्मा

आज दौर है डिजिटल इंडिया का। हमारा देश, देश का हर एक बच्चा और एक आम आदमी नवीन तकनीक को अपनाने उत्सुक खड़ा है। मोदी जी के प्रधानमंत्री बनते ही आई स्मार्ट सिटी परियोजना ने उत्सुकता और अधिक बढा दी है। भारत जैसे विकासशील देश में यह डिजिटल कान्ति क्या सच में सार्थक हो पाएगी या फिर यह एक चुनावी वादा बन कर रहा जाएगा, यह आज भी बहुत बड़ा सवाल है। अब बात करते है ग्वालियर की। जितनी तेजी से भारत विकसित होना चाहता है, शायद उतना ही उत्साह ग्वालियर के निवासियों में भी है। लेकिन क्या ग्वालियर इस स्मार्ट सिटी योजना में विकसित हो पायेगा? क्या ग्वालियर डिजिटल हो पायेगा? और अगर ऐसा होगा तो कैसे? आइये इन प्रश्नों के उतर ढूंढने के प्रयत्न करते है।

क्या है डिजिटल इंडिया प्रोजेक्टः– डिजिटल इंडिया देश के नवनिर्वाचित प्रधानमंत्री माननीय नरेन्द्र मोदी द्वारा लायी गयी एक अत्यंत लाभकारी परियोजना है। इस योजना के अंतर्गत देश के युवाओं का कौशल विकास, देश में विदेशी निवेश को बढ़ावा, देश के शहरों का नवीनीकरण और ऐसे ही तमाम कार्य प्रस्तावित किये गए है।देश में इस योजना को लेकर उत्साह भी है और संदेह भी कि यह योजना क्या कभी सार्थक रूप ले पायेगी अथवा यह केवल एक स्वप्न मात्र रह जायेगा ? अगर आम जनता कि राय ले तो कुछ का कहना है कि इससे देश में सैकड़ों वर्षें तक भुखमरी, गरीबी, बेरोजगारी और अन्य कई समस्याएँ दूर हो जायेंगी। लेकिन कुछ यह मत है कि इसे केवल चुनावी चाल मान लेना ही उत्तम होगा क्योंकि ऐसा वास्तविकता में संभव नही है। अब कौन सही है, कौन गलत, यह तो आने वाला समय ही बताएगा। लेकिन डिजिटलीकरण के लिये आम आदमी में दिख रहे उत्साह और वर्त्तमान समय में कम्प्यूटरीकरण के युग को देखते हुए यह ही कहा जा सकता है कि ''डिजिटल बनेगा इंडिया, तभी बढेगा इंडिया ।।।''

क्या है स्मार्ट सिटी प्रोजेक्टः–

स्मार्ट शहर के लिए अधिक से अधिक निवेश, बुनियादी ढांचे पर अधिकाधिक खर्च, महानगरीय योजना बनाने वाली समितियों का दक्ष होना बेहद जरूरी है। एक शहर कब कहलाता है ''स्मार्ट''? इसका जवाब सरकार से लेकर आम लोगों तक के लिए अलग–अलग है। मोदी सरकार भारत के सौ शहरों को 'स्मार्ट' बनाना चाहती है। लोगों में भी चाह है कि वे स्मार्ट शहरों के निवासी कहलाएं, लिहाजा इस परियोजना पर उनकी नजर भी बनी हुई है।

लेकिन एक बड़ा सवाल सभी के सामने है और वे ये है कि एक शहर आखिर 'स्मार्ट' कब कहलाता है। सरकार से लेकर इन योजनाओं पर काम करने वाली बहुराष्ट्रीय कंपनियों और आम लोग तक इसका अलग–अलग जवाब देते हैं। ऐसा होना लाजमी भी है क्योंकि 'स्मार्टनेस' की परिभाषा सभी के लिए अलग होती है।

निर्माण और वास्तुकला पर जाने–माने लेखक भाटिया के अनुसार स्मार्ट सिटी 21 वीं सदी का शब्द लगता है, जिसे किसी स्मार्टफोन या स्मार्टहाउस की तर्ज पर सोचा गया हो। लेकिन किसी शहर को स्मार्ट कहना मेरे हिसाब से थोड़ा ज्यादा हो जाएगा क्योंकि हर शहर की अपनी संस्कृति सिटी' शब्द का प्रयोग सही नहीं लगता है।

अगर आम आदमी की बात करें 'स्मार्ट सिटी' शब्द सुनते ही सबसे पहले तस्वीर आती है एक ऐसे शहर की जो काम करता हो, जहां लोग साइकिल चला पाते हों, सड़कों पर पैदल चलने की जगह हो, पार्क हो, यातायात सुलझा हुआ हों।सड़कें और इमारतें योजनाबद्ध तरीके से बनी हों, शहरी और सार्वजनिक यातायात सुलभ हों। बिजली, पानी, इंटरनेट जैसे आम सुविधाओं की अबाध्य आपूर्ति हो। बाकी, शहर का कैरेक्टर धीरे–धीरे ही तैयार होता है।

चुनौतियांः

ये किसी नए बसे शहर पर शायद बेहतर फिट हो लेकिन पुराने कैसे बनेंगे स्मार्ट?

भारतीय शहरों 'स्मार्ट सिटी' बना पाना आसान काम तो बिल्कुल नहीं होगा। सबसे बड़ी दिक्कत ये है कि हमारे ज्यादातर पुराने शहर अनियोजित है, उनकी सही मैपिंग उपलब्ध नहीं है। इन शहरों की 70 से 80% आबादी अनियोजित इलाकों में रहती हैं, इन इलाकों में लगातार आवाजाही होती रही है। ऐसे में आप काम की शुरुआत भी कैसे कर पाएंगे। इससे आसान तो होगा कि नए शहर ही बसाए जाएँ, जहां हर चीज की प्लानिंग पहले से की गई हो।

क्या 'स्मार्ट सिटी' जैसे कॉन्सेप्ट से विदेश में भारत की छवि को फायदा होगा?

एक अंतराष्ट्रीय छवि तैयार करने के उद्देश्य से ही सरकार स्मार्ट सिटी परियोजनाओं पर काम कर रही है लेकिन एक मत यह भी कहता है कि वो काम करने वाले शहर बनाए, जहां काफी कुछ हो सकता हो, इसके बजाय की उसे सिर्फ स्मार्ट साबित करने की चिंता की जाए।

क्या पूरे देश में 100 शहर चुनकर उन्हे 'स्मार्ट' बनाने की बजाय बुनियादी सुविधाओं पर ध्यान देना चाहिए ?

यह सिर्फ सड़कों और मूलभूत सुविधाओं की बात नहीं वरन हमारे शहरों की संरचना और लोगों के रहन–सहन में बड़ी जटिलता है।

शहर की एक बड़ी आबादी पक्के मकानों में रहती है, जबकि लगभग उतनी ही आबादी सड़को और झुग्गी–झापड़ियों में रहती है। सरकार को ऐसे शहर बनाने चाहिए, जहां लोगों के रहन–सहन में थोड़ी समानता दिखे। बाकी कम्प्यूटर और इंटरनेट सेवाएं तो इसके बाद भी शुरू की जा सकती है।

क्या है ग्वालियर का स्थानः–

अगर बात ग्वालियर की करें तो स्मार्ट सिटी के लिए भले ही टॉप 7 सिटी का चयन होना था, लेकिन असली मुकाबला चार महानगरों के बीच था। कांटे के इस मुकाबले में ग्वालियर 84 अंक के साथ चौथे पायदान पर है। चौथा स्थान पाने की वजह से स्मार्ट सिटी के प्रथम चारण में ग्वालियर का नाम शामिल नहीं हो पाया। शहर की एक बड़ी आबादी पक्के में रहती है, जबकि लगभग उतनी ही आबादी सड़कों और झुग्गी–झोपड़ियों में रहती है। स्वच्छता सूची में भी ग्वालियर 400 वे स्थान पर है।

तो कैसे बनेगा ग्वालियर स्मार्टः–

सबसे पहले ग्वालियर के प्रदुषण को नियंत्रित करना होगा। यह सुनिश्चत करना होगा कि शहर का हर एक युवा कौशल से परिपूर्ण है व कंप्यूटर ज्ञान से युक्त है। शहर की सडके साफ व सुनियोजित हैं। इस कार्य में शहर के डिजिटलीकरण में तकनीकी संस्थानों को बढ़ कर हिस्सा लेना होगा।

तभी यह कार्य सफल हो सकेगा।

अंत में यही कहना चाहूँगा कि–
'मिलेगी परिंदो को मंजिल
ये उनके पर बोलते है,
रहते है कुछ लोग खामोश
लेकिन उनके हुनर बोलते है।।
खुशबू बनकर गुलों
से उड़ा करते हैं,
धुआं बनकर पर्वतों
से उड़ा करते हैं,
ये कैंचिया खाक हमको
उड़ने से रोकेगी,
हम परों से नही हॉसलों
में उड़ा करते है।'

जब हिन्द । जय भारत।। ◆

Euthanasia should be legalised

Mahima Gupta

Hello, I am here to present my views regarding legalisation of euthanasia, a debate since ages. Let me first introduce you to the term euthanasia i.e. simply a good or a painless death given to someone in assistance of the doctor if and only if he is suffering from an incurable painful disease. No one can be forced to suffer and if so happens then it should be considered as much of a crime to make someone live who with justification does not want to continue as it is to take life without consent. One should have a right to die when life becomes excruciating or undignified. What's the good in seeing a person gradually declining both physically and mentally and even if this is not the case then the huge amounts of medications giving no results would often leave them in delirious and incapable state and so I whole heartedly feel that it is surely more humane to allow such people to choose the manner of their own end, to at least celebrate with family, friends and doctors before leaving for the heavenly abode. They should have the right to die with dignity. What is the sense in dying after a long coma that would leave the person to being nothing but an inanimate burden not on the family or society but on oneself. You all know that the most

sacred element of a person is his identity as an individual and soul. Once this is lost much of the sanctity and fulfilment in life is lost.

I would like to mention that in such situations where person is facing hostile conditions feeding tubes of the patients are removed and the person is starved to death. If you talk about humanity then I would like to ask you the audience that where has that humanity gone when you are not giving a person to eat and letting him die.

The article 21 of our constitution guarantees us the right to live simply because we own this life and for this very reason we should also be given the right to die, of course with proper terms and conditions. When the government itself can take someone's life for an apparent reason then why can't we. We too have a strong reason and let me remind you my dear friends that it is obligatory and not mandatory to opt for euthanasia.

You might be thinking that how can a doctor take someone's life; it would be simply against his profession. So my dear friends, doctor is not only the one who is specialised in healing arts but is also someone who is licensed to practise the use of drugs and

obviously to euthanize is to use drugs.

Now let us come to the most widespread misconception about euthanasia as a suicide or a murder. I would firstly like to make the difference between the two very clear. A suicidal person may have more to live for in life. He may discover the next day to be a new ray of hope but that ailing person shall not and cannot see beyond his pains and sufferings rather his next day would be even worse.

If you people have watched the movie Guzaarish, then you must have seen that the prosecutor could not stand just for sixty seconds in Ethan Mascaranas' shoes and was expecting the person to bear the pain for his whole life.

God forbid, if you have some kind of incredibly painful disease where you feel you are being skinned alive and burned, would you not want to end your sufferings or would you like to live it out in extreme pain and then die.

Well in any case its either die now peacefully or die later painfully.

Therefore, I would like to conclude that euthanasia is the only and only solution for a person suffering from extreme pain and hence should be legalised. ◆

The Internet of Things (IoT)

Ankur Singhal

A Digital Revolution! Yes, it has started a digital revolution all over the world. The term "Internet of Things (IoT)" was coined by British entrepreneur Kevin Ashton in 1999. Formally, it can be described as the network of physical objects or "things" embedded with electronics, software, sensors & network connectivity, which enables these objects to collect & exchange data.

Though the world is moving towards a smarter, automatic & a more technical space surrounded by the Internet of Things, it also raises many questions out of it which are more worrying than others.

The first question arises- Will the IoT lead to the situation where we are surveilled in our own homes?

In this modern era, things are connected digitally whether these are humans or the physical objects. Being digitally connected, it eases the tasks but something that is hazardous is: access to private data. Data privacy is one of the major concerns while using such smart embedded systems or devices. We use such smart systems to ease our tasks but many of these have access to our private data which is being used in one form or the other. According to a survey, Data privacy is the most preferred service of any company. Here the trustfulness between the service provider and the user comes in. Again another question arises- Will the IoT work if people don't trust companies? It would not be possible for IoT to work in these situations. It should be only our wish to use the part of the data by the companies against its services. We can say that IoT can't be perfectly secured.

Another question comes in – Will the smart systems be able to take moral decisions?

Embedding "smart" into a device means device is ready to automate basic decisions. Let's take an example of a smart sprinkler and how does it work? It tests the soil in the garden, checks the weather report & decides whether to start spraying. We don't have to worry about the dryness of the soil, it will check in its own. But if we take another example of much awaited technology to roll on roads i.e. self-driving or self-automated cars, how will it be decided who the car kills when someone has to be killed (if such situation arises on the road). Above are some serious concerns that arise with this and we have to fix these problems for the usefulness of the human world. Everything has its pros & cons. If we look at its other side, it really seems like future tech spine of the modern era. Heart monitoring implants, Biochip transponders on farm animals, automobiles with built in sensors, field operation devices used in search and rescue operations, smart shopping systems, integrated transport system and many more, all are examples of IoT which we are using and have eased our tasks to perform and record. Surely, it has revolutionized smartness, automation & digitalization! Someone has righty said-"Everything that can be automated will be automated". ◆

The Internet is the first thing that humanity has built that humanity doesn't understand, the largest experiment in anarchy that we have ever had.

-Eric Schmidt, Google

We are still in the very beginnings of the internet. Let's use it wisely.

-Jimmy Wales

The Diaries of Unemployment
Nanda Kumar Ambati

Every graduate student will be on cloud 9 after successfully completing the last assessment/VIVA or whatsoever that virtually entitles them to the terms that are synonyms of graduate. I will try to see that the readers can never decode at any stage whether this is an auto-biography or a biography of one of my friends.

The graduate student I'm talking about has an offer-in-hand that was achieved during the final year. The offer received will make him work in the World's Cheapest City (According to a reliable Survey). But, little does the guy know that winters are coming. I hope everybody GOT it. The two phases over here that most of them face are , one where the offer-in-hand satisfies the thirst for employment and the other where one tries to achieve a better job than the one in hand in the meantime of being asked by the prospective employer to be a part of their team and guard the wall. And, interestingly both are equally worse than the other.

Based on the Senior Advisory Committee's (everybody knows who they are) inputs the latter option is chosen and implemented. The number of applications made on various career sites; sent through Emails to VC's, Advisors, Founders; through potential referrals is N, where N is highly significant in this scenario. There is a slight share of pie sectored for the Mass Recruitment Events too in N where the peers with whom the competition lies ahead have come across the terms related to Institute of National Importance for the first time in their lives (I don't know what Arnab is doing when Young India doesn't know about these terms). The reason why this is highly annoying is on a general basis it takes 45 minutes to an hour for the job related activity like apply/ send an Email. This is an un-paid work but whose valuation will be really high if you get a reply back and on the other hand gets devalued to infinity on the negative side if no one turns up to attend your request. Attending various summits will help you land in one dream job of yours as they are specific talent search markets and who knows there might a tailor-fit job ready for you to put your feet in.

I again remind you all that the offers are still alive but in vegetative state. And, as widely criticized in the sub-continent a student's expenses are covered by their family; a single employee takes care of one's own expenses but history has never cared to mention about this bridge course of time. This is the time when we dream of fulfilling all our desires aka go on alone trip; read a high-rated, no-download only hard-copy novel; watch a sci-fi/ action movie which all need quite a few bucks which are categorized as unallocated, not-required expenses by the elder siblings (:P, I've two). And, mind you India hasn't devaluated the INR unlike China lest to help the unemployed graduates.

It's a kind request to NaMo to address these people too with a mission or yojana or whatever.

Coming to the end note we can quickly summarize saying, prepare for the winters well ahead; stay in touch with the alumni (no matter when they passed-out), they'll lend you a helping hand treating you as their younger sibling which I've personally experienced; attend summits sponsored by YS, NASSCOM, Fund Investors, Startup Assoc--iations, make a note of life-lessons from all the kinds of people you meet whether in a bar (any), indoor stadium, gymnasium, summit, LinkedIn, Facebook. As far as people known to me are concerned it has been one of the most painful phases in a youngster's life that shall eventually carve the best out of a person if faced with patience.

This is the collection of various excerpts from various youngsters' diaries and it shall've no endings.

Nanda Kumar Ambati (IPG-2010) is curently providing services at Royal Bank Of Scotland. He has done his masters in management. ◆

MOTIVATION
Abhinav Anand

The internal and external factors that stimulate desire and energy in people to be continuously interested and committed to a job, role or subject or to make an effort to attain a goal is what we call motivation. Many a times such situations come in our life due to which we want to give up. We actually need someone or something which can show us the right direction and make us realize our capabilities. Even in our Bollywood movies there is a scene when the Hero is struck by the villains and all his energy goes down, suddenly he begins to remember all the harms made to him like killing his family, kidnapping his love and accumulating all these, just one punch is enough for his victory. This is what we call motivation. Sometimes we give up because we think that things are beyond our ability which is completely bullshit and it is also said that "we are only condemned by the walls of our thinking".

Being a student from Kota, I have a number of motivational stories, one of which I would like to share.

Around 10 years ago, there was a student named Anupam Agarwal who came to Kota after completing his 12th .He was suffering from appendix problem. Doctors suggested him an operation but he and his family were tried to prevent it. He was a good student and teachers expected his rank to be around 2000-3000 in IIT-JEE. During November, his problem became severe and he went through an operation. Teachers also lost hope and those students who dropped an year can understand that after November a single second contributes to the career. After his operation doctors suggested him to take 15 days rest, but after 2 days he was present in the class. Teachers enquired from his mother who used to sit outside for him ,his mother told the teachers he was being so restless and worried for his career at home that it was better to take him to the class. And this was not the only thing. He also went through another operation in February and yet his All India Rank was near 500.There are also a number of other examples .

SRK used to borrow Rs.20 from his friend to travel to the Film City, Lionel Messi at the age of 11 was removed from his football team after being diagnosed with a growth hormone deficiency, which made him smaller in stature than most kids of his age. Einstein was not able to speak until he was almost 4 years old and his teachers said "he would never mount to much". From all these examples it is clear that all of them never lost hope and never let their love, passion for work go down by what others say about them.

So there is always something very strong, something very compelling which provides us the adrenaline to succeed in our mission and we should never lose our hope as we are not defeated until we accept the defeat. The basic difference between winners and losers is that "losers quit when they fail and winners fail till they succeed". All we need is to find the factor which provides us that rush of adrenaline. ◆

"Little things affect little minds."
-Benjamin Disraeli

INTERVIEW WITH
Mohd. Zulfi Khan

Mohd. Zulfi Khan is the technical head at Info Edge Ltd. which is an Indian e-commerce company founded in 1995 headquatered in Noida. His work and achievements are an inspiration for everyone.

Q) What is your impression of the institute and the students here?
A) The institute has got a lot of capable students who have good and competitive coding skills. This is of utmost importance to us since we hire software engineers. Apart from coding skills students here have knowledge of emerging trends like big data architecture which reflects their awareness.

Q) When did you join Info Edge and what has been your philosophy throughout?
A) It has been two and a half years. For me it's all about hiring best engineers from prominent institutes like IITs, NITs and IIITs. We always search for the best talents who can help us in improving our performance and fulfilling the needs of our customers.

Q) What qualities should be present in today's youth for them to be more market friendly and employable??
A) Basic programming knowledge is a prerequisite. Above that, the will to learn new things is always desired. If you are not open to new ideas and your ideas remain stagnant, then your progress is bound to be hindered. Keep learning.

Q) Could you brief us with the your competitors and how you deal with them?
A) Considering our websites, naukri.com has no notable competitor since we have 80% of the market in our hands. Sites like monsterindia.com are lagging far behind. Our matrimonial website jeevansathi.com is running pretty good but we face competition from shaadi.com and bharatmatrimonial.com. 99acres.com is also flourishing even if it has tough competitors like magicbrics.com and housing.com. We take competition in a healthy manner and keep

Q) How do you deal with the pressure when you face such challenging competition?
A) Pressure handling has a direct link with work experience. Once you go up the ladder, it becomes easier to handle pressure and to come up with solutions. Being a beginner, you might ask for help from seniors and friends but once you gain experience you begin to handle things by yourself.

Q) Whom do you see as better employees- freshers' or experienced?
A) Frankly speaking, dual degree is a hassle-free endeavour.It provides you with an option after your three years of education, to decide the path for the rest of your life. You have an idea of your interests and then can easily choose between tech and management.

Q) It is often the case that students with good CGPA are not technically sound and vice versa. What do you prefer- CGPA or technical skills?
A) If the curriculum is the reason behind the low GPA , I'll say that students have to go through it before choosing their college itself. But we not only look for GPA, we also compare it with their 10th and 12th standard board marks. If all the scores are below average, there is no scope of the person being a good performer.

Q) Can you share any experience which always puts a smile on your face?
A) During my post-graduation days, we used to collect funds from cooperatives and used it to deposit school fees of underprivileged children. I always cherish it as a wonderful experience.

INTERVIEW WITH
Chaitanya Gupta

Chaitanya Gupta is currently working as Software Engineer at Paytm. He is also a part of recruitment team at Paytm. He had previously worked with Samsung Electronics and is an alumni of ABV-IIITM Gwalior.

Q) How does it feel to be back in the institute not as student but as a recruiter this time?
A) It feels great as IIITM has been a part of me for some crucial years of my life. I have a lot of memories associated with this institute and the IIITM family.

Q) What vibes do you get out of the students here at ABV-IIITM?
A) The students at IIITM are getting more technically sound as compared to the times when I was a part of the institute. They are more involved in coding and are much more aware of the recent tech around them. The infrastructure of the institute has also become more tech-savvy and obviously all these lead to positive vibes from the both the students as well as the institute.

Q) Taking inspiration from Narendra Modi's initiative of 'Smart City', what is your vision to turn Gwalior into a Smart City in the coming 10 years?
A) The city has been doing well since long. There have been drastic changes in infrastructure and cleanliness of the city. As a responsible citizen we should keep it that way and also put in efforts to improve the situation. Also it is a responsibility endowed upon the authorities how easy they can make the access of the services for the common

Q) How should one decide whether to take up a job or follow your dreams and become an entrepreneur? What should the decision be based on?
A) It is a totally conscience driven thing. The current trend is to go into the market and earn money. People are taking risk out of nowhere. Becoming an entrepreneur has been a commoner thing for people who want to get out of their jobs. I personally believe that if you feel that your idea is worthy enough to create an impact on people then go

Q) It is told to maintain a proper work life balance. Is it possible in today's world with cut-throat competition?
A) I would say 'Just Keep Things Simple'. Work Hard. Play Hard. Set your priorities well. It depends upon each individual how they balance things. There is no set formula for it.

Q) What has been the reason for exponential growth that PayTM has accomplished in the last few years?
A) This is probably because PayTM addresses "people's" problem of market, recharge and other basic necessities of the current world. It purely reflects the life of a person in a metro and caters to their needs on the click of their fingers. They have no time to order food or book tickets or do any such things in person. PayTM offers an easy escape to them. To add on, it is backed by AliBaba which is a major role player.

Q) Is the sharp rise in the number of people joining this sector a big worry?
A) It is not a cause of worry although the situation of recession may arise yet again. I would say that all those who join this sector just for the sake of money are doing injustice to themselves. Please don't get into things just because of the money associated with it else you would do more harm to yourself than good.

Q) How does the industry see integrated degree holders (like in our institute)? Do they welcome them or do they have some apprehensions in accepting them?
A) I don't think it is of much importance when one plans to take up a job. It the service sector it is only your work that counts. Moreover, if you embark upon an entrepreneurial venture then nothing but your creativity matters. However, it might be of importance if you plan to pursue research.

Q) What are your suggestions for students aspiring to join PayTM?
A) That can be summed up by our company's motto… "Move fast. Great things make history."

Ruby On Rails

Abdul Qadir Fairidi

Ruby on Rails is a web framework based on model-view-controller architecture written in Ruby which is a language designed to increase the happiness of developers.Ruby programming language is clean,elegant,easy to read. As the name 'Ruby' indicates itself, the language is designed to be a joy to use, thanks to readability and elegance. So if you dont have a grasp of Ruby on Rails, it is not as challenging to learn.Personally,Ruby is very handy.Let me illustrate simple Monkey Patching-if you dont like the behavior of a specific piece of a framework, you have the flexibility to modify it:

```
"1".to_i
#=> 1

class String
  def to_i
    raise 'aqfaridi'
  end
end

"1".to_i
#=> RuntimeError: aqfaridi
```

Its as simple as that, with just five lines of code, we have taken an existing class

and overridden its behaviour. Now-a-days almost every new tech startup is using Rails for rapid development. Rails development is fast. To be precise, I mean time required to develop a functioning and slick website in Rails is far less than the time it would take if you use another web framework by 30-40 percent.This helps in large projects where we have to figure out how easy or hard a new functionality is to implement.

Rails is a very fast web framework especially with the emphasis on "convention over configuration". Default behaviors mostly make sense - and if not, you have full control to override them. Rails apps come with preset configurations and defaults that reduce the decisions that developers need to make when writing the code. Making less decisions not only saves time but also means developers will make better choices on the decisions that matter i.e inner workings of your application. It makes developers more productive.

The Ruby development community is extremely active and responsive to support via the huge library of gems - the best line of code is the one you don't have to write :P. If you are integrating with other platforms, chances are there is a Ruby gem for that so instead you should spend time coding on your core idea.

Gems like Omniauth,Active Merchant,EventMachine etc. are very useful.

Omniauth : OmniAuth is a Ruby authentication framework that provides a standardized interface to many different authentication providers such as Facebook, OpenID, and even traditional username and password.

Capybara : Capybara helps you test Rails and Rack applications by simulating how a real user would interact with your app.

Active Merchant : Active Merchant was developed for usage in Ruby on Rails web applications from the e-commerce system Shopify. Shopify's requirements for a simple and unified API to access dozens of different payment gateways with very different internal APIs was the chief principle in designing the library.

EventMachine: EventMachine implements a fast, single-threaded engine for any network communications. It is extremely easy to use in Ruby. EventMachine wraps all interactions with IP sockets, allowing programs to concentrate on the implementation of network protocols. It can be used to create both network servers and clients.

The Ruby community has the culture of rails developers to write tests for their code. Tests are snippets of code in project that make sure the other lines of code are working correctly.It is useful in case of new changes in project. Introducing new feature in Project always costs bugs which could potentially cause harm to your business in lost revenue and good-will before they're corrected. With test suite, you would have been alerted to the new bug as soon as it appeared and you would have fixed it then and there.

Writing tests is an integral part of the Rails framework. Rails will automatically generate a corresponding test file for every code file you create. Tools like CircleCI assure that your app is working well, by emailing you if there's a test that fails. Every good Rails developer knows the importance of writing tests for their code, and this is a cultural trend that just is not really present in other framework

developers communities. Rails is a inherently RESTful architecture which makes building a REST API pretty easy : REST (REpresentational State Transfer)

What does that mean ? These days , most of the web services are not just stand-alone websites, they interact with the external world also. Simply your own project mobile app that pulls its data from your website, or maybe its another website pushing content to your website the same way Twitter and Facebook do.

Rails has a very large community of developers which remain active since decades. You have heard of Rails' cousin Django framework .Django is also very good framework, but has a smaller community of developers. So if a nasty bug appears in your project, you have a massive community of peers to help you out and find the best solution.

Rails is very secure framework used by some of the giant

companies online including GitHub,Twitter, Scribd,Slideshare, Groupon etc.Ruby on Rails is open source. Its the cost savings for any startup to run on a free operating system and work with mostly free databases and web servers. Rails is suitable for applications that require large content input, storage and management like CRM, CMS or e-commerce systems.

Almost every startups prefer to deploy their apps on a PaaS (Platform as a Service) provider as PaaS reduces initial app deployment cost. Most of these support Ruby on Rails out of the box like Heroku, Engine yard etc.

Ruby on Rails is most powerful framework for present tech startup boom available today,its the best choice, at least for now, for rapid and productive development.◆

This course about Ruby on Rails is at "https://www.codecademy.com/courses/learn-rails" will give you a fair idea on what all things could be done with this technology.

Machine Learning

Sarthak Joshi

Have you ever thought about how you get those google instant suggestions for your search when you have not even typed a single complete word? Or thought of how Google translate works? As a child you would have definitely thought at least once to build a self-driven car. These might seem to be working miraculously but in the core of all such technologies lies the application of machine learning. It is one of the most highly demanded technologies in IT industry as every product based company wants to add the intelligence provided by the machine learning algorithms to their products. Not only in the field of information technology Machine learning has found its application in other fields such as medical science where it is being used in detection of cancers using the past data collected from the patients.

The advantage of using a machine learning algorithm is that unlike a normal condition based program where you will be setting some parameters and their output will govern your decision, machine learning is purely based on the statistics and data from the past experience of input and output. Computers are given a huge data set which makes the computer "learn" how to deal with the problem in the real life. It is analogous to a small child learning how to speak, write etc. by seeing others do the same activity. This can be easily explained by an example of a bot that can play chess. By feeding the data of wins and losses occurred by making a particular move we make the machine "learn" to evaluate a move and using the somewhat same logic as a human would use to play the game that is through experience.

Coming to the point of how to learn machine learning there are some prerequisites for it first and foremost is a mathematical background. Good knowledge of core subjects of computer science like algorithm and data structures, will definitely help in fast implementation and development of code. Basic knowledge of calculus and probability theory will be greatly helpful in understanding the algorithms as their proof involves them. When at a novice level I would advise to first develop code in Matlab or Octave as they provide a very good set of mathematical libraries and save you from being involved in the intricacies involved in matrix operations. Afterwards you can switch to Python for a fast running time for algorithms. There are many great courses to start with machine learning but I would refer to you to start with Cousera it has a very good course on machine learning by Stanford University. Though this course does not go very deep into the application of machine learning but gives an insight into the vastness and the level of problems that machine learning tend to solve. Machine learning can feed into several different capabilities: Natural Language Processing, Machine Vision, Robotics, Neural Networks, etc. If you're not sure yet which you may enjoy, I recommend looking into some of these specialties and picking up an open-source project on them. Given below is the link of a website that uses machine learning in its working.

www.how-old.net recognises your age using machine learning.

Other applications you can directly observe whenever you search anything next time on Google or use google translate. To start learning machine learning I suggest to visit *www.coursera.org/learn/machine-learning.*Here are some more links to the recent developments which use machine learning that will give you a deeper insight into its vast application(bit more advance)-

http://karpathy.github.io/2015/10/25/selfie/

Machine learning is certainly the next Big thing in IT and a must to have skill in an engineer's kit.◆

Infotsav 2015

Kushagra Varshney

Reading the title you must have figured out that I will try to narrate the story of Infotsav'15 through this composition. Was fest Successful? Did the team deliver on key issues? Did we do justice to our work and to Infotsav? These few questions must have flashed in your mind. But the tract will not answer any of these and will leave it to your prudence to answer these. The write-up will take you to our journey, the essay would tell you about our endeavour to build the road to Infotsav'15.

Infotsav was something that we always wanted to be there, but somewhere we were withdrawn to show our itch. Then one day Jayant presented his thought, Shubham recited it, Rohit always had some love towards Infotsav and then one day Milan came to me to take things forward. Though we all showed zest but somewhere back in our brain we had this fear of failure as previous two versions of Infotsav were not upto the expectations and then an year lapse but what kept us pushing was the zeal of starting afresh. With this fervour we started our exertion to pave the road to our destination. I would avow that most of our pre-plans failed miserably and fate always had a bunch of surprises for us.

We needed a dedicated team to work round the clock, but this was never a problem since we had remarkable juniors. We made sure that every individual is respected, this developed a sense of ownership for the fest among them. We also wanted the team size to be as small as possible and we strictly followed the policy of Shape up or Ship out though our fate helped us to never use ship out. Everyone did their work from Third year EMT's to event organizers and executives. We were very reluctant to take work from freshers, but these souls time and again showed their interest to contribute to the fest, around three week time was left the pressure of work increased, then we decided to show deference to their zeal and included them in the team and they startled us by their work. We had all the ingredients to build the road but we lacked with the map or direction, Dhar sir was that guiding light that showed us the direction to our destination. Director Sir always encouraged us and his vigilance always kept us alive and awake, one of his meeting with the team proved to be path breaking, the meeting took the team's dynamism to a whole new level. I would take this moment to thank whole support staff, they were never reluctant to our requests. They worked overtime and even on national holiday just to deliver perfection.

Promotion was kept at the focal point of all the affairs, we wanted fest to be hyped outside institute but also wanted to keep it low profile inside the campus, there was a fine line between these two and we had to walk on the line, falling on either side would have resulted in somewhat less enthusiastic results. Another shocker that startled us was reluctance of second years to go out for promotion. I would mark us at fault since at first we were unable to make them believe in us, everyone feared that their money wouldn't be refunded but later somehow we convinced them, later on their promotion work amazed us. This not only created a positive environment for the fest but also proved constructive for the image of Institute. Nobody will deny the fact that designing was way beyond expectations the artwork displayed was due to the untiring efforts of designing team which was directed by Faiz. Riyaz's artwork of Dr. Kalam needs to be mentioned here he and his team beautifully potrayed Dr. Kalam containing around two thousand names of institute students. You can visit art gallery of the institute to witness the masterpiece.

Robotics team needs a special mention, their work amazed everyone, rush in the event was eye-catching even the count of participants quite well surpassed our imaginations.

I would like to share with you the story of laser tag, we had finalized laser tag from a company based at Pune. We were to give them a fixed amount and in return they would organize laser tag for us, but two days before the fest the company e-mailed explaining their inability to come. We were demoralized after reading the mail, but then it also encouraged us to find something else as replacement and we found some guys who would organize paintball during the fest. I would also like to share that we deviated from tradition while spending the money. We made sure that money was spent cautiously and cost cutting was done where ever necessary and all these measures led to the completion of the fest in a much lower amount of what was allocated to us. When I started the composition I was suspecting if I will be able to write much but now I had to stop my pen since our beloved editor had to manage too. A party is soon lined up for the Infotsav family I'm sure that next year a better fest would be administered by a better team. I'm sure Infotsav will grow year by year and will bring more acclaim to the Institute.◆

Special thanks To...

Ms. Divya Kumari (IPG 2014)
Comic sketch Creator in realising Abhishar and his friends in "Friends, Fun and Dreams" in the current edition of Abhishar.

Mr. Vaibhaw Vishal (IPG 2014)
Invaluable efforts in designing the cover for Abhishar volume 5.0

AASF EXECUTIVE MEMBERS

FACULTY ADVISORS

Dr. A.K. Saxena
Dr. Anupam Shukla
Prof. Om Vikas
Dr. P.K. Das
Prof. Y.M. Gupta
Dr. Joydip Dhar (2007-til date)
Dr.K.K. Pattnaik (2009-til date)

2001
Ashish Jha
Saurabh Sharma

2002
S. Ajay Kumar

2003
Dhruv Joshi
N. Raghavan
Shishir Chandrol

2004
Amit Gupta
Kunal Kapoor
Mayur Gupta

2005
Aditya
Arora

Manyata
Goel

Rahul
Kala

2006
Anirudhh
Srivastava

Vipul
Pandey

Lt. Gunjan
Nishant

Prachi Jain

2007
Anurag
Upadhyay

B.Sushmitha

Ronak Dhoot

2008
Ark Mishra

Kamya
Jaiswal

Lt. Tushar
Sharma

2009
Ankita Ahuja

Ankit Katiyar

Ketan Jain

Nitish Bhardwaj

Payal Anand

Renu Verma

Sidhharth
Dharmadhikari

Vishwa Prakash
Gayasen

2010
Lt. Abhinav
Saxena
Rajesh Kumar
Swati Sinha
Surbhi Arora

2011
Adiyta Verma

Chitranjali Banjare

RajKumar Verma

Riya Naval

2012
Annu Sachan

Kushagra
Varshney

Rohit
Retnakaran

Shreya Lohani

2013
Shreya Sinha
Shubhankar
Mohan
Sneha
Saharawat
Tanmay
Gadpayle

2014
Anjali Munjal
Shubham Jaroli
Shubham
Shukla
Vishakha
Chichra

Coalescence of Knowledge & Skills

Abhigyan Abhikaushalam Students' Forum

Abhigyan Abhikaushalam Students' Forum
(ABHISHAR, A-216, ABV-IIITM, GWALIOR- 474015)
www.aasf.in