

# **THE BYTE**

## **NOVEMBER 2018**



**Department of Computer Science**  
**IMS Engineering College, Ghaziabad**

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# Editorial

*We feel immense pleasure and happiness that we place in the hands of our readers monthly magazine "THE BYTE", November 2018 issue. This magazine is a platform that exhibits the literary skills, innovative ideas of teachers and students.*

*Though editing this magazine seemed like a herculean task at first, It has been made possible by the grace of God. And I would like to thank to Dr. Pankaj Agarwal (HOD CSE), Dr. Avdesh Gupta, editorial team members (Mr. Anurag Gupta & Ms. Juhí Chaudhary) and all student coordinators (Nitish, Suyash, Mukhar, Krati, Priyansh, & Priyanka) and my colleagues for helping us pull this through.*

*We express our considerable appreciation to all the authors of the articles in this magazine. These contributions have required a generous amount of time and effort. It is this willingness to share knowledge, concerns and special insights with fellow beings that has made this magazine possible.*

*Thank you all !!*

*Sapna Yadav*

# Vision/ Mission of Institution and Department

## Vision (Institute)

Our vision is to impart vibrant, innovative and global education to make IMS the world leader in terms of excellence of education, research and to serve the nation in the 21<sup>st</sup> century.

## Mission

- To develop IMSEC as a centre of Excellence in Technical and Management education.
- To inculcate in its students, the qualities of Leadership, Professionalism, Executive competence and corporate understanding.
- To imbibe and enhance Human Values, Ethics and Morals in our students.
- To transform students into Globally Competitive professionals.

## Vision (Department)

To be recognized as a Centre of Excellence imparting quality education and creating new opportunities for students to meet the challenges of technological development in Computer Science & Engineering.

## Mission (Department)

- To promote technical proficiency by adopting effective teaching learning processes.
- To provide environment & opportunity for students to bring out their inherent talents for all round development.
- To promote latest technologies in Computer Science & Engineering and across disciplines in order to serve the needs of Industry, Government, Society and the scientific community.
- To educate students to be Successful, Ethical and Effective problem-solvers and Life-Long learners who will contribute positively to the society.

# Program Educational Objectives

- Graduates of the program will be able to apply fundamental principles of mathematics, engineering, management, basic programming languages in problem understanding & formulating its solutions. They will be aware of the role of computing in multiple disciplines.
- Graduates will learn to apply the principles of advanced computer programming & approaches, software engineering, project management, emerging techniques & tools while developing real world computational solutions and projects. Graduates should also learn to collaborate & apply innovative aspects in problem solving.
- Graduates will enhance their technical, aptitude, communication & professional skills through value addition programs, project based learning, engineering events, self-learning, research, interaction with industry & alumni. Help our graduates to establish a productive Computer Science and Engineering career in Industry, Government or Academia.
- To promote the understanding of professionalism, ethics, social responsibilities among graduates. They will contribute to the society through active engagement with professional societies, schools, civic organizations or other community activities. To promote professional capabilities through life-long learning.

## PROGRAM SPECIFIC OUTCOMES (PSOs)

- Student should learn to demonstrate the basic understanding of Computer Science & Engineering fundamentals, programming, and professional/social ethics and apply mathematical foundations to design & solve computational problems.
- Student should learn to apply analysis, design, development, testing & management principles in the development of computational solutions & software systems; He/she is expected to function effectively in development teams.
- Student is expected to gain enough value addition and technical expertise on latest industry specific skills through self learning & training. They are expected to have good communication skills with correct attitude and aptitude.
- Students are expected to inspire for lifelong learning & do well in their professional careers. They are also expected to act as a good citizen by inculcating in them moral values & ethics.



“The art challenges the technology,  
and the technology inspires the art.”

- John Lasseter

## INSIDE THIS ISSUE:



ARTICLES

LATEST TECHNOLOGIES

LITERARY

MOTIVATIONAL STORIES

ACHIEVEMENT

UPCOMING EVENTS

DEPARTMENTAL EVENTS

ALUMNI TALK

CURRENT AFFAIRES & CODING CHALLENGE



A collection of writing tools is arranged on a light-colored wooden desk. In the foreground, an open spiral-bound notebook with lined pages is open. To its left lies a fountain pen with a light-colored, textured barrel and a silver nib. Above the fountain pen is a small, dark inkwell with a white label. In the background, two ballpoint pens are visible: one with a silver barrel and black grip, and another with a silver barrel and black grip. The word "ARTICLES" is written in a large, stylized, black serif font with a white outline, slanted across the notebook page.

# ARTICLES



## *Women Empowerment: Winds of Change*



Women empowerment has become the buzzword today with women working alongside men in all spheres. They profess an independent outlook, whether they are living inside their home or working outside. They are increasingly gaining control over their lives and taking their own decisions with regard to their education, career, profession and lifestyle.

With steady increase in the number of working women, they have gained financial independence, which has given them confidence to lead their own lives and build their own identity. They are successfully taking up diverse professions to prove that they are second to none in any respect.

But while doing so, women also take care to strike a balance between their commitment to their profession as well as their home and family. They are playing multiple roles of a **mother, daughter, sister, wife and a working professional** with remarkable harmony and ease. With equal opportunities to work, they are functioning with a spirit of team work to render all possible co-operation to their male counterparts in meeting the deadlines and targets set in their respective professions.

Women empowerment is not limited to urban, working women but women in even remote towns and villages are now increasingly making their voices heard loud and clear in society. They are no longer willing to play a second fiddle to their male counterparts. Educated or not, they are asserting their social and political rights and making their presence felt, regardless of their socio-economic backgrounds. While it is true that women, by and large, do not face discrimination in society today, unfortunately, many of them face exploitation and harassment which can be of diverse types: **emotional, physical, mental and sexual. They are often subjected to rape, abuse and other forms of physical and intellectual violence.**

Women empowerment, in the truest sense, will be achieved only when there is attitudinal change in society with regard to womenfolk, treating them with proper respect, dignity, fairness and equality. The rural areas of the country are, by and large, steeped in a feudal and medieval outlook, refusing to grant **women equal say in the matters of their education, marriage, dress-code, profession and social interactions.**

Let us hope, women empowerment spreads to progressive as well as backward areas of our vast country.

# 15 of the Most Powerful Women in Tech

## WOMEN IN TECH



### 1. Sheryl Sandberg - COO, Facebook

In June 2012, Sheryl Sandberg became the first woman to serve on Facebook's board of directors. That same year, she made Time's 100 Most Influential People list. Prior to her work with Facebook, Sheryl was the chief of staff for the U.S. Secretary of the Treasury and was later employed at Google, serving as Vice President of Global Online Sales and Operations.

She is the author of the book *Lean In: Women, Work, and the Will to Lead*, which explores themes like feminism, sexism in the workplace, and the societal/personal barriers to gender equality in the professional world. It topped bestseller lists and sold more than one million copies. Currently, reports estimate Sandberg's net worth, which is largely in stock holdings, at over US \$1 billion.

### 2. Susan Wojcicki - CEO of Youtube

Susan earned her bachelor's degree in history and literature at Harvard University, graduating with honors in 1990. Originally, her plan was to pursue a PhD in economics and work in academia but changed course when she became interested in technology. In 1999, she joined Google as their first marketing manager and worked her way up to senior vice president of Advertising and Commerce.

After overseeing Google Video for some time, Susan proposed that the company acquire Youtube (which at the time was a small startup). In 2006, she handled the \$1.65 billion purchase. The following year, she oversaw another large acquisition: the \$3.1 billion purchase of DoubleClick. She later handled two of Google's largest acquisitions: the \$1.65 billion purchase of YouTube in 2006 and the \$3.1 billion purchase of DoubleClick in 2007. In February 2014, Susan was appointed CEO of YouTube. Susan often speaks about the importance of balancing family and career life, and with five children of her own, has the experience to back up her words. Like Sheryl Sandberg, she also made Time Magazine's 100 most influential people in 2015.

### 3. Ginni Rometty - CEO, IBM

Ginni heads IBM, serving in the capacities of Chairman, President, and CEO. She is the first woman to do so. Since 1991, she has held various important roles at the company and was appointed CEO and President in October of 2011.

For ten consecutive years, she has been featured in Fortune magazine's "50 Most Powerful Women in Business", taking the top spot on the list in 2012, 2013 and 2014. Forbes magazine named her one of the "World's 100 Most Powerful People" in 2014.

#### **4. Meg Whitman - CEO, Hewlett-Packard**

Meg Whitman has a long and varied career, serving as an executive for numerous high-profile companies. During the 1980s, she was vice president of strategic planning at The Walt Disney Company. In the 1990s, she worked for DreamWorks, Procter & Gamble, and Hasbro. Then, from 1998 to 2008, she served as president and chief executive officer of eBay. Meg was named 20th in Forbes' 2014 list of the 100 most powerful women in the world.

#### **5. Marissa Mayer - CEO, Yahoo**

Marissa has been the current president and CEO of Yahoo! since 2012. Prior to her employment with Yahoo!, she worked at Google as an executive and spokesperson for over a decade. In 2013, Marissa was recognized on the Time 100 list; then, in 2014, Fortune magazine ranked her sixth on their 40 under 40 list and sixteenth on their list of most powerful businesswoman in the world.

#### **6. Safra Catz - Co-CEO, Oracle**

Safra has been with Oracle Corporation since April 1999. In October 2001, she joined the company's Board of Directors and was named President of Oracle Corporation in early 2004. From November 2005 to September 2008, and from April 2011 to the present, she also served as the company's CFO. In September of 2014, she became co-CEO, along with colleague Mark Hurd. Other professional activities include her status as a member of the Executive Council of TechNet, Director of PeopleSoft Inc., and Director of Stellant, Inc.

#### **7. Angela Ahrendts - SVP, Retail, Apple**

Angela is new to the tech industry, but not new to leadership positions. She served as the CEO of Burberry from 2006 to 2014, before leaving to join Apple as the Senior Vice President of Retail and Online Stores. In 2014, she was Apple's highest-paid executive, earning over \$70 million. Her distinctions include placing 25th on Forbes' 2015 list of the most powerful women in the world, 9th in the BBC Radio 4 Woman's Hour 100 Power List, and 29th in Fortune's 2014 list of the world's most powerful women in business. Angela also sits on the UK Prime Minister's business advisory council.

#### **8. Ursula Burns - Chair-CEO, Xerox**

In July 2009, Burns became the first African-American woman CEO to head a Fortune 500 company. She had worked for Xerox since 1980, beginning as an intern and climbing through the ranks for the next three decades. Other accomplishments include:

President Obama appointed her vice chair of the President's Export Council in 2010. She is a board director at multiple professional and nonprofit entities. Forbes rated her the 22nd most powerful woman in the world in 2014

## **9. Ruth Porat - CFO, Google**

After working with Morgan Stanley for decades, serving as their Chief Financial Officer and Executive Vice President from January 2010 to May 2015, Ruth Porat became CFO of Google on May 26, 2015.

In 2013, Ruth was being considered for the nomination as the next Deputy Secretary of the Treasury but asked to be withdrawn from the running so she could continue her career at Morgan Stanley. In 2011, Forbes named her #32 on their list of the world's 100 most powerful women.

## **10. Renee James - President, Intel**

Renee James has worked at Intel for over 25 years, serving in a variety of roles. She became President of Intel Corporation in May 2013; however, the Wall Street Journal recently reported that she will be stepping down to seek a CEO position elsewhere at the end of 2015. Renee is one of Silicon Valley's most prominent female executives and Intel's highest-ranking woman ever. Forbes' 2014 list of the most powerful women in business ranked her 21st, and the following year, she was 45th on the list of Most Powerful Women.

## **11. Amy Hood - Chief Financial Officer, Microsoft**

Amy Hood currently serves as the first female Chief Financial Officer at Microsoft Corporation, a role she has held since May 2013. She has been with the company since 2002, before which time she worked with Goldman Sachs. Hood holds a bachelor's degree in economics from Duke University and an MBA from Harvard University. She was named #48 on the Forbes World's 100 Most Powerful Women list.

## **12. Mary Meeker - General Partner, Kleiner Perkins Caufield & Byers**

Mary Meeker is a partner at the Silicon Valley venture capital firm Kleiner Perkins Caufield & Byers. Her interests primarily lie in the direction of technology and Internet. Before becoming a venture capitalist, Mary was a Wall Street securities analyst, working with Morgan Stanley. In 1998, she became known as the "Queen of the Net" after a piece in Barron's Magazine. Forbes listed her as the 77th most powerful woman in the world in 2014.

## **13. Padmasree Warrior - Former Chief Technology and Strategy Officer, Cisco Systems**

Until recently, Padmasree Warrior was Chief Technology & Strategy Officer (CTO) of Cisco Systems. Before joining Cisco in 2007, she worked for 23 years at Motorola, Inc., serving as Corporate Vice President and CTO for many of them. In 2004, with Padmasree at the helm, President Bush awarded Motorola the 2004 National Medal of Technology. Padmasree just started a new chapter in her professional life as CEO of electric vehicle company NextEV.

As of 2015, she is listed on Forbes as the 84th most powerful woman in the world (she was #71 in 2014 as well). Additionally, The Economic Times named her the 11th Most Influential Global Indian in 2005.

#### **14. Weili Dai - Co Founder-President, Marvell Technology Group Ltd.**

Chinese-born American businesswoman Weili Dai is president and co-founder of Marvell Technology Group. She is the sole female co-founder of a major semiconductor company and is considered one of the most successful female entrepreneurs worldwide, with an estimated net worth of over \$1 billion. Weili is currently listed as the 95th most powerful woman in the world by Forbes. She was also #21 on their list of America's Self-Made Women this year.

#### **15. Jenny Lee - Managing Partner, GGV Capital**

Jenny Lee is the highest-ranked woman on the 2015 Midas List and has carved out a well-respected career as an investor in the Chinese tech scene. Before joining GGV in 2005 and helping to open its Shanghai office, she worked at JAFSCO Asia. Forbes lists Jenny as their #98 Power Women for 2015.

#### **Conclusion**

Technology still has a reputation for being a male-dominated field, but these women (and more like them) are proving that gender is no barrier to success.

JYOTI CHAUHAN , CSE, 2<sup>ND</sup> YEAR

## Teaching future Engineers- Practices & Challenges

By 2030 there will be **unprecedented explosion of knowledge on web**, resulting in greater confusion, availability of readymade solutions & technology, shortcuts, summarized view of knowledge. This will surely affect the student's ability to learn & apply themselves. As teachers our role will be more of a facilitator & helping the students to learn most relevant / standard contents. Teaching future engineers has become a challenge today specially in private engineering institutions.

Therefore teaching community needs to explore innovative teaching methods to keep pace with the changing requirements of stu-



Methodology	Practices
Real life Teaching	<p>Enable the students to develop the ability to look outside the classroom and laboratory and to think about how their learning can be applied to respond to global challenges and for the benefit of society</p> <p>Ensuring that the content of curricula remains relevant and is informed by regular dialogue with employers, accrediting bodies and with our alumni.</p> <p>Use of authentic, real life examples and make clear the relationship between our students' learning and their world beyond the classroom.</p> <p>We need to encourage and facilitate opportunities for students to engage in work based learning.</p>
Digital and online innovations	<p>Digital and online innovations will be used to support and enhance more interactive ways of teaching</p> <p>With blended learning, online and digital technology can replace lectures and classroom time can be used for interactive education experiences. Emerging evidence shows that together interactive learning and digital technology innovation are particularly successful in improving students' learning (Ghadiri et al., 2013; Klochan, 2015).</p> <p>By 2030 concept of international classrooms may be a common concept, enabling students to learn with peers in other parts of the world online, and by creating multi-site classrooms with students based on different campuses.</p>

<p>By 2030 there will be unprecedented explosion of knowledge on web, resulting in greater confusion, ambiguities in the presentation of concepts, availability of readymade solutions &amp; technology, shortcuts, summarized view of knowledge. This will surely affect the student's ability to learn &amp; apply themselves.</p>	<p>Enabling the students to learn the correct fundamental concepts and apply them in problem solving. Teaching the students to make use of the contents &amp; technology in right manner. Presentation of standard &amp; meaningful teaching material to students. Encouraging the student to learn from standard books.</p>
<p style="text-align: center;"><b>Applying Technology</b></p> <p>Learning &amp; teaching technology will not be a challenge tomorrow. Applying the concepts &amp; technology for solving problems in real world will be a real challenge.</p>	<p>Self up gradation on newer technology to make use of newer tools &amp; techniques in solving problems. Showcasing the use of technology on real world case study/Problem. Discuss the analysis &amp; impact of proposed solutions. Using the solution in real world Model Based teaching &amp; Learning virtual experimentation and computer simulation Ensure learner access to relevant technologies and possession of necessary skills to gain maximum benefits from them;</p>
<p style="text-align: center;"><b>Research-based Teaching</b></p> <p>By 2030 research based learning will become an important aspect of all kinds of engineering studies. A research-based education will enable the students to become independent learners with the curiosity and drive to continue learning throughout their lives. to an academic audience</p>	<p>engage students in active research experience All undergraduate students to undertake research as part of their degree, under the supervision of an active researcher. Specialized research domains for each student depending on the availability of resources. Branch specific specializations to be created</p>

<p style="text-align: center;"><b>Student-centred</b></p> <p>Student-centred education also means giving students responsibility for their own learning. They will participate in setting their own goals, manage their own learning process and have the freedom to find their own direction in their education. They will become independent thinkers by developing the strategies and the confidence to learn by discovery, rather than simply memorising factual information</p>	<p>Creating opportunities for students to actively shape innovation in learning and teaching.  Implement a modular structure in course curriculum that enables the students to have greater choice and flexibility within their discipline programmes and gives them the opportunity to access modules from other disciplines.  Enabling the students to become lifelong learners</p>
<p style="text-align: center;"><b>Evidence-based</b></p>	<p>Applying evidential rigour practice to curricula, pedagogy, learning environment and educational technologies.</p> <p>By evaluating the effectiveness of learning and teaching innovations, and then adjusting the teaching methods based on the evidence we have collected, we can continuously enhance our education.</p> <p>Use of data science and the possibilities of learning analytics can allow us to study the effects of digital and online technology on students' learning.</p>
<p style="text-align: center;"><b>Inclusive and diverse</b></p>	<p>Recognising and harnessing students' diverse cultural backgrounds, identities and experiences by creating opportunities for them to learn from each other and to make their different backgrounds an asset</p> <p>Facilitating all students' sense of personal and professional identity and sense of belonging within a field, so that their background can contribute to their success</p> <p>Designing a diverse range of teaching, learning and assessment approaches that recognise and support the needs of students both as individuals and as members of a learning community</p> <p>Removing barriers to learning and creating a more equitable experience to assist all students, regardless of health issues or language support needs</p> <p>Counterbalancing the effects of unconscious bias in individuals and in institutional structures through creating and implementing evidence based policies</p> <p>Using lecture capture and captioning, as well as by making comprehensive lecture notes available in advance</p>
<p style="text-align: center;"><b>Investing in change</b></p>	<p>The implementation of change will be an ongoing and evolutionary process, which will require investment across many different areas of staff resources and infrastructure.</p>



<p><b>Active Learning Pedagogy</b></p>	<p>The adoption and introduction of active learning methods requires the transformation of current practice at all levels on a case-by-case basis.</p> <p>Encouraging students to become responsible for self-directed learning that bridges their individual learning gaps</p> <p>Developing interactive teaching tools that deliver fine grained, timely, dialogic feedback</p> <p>Making the educational design and learning intent explicit to all students and staff involved, providing training and support as we make changes to the pedagogical approach</p>
<p><b>Curricula and Assessment</b></p>	<p>Developing a balanced set of learning outcomes at programme and module level, focusing on: discipline-specific abilities, discipline identity, fundamental skills development</p> <p>Amending and reshaping each curriculum to create time for more integrative and more interactive learning</p> <p>Including a research project in all undergraduate degree programmes to provide students with active engagement in discovery, with supervision by an active researcher</p> <p>Consulting widely with employers, accrediting bodies and with alumni, making use of network of Industrial Liaison and Advisory Boards</p>
<p><b>Assessment and Feedback</b></p>	<p>Establishing norms and standards that enable students to better gauge the effort required for assessments (e.g. use of word caps), focusing effort on fewer, better assessments methods</p> <p>Deploying tools that allow frequent self-diagnosis by each student on every module to identify their relative attainment of knowledge and skill (e.g. instant feedback online quizzes before each learning event)</p> <p>Communicating clearly the ways in which every assessment aligns with module learning outcomes and how these relate to programme outcomes; and aligning feedback strategy for support</p> <p>Actively building recognition amongst students that making mistakes is a helpful part of learning, and supporting students to develop personal strategies for learning from errors that enable the development of creative, progressive solutions</p> <p>All assessments have clear alignment to module learning outcomes, contextualised within programme learning outcomes</p> <p>Significant reduction in assessments based on memorising of accumulated facts</p> <p>Balanced student workloads for assessment and for integrating feedback within modules and across programmes as a whole</p> <p>Increased self-assessment and self-diagnostic opportunities for students to discover their own gaps, and to calibrate progress against peers</p>

<p><b>Student engagement in positive change</b></p>	<p>Ensuring that students who actively contribute to these changes are supported and recognised.</p> <p>Establishing new ways for students to contribute to their own and to their peers' educational experience, including in the online and digital space</p> <p>Strengthening existing feedback structures and build on their foundations for consultation, participation and collaboration with students</p> <p>Funding a series of projects that create an opportunity for staff and students to work together in addressing shared issues of concern, creating a partnership approach that is supported locally and centrally</p>
<p><b>Use of data and analytics to understand success</b></p>	<p>Mapping and monitoring data about curricula and assessments to provide a clear picture of the content and workload across each programme</p> <p>Giving students clear, detailed information and advice about possible pathways through optional modules in order to inform their choices</p> <p>Learning from, augmenting and aggregating data to follow individual students' trajectories through Imperial and potentially beyond</p> <p>Incorporating social sciences data analytic techniques into our evaluation, and web-based analytics into research of online learning</p> <p>Using our online and digital spaces as a 'laboratory' for rigorously testing different pedagogies in a controlled environment, for instance by simulating randomised controlled trials in a digital environment</p>

**DR. PANKAJ AGARWAL**  
**PROFESSOR & HOD, CSE**

# Accelerated Mobile Pages vs Progressive Web App

## Accelerated Mobile Pages (AMP)

Accelerated Mobile Pages (AMP) are scripts developed on open source platform to help websites in loading web content in much faster way in mobile devices and approved by Google to improve page-loading performance of web pages. It generates an outstandingly fast browsing experience on mobiles. AMP is simple as it contains **10 times less data** than a usual website or app. It thus helps to get the informative content in front of users in the shortest possible time. This technique is used by News websites and by eCommerce websites to provide their products in mobile as fast as possible. However, they put restrictions by stripping all irrelevant scripts and JavaScripts (JS) to save bandwidth and display only the content. Pages are statically sized and heavy elements like images, which are off-screen are not downloaded until user is able to view them. This reduces the page loading time sharply, but by removing such irrelevant scripts it deteriorates the user experience too.

## Progressive Web App (PWA)

Progressive Web Apps (PWA) are Web Apps or a Website Page which provide the looks of a general Mobile Application. PWA help users to re-visit your website through features like Rich Offline Experiences, Periodic Background Syncs & Push Notifications.

PWA is the latest Google feature developed for the home screens of smartphones & other mobile devices with modern web technologies including App Shell model that provide features such as push notifications, offline web pages, and fast load timings. These are simple web pages with modern browsing features which makes these web pages to appear as a normal mobile application.

It has been noticed that if users arrive from home screen icon of a PWA, the conversion rate is more than 70%. Not only does it load pages faster, it also has 3 times lower data usage. Users who visit the website twice or more within 2 weeks span are suggested the option '**add to home screen**'. They just need one tap to add to home screen and one tap to open it.

Difference Between AMP and PWA		
	AMP	PWA
DEFINITION	Accelerated Mobile Pages (AMP) are scripts developed on opensource platform to help websites to load their content as fast as possible in mobile devices.	Progressive Web Apps (PWA) are mobile Apps which provide the looks of a general website.
TECHNOLOGIES INVOLVED	It involves streamlined CSS and standardized JavaScript and components.	It involves Social Worker, Service Worker, App Shell, Web App Manifest.
RECOMMENDED FOR	Static content such as blog articles or recipes.	"HTTPS" website which is a secure connection between site and users.
TARGET USERS	It is suitable for publisher-based website.	It is suitable for ecommerce website.
RESULTS	AMP mechanism reduces the page load time.	PWA pages update as fast as possible allowing users to surf the website without any interruption.

PWA can be used to fill the vast void spaces created with AMP results, if you're seeking to reduce your webpages load time. Currently, these are only used by big enterprise level websites and companies.

### Which is Better AMP or PWA?



With AMP, users get access to content quickly while PWA improves user experience and keeps them engaged.

Progressive Web Apps are better than Accelerated Mobile Pages. AMP cannot be ignored, because, there are hundreds of websites that users are visiting each day, and they store all apps all on their mobile phones. But they need **websites to load faster** and, that's where the role of AMP comes into play. Almost 92% of users give

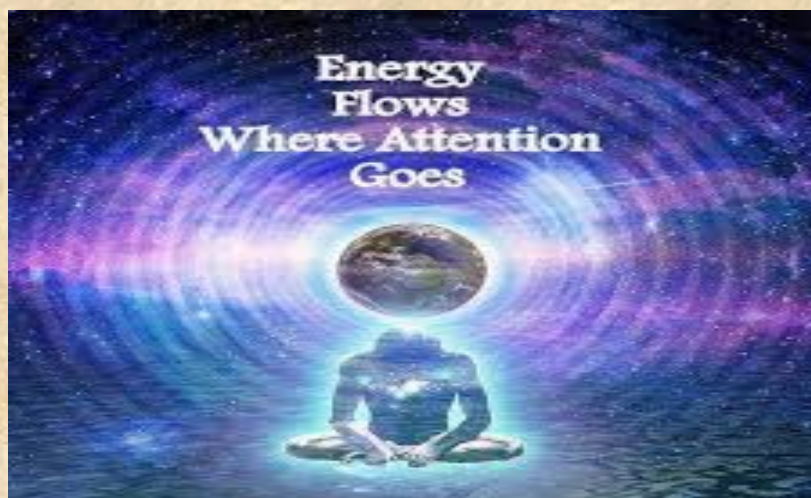
up on a site if they find signing up difficult or lengthy. One tap sign in or auto sign in is possible with Credential Manager API (Application Programming Interface) and one tap check out is possible with Web Payments API.

Standard progressive enhancement techniques will help PWAs to work across all modern browsers. So, a website will not have to pay for each browser and will see a huge improvement in terms of traffic, leads and conversions. One more major difference between AMP and PWA is this notification facility in PWA. It also secures the website from unwanted content, unwanted ads and viruses. Many new technologies are supported in https only.

It has continuously been noticed that Google is giving extra preference to AMP. Recently, Google has come up with a new visual content "Snapchat-like Media Content". This content format is based on AMP and is very much similar to stories feature of Snapchat. This new Google AMP initiative, named as "Stamp", where 'St' stands for stories, is based on AMP for faster loading of pages.

**DR. AVDHESH GUPTA**  
**ASSOCIATE PROFESSOR, CSE**

## *Thought Power: Feel the Magic of Life*



*Thought has got tremendous power. Thought can heal diseases. Thoughts can transform the mentality of persons. Thought can do anything. It can work wonders. The velocity of thought is unimaginable. Thought is a dynamic force. It is caused by the vibrations of psychic Prana (soul) on the mental substance. It is a force like gravitation, cohesion or repulsion. Thought travels or moves.*

### *Thought-waves and Thought-transference*

What is this world, after all? It is nothing but the materialization of the thought-forms of God. You have got waves of heat and light and electricity in science. There are also thought-waves in Yoga. Thought has tremendous power. Everybody is experiencing the power of thought unconsciously to a greater or lesser degree.

Great Yogis used to send and receive messages to and from distant persons through mind-telepathy (mental radio) and thought-transference. Telepathy was the first wireless telegraph and telephone service ever known to the world.

Just as you take physical exercises, play games such as tennis and cricket in order to maintain physical health, you will have to maintain mental health by radiating the right thought-waves, by taking Sattvic food, mental recreation of an innocent and harmless nature, change of mood, relaxation of mind by entertaining good, ennobling and sublime thoughts and by cultivating the habit of cheerfulness.

## *Experiments on Thought Power*

### **Experiment 1: Effect of thoughts on Food and Water we consume**

Mr Masaru Emoto has done hundreds of experiments, testing the effect thoughts and emotions have on water molecules. He proved that indeed the water structure is affected by positive and negative thoughts. His photographs of the changed water structure by even a single word of a positive intent (love) or negative intent (disgust) have made it around the world. Have a look at them on his official website.

Mr. Emoto has been able to prove a connection between our positive attitude and the outer reality through experiments on water molecules. It is quite remarkable to observe water crystals 'transform' their essence according to the nature of the situation. The human body constitutes 70% of water: therefore it has now been scientifically established that we also are affected by our environment. Mr. Emoto has done a similar experiment on rice to prove the effect of thoughts on the very structure of molecules.

Impressive how your thoughts and emotions can effectually influence the outer world, right?



### **Experiment #2: Thoughts are waves**

Now a lot of people argue that the quantum world has nothing to do with our "real" reality and that you cannot find or use the "magical" quantum effects in our physical world. Well, this is not correct. Science has now discovered that the nature of thoughts and intentions is of quantum orders.

In 1970 the German Physicist Fritz Albert Popp, has made the discovery that all living things emit tiny particles of light, a constant stream of light photons. (Spiritual people call this the aura ). In science they are called "biophoton emissions". As per "Kirlian photography", named after its inventor Ingenieur S.D. Kirlian, that can actually take pictures of this light emanating from our body or plants, animals, even "material" things. Popp's research has concluded in the idea that these light waves are like an information system, able to carry information through your body almost instantly.

### **Experiment #3: Thoughts as Healers**

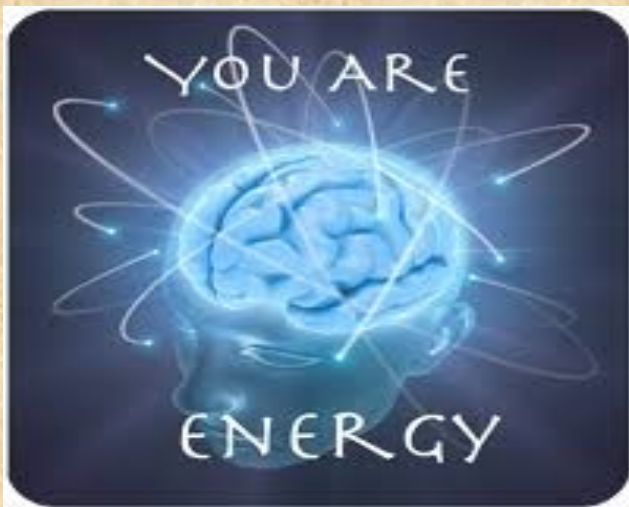
Later, scientist G. Schwartz took pictures of this light when Reiki healers sent a healing intention and this intention showed as streams of laser like light waves from the hand of the healers. The quality of these biophotons was a super-powerful frequency known as "super radiance". This living energy was able to "organize itself into a giant coherent state with the highest form of quantum order known to nature". This "super-power-state" had actually already been discovered by Einstein 70 years ago, called the "Einstein-Bose-Condensate". Scientists believed that this state only occurred in the subatomic world.

*"A thought radiates out like star light, affecting everything on its path"*

- L. McTaggart

#### **Experiment #4: Effects of Thoughts on others.**

The experiments of the “Love study” wanted to show the effects your thoughts can have on another person. For that couples were separated in different rooms, which were isolated by walls of steel. An EEG recorded the brain waves of both persons. The sender was asked to send a thought with an image to the receiver and the results showed that it recorded identical brain wave patterns. The receiver's brain acted like he was seeing the same image at the same time. Couples who were meditating regularly showed even better results. The EEGs synchronized immensely when the couple was in a loving relationship, a close sibling or experienced meditators. So when one person sends an intention to another person, their brain waves synchronize, no matter the distance. It also showed that training and especially meditation leads to better results. It has been scientifically proven that meditation establishes more coherent brain waves and more coherent biophoton emissions. Other factors for success of the intention seem to be focus, belief that it works, love and compassion for the other, So next time you think of a person or your loved one, be well aware that the other subconsciously does receive your thoughts.



#### **Experiment #5: Effect of Negative Thoughts on Our Body**

Research has also shown that negative thoughts and visualizations can have a negative effect on your body. By thinking negative thoughts you damage the health of your own cells. It is as if the negativity is somehow infectious and takes on a physical form. That is also known as the *Nocebo-Effect*, the result of a negative thought. If you've been told by a doctor you'll die in six months and your mind believes it, you most likely will die in six months. The importance here is, *if* your mind believes this!!! A belief emerges from collective affirmations within your

mind (to put it simpler: you think a thing over and over again). Studies have shown that people with negative thought patterns (anger, fear, guilt, no self-worth) heal much slower from an injury than positive thinking people.

Scientific evidence also suggests that human thoughts regularly manipulate the chemical nature of our body. Recently, doctors have been able to prove that of all biological reasons behind the spread of sickness and disease, 75% of them originate in the mind; which means that out of a hundred sick people, 75 of them must have fallen sick due to a negative thought process. Impressive, right?

For example, depression is a direct result of alterations in DNA cells caused by the constant flow of negative thoughts. Consequently, high levels of depression result in mental conditions such as, Alzheimer's disease and Asthma, therefore stress-related disorders are initiated by an event in the brain. So, this proves positive thinking is highly important for your health and well-being!

**Experiment #6: To better yourself by using Power of Thought.**

Mental rehearsal has been used for many years by all kinds of athletes and sports enthusiasts. Focused intention and visualization has been proved to alter and improve the physical performance. By practicing in your mind, you become better and better. Any modern coach uses mental rehearsal to train his students. Mental rehearsals are different from positive thinking as you pre-think and pre-feel the situation as if it was real. You watch a mental video, observing yourself. The most important thing here is to include all your senses and think as if it was real and already happening. Research has shown that the electrical activity in the brain is the same whether we are only thinking it or actually doing it.

A study showed that people training their biceps in their mind increased their muscles by 15 % while the other group who actually went to the gym for a real training increased the muscles by 30 %. So pure mental training is almost as effective as a real workout.

*“Every thought we have is a tangible energy with the power to transform. A thought is not only a thing; a thought is a thing that influences other things.”*

*– Lynne McTaggart*

**So, Bring the Magic in Your Life!**

**DR. GUNJAN SHARMA  
ASSOCIATE PROFESSOR, AS&H**



**LATEST TECHNOLOGIES**



## STAY ANONYMOUS ONLINE



Google Chrome's "incognito" mode used to open up with a warning that, even while you were supposedly surfing anonymously, secret agents could still be tracking your online activity. Most of us smiled and dismissed the idea as fantastical; then Edward Snowden broke cover and wiped the smiles from our faces. That specific disclaimer no longer appears, perhaps because we've all learned our lesson.

It certainly doesn't mean the issue has gone away. Online surveillance is still a constant threat, and there are plenty of legitimate reasons for wanting to stay anonymous online. So how can we ensure that what we do in the privacy of our browser really does stay private?

The short answer is that we can't. What we can do, however, is minimize our exposure and make life as hard as possible for would-be snoopers.

### **SIGN UP TO A VPN**

Perhaps the simplest and most effective step you can take to protect your privacy is to sign up with a reputable VPN provider, preferably one based overseas. This acts as an encrypted conduit for your internet activity, so that your ISP and other UK-based bodies can't monitor what you're doing – and it makes it a lot harder for the sites to trace where your connection is coming from.

There are plenty of services to choose from, but our advice has always been to pay for a reputable VPN service. Free providers are by no means universally illegitimate, but we've heard stories of user data being accidentally leaked, or deliberately sold to fund operations – which undermines the whole point.

Free providers may also insert their own content into your traffic, replacing third-party ads with their own, which isn't always transparent and raises some troubling questions. At the end of the day, you need your VPN service to be 100% on your side, since they have the capability, should they choose, to see everything you do, from reading your emails to tracking your purchases on Amazon.

As long as you have picked a service you can trust, however, a VPN offers great peace of mind. There's a supplementary benefit, too: you can normally route your connection through servers in a variety of different countries. This allows you to access content that's not generally available to UK browsers, or see how your own site looks to international visitors – an easy way to check there are no issues with page loading times, rendering or censorship.

## **TURN TO TOR**

Tor stands for “The Onion Router” – a name that hints at the multilayered way it works, routing internet traffic through multiple servers before finally passing it on to its destination. There's nothing new about the general idea of forwarding traffic around in this way – that's basically how the whole internet operates. But Tor adds an encryption element, with each node that your data passes through decrypting a little more of the packet, like peeling away another layer of onion skin.

By the time your request reaches its destination (the website you want to visit), it will have been fully decrypted, but anyone trying to intercept it en route won't have a complete record of your activity. For the same reason, even the nodes that handle your request won't know precisely where it came from. Tor sounds like the perfect tool for espionage – so it perhaps makes sense that it's at least partly the product of the United States federal government, having been originally developed at the United States Naval Research Laboratory and refined by DARPA prior to its public launch in 2003.

There are questions, however, over whether Tor is really secure. Earlier this year, a vulnerability was found in the Tor web browser that could result in users accidentally connecting directly (and traceably) to their requested sites, without the benefit of Tor's obfuscation.

University researchers have found ways to work out the origins of Tor packets, and Europol has recently made some high-profile arrests by successfully exposing the identities of Tor users – though, understandably, the agency hasn't gone into detail about its methods. If you want to give Tor a go, it's easy: visit [torproject.org](http://torproject.org) and you can download a browser (based on Firefox) for Windows, macOS and Linux that routes all of the traffic through the Tor network, as well as clearing out cookies and browsing history automatically.

However, if you prefer to stick with Chrome, you will find a selection of Tor extensions in the Chrome Web Store. Like a VPN, Tor doesn't just encrypt your data: it also conceals your location and other details about your connection. When we used the Tor Browser running on a Mac just outside London to visit [iplocation.net](http://iplocation.net), we were identified as a Windows 7 user in Paris. Subsequent attempts located us in Romania and Norway, so it's going to be pretty hard for anyone to reliably track your ongoing activity. The only catch is that Tor's convoluted routing has a big impact on browsing speed – using it can feel like a trip back to the days of the dial-up modem. For Android users, another option is Orweb Private Web Browser, which routes requests over the Tor network.

## **FLUMMOX FINGERPRINTING**

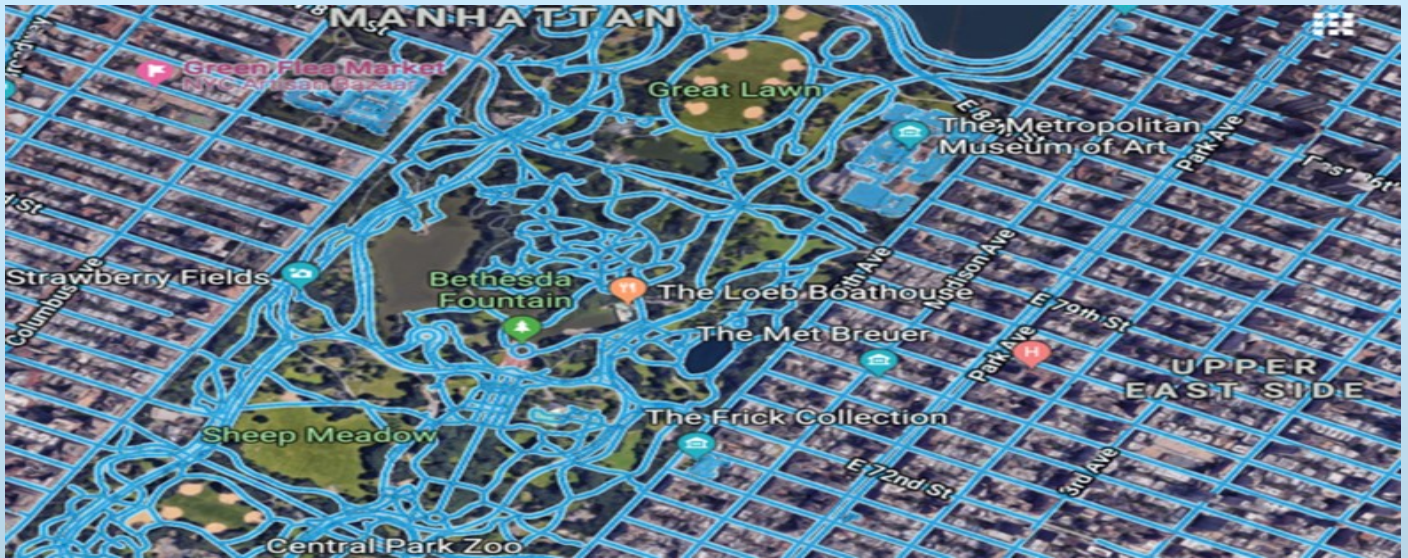
Staying anonymous online isn't just about ensuring your traffic can't be intercepted. The sites you visit can keep records of your visits and build up an alarmingly detailed profile of your interests and activity – even if you're using a supposedly private browser that doesn't store cookies from one session to the next. They do this by recognising the device you're using to connect.

After all, there probably aren't many PCs out there with the exact same combination of browser, memory, graphics hardware, screen resolution and so forth. The distinctive configuration of your computer acts like a fingerprint, so you can be identified each time you come back to the site – and there's not much you can do to change it.

Even if you switch browsers, you're only altering one element of your unique technology mix. Unless you also swap out the graphics card, processor and several other elements at the same time, it's likely you'll still be recognised as the same person. The thing that's sinister about fingerprinting is that it's not limited to a single site: fingerprint data can be shared and sold, so even sites you've never visited before can identify and track you as you move around the web – even if you're not accepting cookies. There are ways to defeat fingerprinting. As we've seen, when you surf with the Tor browser, the server you're connecting to sees the details of the exit point of your connection, rather than the computer you're sitting at, so it can't build up a profile. Using a VPN isn't so safe, though: your apparent location changes, but information about your computer configuration is forwarded to the site you're visiting. You can reduce your exposure to fingerprinting by disabling JavaScript, because many servers use JavaScript routines to gather their data. Unfortunately, this will also stop many sites from working properly. It's also worth looking for browser extensions that can block specific fingerprinting techniques.

**MUKHAR BAJPAI , CSE, II YEAR**

## *A new way to automatically build road maps from aerial images*



Map apps may have changed our world, but they still haven't mapped all of it yet. Specifically, mapping roads can be difficult and tedious: Even after taking aerial images, companies still have to spend many hours manually tracing out roads. As a result, even companies like Google haven't yet gotten around to mapping the more than 20 million miles of roads across the globe.

Gaps in maps are a problem, particularly for systems being developed for self-driving cars. To address the issue, researchers have created RoadTracer, an automated method to build road maps that's 45 percent more accurate than existing approaches. Using data from aerial images, the team says that RoadTracer is not just more accurate, but more cost-effective than current approaches. It will be useful both for tech giants like Google and for smaller organizations without the resources to curate and correct large amounts of errors in maps.

RoadTracer is well-suited to map areas of the world where maps are frequently out of date, which includes both places with lower population and areas where there's frequent construction. For example, existing maps for remote areas like rural Thailand are missing many roads. RoadTracer could help make them more accurate. For example, looking at aerial images of New York City, RoadTracer could correctly map 44 percent of its road junctions, which is more than twice as effective as traditional approaches based on image segmentation that could map only 19 percent.

Current efforts to automate maps involve training neural networks to look at aerial images and identify individual pixels as either "road" or "not road." Because aerial images can often be ambiguous and incomplete, such systems also require a post-processing step that's aimed at trying to fill in some of the gaps.

Unfortunately, these so-called segmentation approaches are often imprecise: If the model mislabels a pixel, that error will get amplified in the final road map. Errors are particularly likely if the aerial images have trees, buildings, or shadows that obscure where roads begin and end. (The post-processing step also requires making decisions based on assumptions that may not always hold up, like connecting two road segments simply because they are next to each other.)

Meanwhile, RoadTracer creates maps step-by-step. It starts at a known location on the road network, and uses a neural network to examine the surrounding area to determine which point is most likely to be the next part on the road. It then adds that point and repeats the process to gradually trace out the road network one step at a time.

Rather than making thousands of different decisions at once about whether various pixels represent parts of a road, RoadTracer focuses on the simpler problem of figuring out which direction to follow when starting from a particular spot that we know is a road. This is in many ways actually a lot closer to how we as humans construct mental models of the world around us.

The team trained RoadTracer on aerial images of 25 cities across six countries in North America and Europe, and then evaluated its mapping abilities on 15 other cities.

.It's important for a mapping system to be able to perform well on cities it hasn't trained on, because regions where automatic mapping holds the most promise are ones where existing maps are non-existent or inaccurate. the fact that RoadTracer had an error rate that is 45 percent lower is essential to making automatic mapping systems more practical for companies like Google.

If the error rate is too high, then it is more efficient to map the roads manually from scratch versus removing incorrect segments from the inferred map. Still, implementing something like RoadTracer wouldn't take people completely out of the loop. The team says that they could imagine the system proposing road maps for a large region and then having a human expert come in to double-check the design.

That said, what's clear is that with a system like ours you could dramatically decrease the amount of tedious work that humans would have to do. Ineed, one advantage to RoadTracer's incremental approach is that it makes it much easier to correct errors; human supervisors can simply correct them and re-run the algorithm from where they left off, rather than continue to use imprecise information that trickles down to other parts of the map.

Of course, aerial images are just one piece of the puzzle. They don't give you information about roads that have overpasses and underpasses, since those are impossible to ascertain from above. As a result, the team is also separately developing algorithms that can create maps from GPS data, and working to merge these approaches into a single system for mapping.

ABHINAV KAUSHIK  
CS II YEAR

# GOOGLE DUPLEX - The Human PhoneBot



Earlier this year at the **Google's I/O Developer Conference**, the company CEO Mr. Sundar Pichai previewed Google Duplex, The AI (Artificial Intelligence) which can attend or make calls for you on your behalf. The new technology has caused quite a stir since it was unveiled, making some feel creepy while others debate privacy implications. While everyone waits to learn more about Google Duplex and see it in action, let's take a look at what's currently known about the fascinating technology.

## What is Duplex?

Google Duplex is the technology behind a new Google Assistant feature. Duplex is a completely automated system that places calls on your behalf, complete with a natural-sounding human voice instead of a robotic one.

Furthermore, Duplex is able to understand "complex sentences, fast speech and long remarks" according to Google.

## Enter Duplex

At the core of Duplex is a **Recurrent Neural Network (RNN)** designed to cope with these challenges, built using **TensorFlow Extended (TFX)**. To obtain its high precision, developer's trained Duplex's RNN on a corpus of anonymized phone conversation data. The network uses the output of Google's **Automatic Speech Recognition (ASR)** technology, as well as features from the audio, the history of the conversation, the parameters of the conversation (e.g. the desired service for an appointment, or the current time of day) and more. Google trained their understanding model separately for each task, but leveraged the shared corpus across tasks. Finally, they used hyperparameter optimization from TFX to further improve the model.

## **The Reason Behind It's Natural Sound**

Duplex uses a combination of a concatenative **Text To Speech (TTS)** engine and a synthesis TTS engine (using Tacotron and WaveNet) to control intonation depending on the circumstance. The system also sounds more natural thanks to the incorporation of speech disfluencies (e.g. "hmm"s and "uh"s). These are added when combining widely differing sound units in the concatenative TTS or adding synthetic waits, which allows the system to signal in a natural way that it is still processing. (This is what people often do when they are gathering their thoughts.) In user studies, they found that conversations using these disfluencies sound more familiar and natural.

Also, it's important for latency to match people's expectations. For example, after people say something simple, e.g., "hello?", they expect an instant response, and are more sensitive to latency. When Duplex detect that low latency is required, it uses faster, low-confidence models (e.g. speech recognition or endpointing). In extreme cases, duplex don't even wait for Google's RNN, and instead use faster approximations (usually coupled with more hesitant responses, as a person would do if they didn't fully understand their counterpart). This allows them to have less than 100ms of response latency in these situations. Interestingly, in some situations, they found it was actually helpful to introduce more latency to make the conversation feel more natural — for example, when replying to a really complex sentence.

## **What can Duplex do?**

The beta version of Google Duplex allows you to complete three tasks: schedule a hair appointment, make reservations at a restaurant and get holiday hours of a business. If the business you've asked Google Assistant to book an appointment with accepts online reservations, Assistant will use that to complete the task. Otherwise, Assistant/Duplex will call the business on your behalf.

## **How do we use it?**

Details aren't exactly clear, but the process will involve telling Google Assistant something along the lines of, "Call XYZ restaurant and make a reservation for four people Friday night at 7." From that point, Google Assistant and Google Duplex will place the call, talk to whoever answers the phone at the restaurant and add the appointment to your calendar when it's finished.



## **When can we use it?**

Google started rolling this Duplex update to some of its Pixel devices later this year. Not much else is known about when it will be available for other Android/iOS devices. Potentially, you could have access to Duplex this year, but odds are you'll be waiting a bit longer. But surely with the release of Duplex possibilities with the concept of Machine Learning is once again Stretched. After all who knows what more we can achieve with it !!

**ANURAG SRIVASTAVA**

**CS II YEAR**

## *Rapid move towards the 5G network after 4G and 3G.*



In this modern era where most of the things we deal with are online, actually we are facing many problems regarding networks. Now we are using mostly 4G network which is better than 3G but actually it can't overcome all the problems related to data, speed, and it's also very costly. Here the main aim of our 5G data is to provide best speed in less money.

There are many other aims-

1. Enhanced mobile broadband. With the promise of 10 Gbps connectivity and latency of less than five milliseconds, it's no surprise the ongoing surge in demand for mobile connectivity will accelerate dramatically. The industry estimates this increased speed will result in a 10- to 100-fold increase in the number of 5G-connected devices over the number of 4G devices.
  2. The Internet of Things (IoT). Thanks to 5G's virtualized, radio technology-agnostic core, published predictions estimate as many as 20 billion IoT connections by 2020—connections that will drive smart buildings and smart cities. CommScope anticipates 5G will offer 1,000 times the bandwidth of 4G, and up to five times the density, making room for all those “things” on the network.
  3. High-reliability, low-latency networks. Beyond just doing what 4G does better and faster, 5G speeds open new doors to allow driverless cars to coordinate over the network, enable augmented reality and virtual reality, and expand the horizons of remote surgery and other applications that can fulfill their promise only on a network with such ultra- low latency times as 5G's five-millisecond threshold.
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- With these case uses in mind as the template for a real-world 5G rollout, it makes sense to also consider what can be done to make these applications possible. For operators, that plan boils down to three key strategies.

The first of these is densification, or the practice of increasing capacity in a given area through more antennas, small cell sites or other measures. Upgrading to MIMO and sector- splitting technologies also falls under this strategy. The second is virtualization, shifting the work of physical equipment to virtualized environments operating in centralized data centres. This strategy's inherent efficiency can reduce costs by as much as 70 percent. The third strategy is optimization of existing assets and processes, including—but not limited to— repurposing earlier-generation wireless and TV spectrum and moving computing resources closer to the edge. Throughout the converged network, efficiency will be a critical design requirement for all aspects of 5G.

Getting ready for 5G is as important as knowing how it will be used. CommScope has made an extensive study of the pre- 5G and coming 5G landscape, and we are excited to share what we know. To participate in a 5G workshop, learn more about CommScope's solutions, request a quote or begin a new partnership, visit [commscope.com](http://commscope.com) or contact us anytime. Powered by experience and focused on progress, CommScope can't wait to help you unlock the power and potential of 5G networks.

**UTKARSH UPADHYAY, CS II YEAR**



LITERARY

## TIME



*Even the prettiest of flower wilt,  
With time, even the lustre fades.*

*Time is a beast.*

*Beat it to survive!*

*Heaviest of the storms settle,  
And bring along the sunshine.*

*Just try being insouciant,  
Stronger every moment.*

*Just as,*

*The big old trees,*

*The diamonds from peat*

*Water and freshly squeezed juice,*

*Stardust and the moon*

*Flowers growing in the cracks of pavement*

*Sun kissed skin,*

*Today. Tomorrow. Now.*

*The winds are pleasant,*

*The ocean seems so calm.*

## *Freeze The day*

*Let us all awaken to a dawn,  
Where the sun never sets,  
Radiating beams of happiness and hopes,  
Forming sunny smiles from frets.  
Why let the unessential obscurity imbricate our existence?  
Can't the sheen and splendor prevail all the time?  
Open your oriel in lieu of drawing your curtains,  
Confront the sun, it costs no dime!*

*Let there be no dark, no night.  
Let there be no tiny stars, no moonlight.  
Scintillate like the sun, which is one of it's own,  
Prove your caliber, make yourself known.  
When evils and insecurities dawn over your sun,  
Bounce them back to the sky, where they're supposed to be.  
Let the light penetrate into your pores,  
Break the clutches of your cocoon and set yourself free!*

*Capable you are, to attain the azimuth,  
Don't predict or presume, just give it a shot.  
Make a ladder out of your wood,  
Why have you left it out there to rot?  
Seize the moment, freeze the day,  
Break the cycle, have your say!  
Believe in yourself, realize your worth,  
In the same prepare yourself for a rebirth.*

*NIKITA GUPTA , CSE II YEAR*

## *DON'T LOOK BACK*



*There was nothing for you here,  
You cried in perpetual fear  
So, move on and don't look back,  
There is no potential that you lack,*

*People hated you, people hurt you,  
Yet you stayed and witnessed this charade,  
As its tools scared your soul.  
So now I will tell you to bid goodbye  
And I don't look back, don't look back,*

*Don't forget  
I am with you in every step of the way,  
Holding your hand, leading you out of fray,  
Helping your tears off, reminding to be strong  
And finally like to conclude  
Not to look back, don't look back,*

**PRIYANKA , CS II YEAR**

## Aspire and Acquire

*The world is a dark place they say  
And our mortal life is just a prison  
To which we are the prisoners  
Trapped inside the cage of our sins*

*But i have seen the most beautiful flowers bloom in the midst of a dirty pool  
Starts and galaxies escaping the black hole  
I have seen failures turn into laurels the hardest stones melt under the fire*

*And with never ending dreams and burning desires  
We shall climb the greatest mountains - Aspire and acquire  
But one gives up too soon  
With a peer of oblivion that lingers  
At the back of his mind negativity prevails*

*Imprisoned not we are but bound in his shackles of our fears  
And a weak, faltering man never hears  
The voice of his soul which tells him not to give up  
To lift up his spirit , work and not sit still  
Even when on the road he is trudging on seems to go uphill.*

PRIYANKA SHARMA

CS II YEAR



*// Good and bad company*

*The basic difference between falling into a good company and bad company is that a bad company always invites you but a good company doesn't....*

*// Life like a movie*

*If life is like a movie,  
Then your success is heroine of that,  
Your destiny is villain,  
And your hardwork is hero...*

*// Likes and dislikes*

*Those who like you motivate you to do once again and those who dislike you give you directions to make some improvements....  
So respect all....*

**NAMAN GUPTA, CS II YEAR**

A low-angle shot of the Golden Gate Bridge tower, showing its red-painted steel structure against a dramatic, cloudy sky. The bridge cables and roadway are visible in the foreground, leading the eye towards the tower.

# **MOTIVATIONAL STORIES**

**WORK HARD  
IN SILENCE;  
LET SUCCESS  
MAKE THE  
NOISE.**

## Potatoes, Eggs, and Coffee Beans:

Once upon a time a daughter complained to her father that her life was miserable and that she didn't know how she was going to make it. She was tired of fighting and struggling all the time. It seemed just as one problem was solved, another one soon followed.

Her father, a chef, took her to the kitchen. He filled three pots with water and placed each on a high fire. Once the three pots began to boil, he placed potatoes in one pot, eggs in the second pot, and ground coffee beans in the third pot. He then let them sit and boil, without saying a word to his daughter. The daughter, moaned and impatiently waited, wondering what he was doing.

After twenty minutes he turned off the burners. He took the potatoes out of the pot and placed them in a bowl. He pulled the boiled eggs out and placed them in a bowl.

He then ladled the coffee out and placed it in a cup. Turning to her he asked, "Daughter, what do you see?"

"Potatoes, eggs, and coffee," she hastily replied. "Look closer," he said, "and touch the potatoes." She did and noted that they were soft. He then asked her to take an egg and break it. After pulling off the shell, she observed the hard-boiled egg. Finally, he asked her to sip the coffee. Its rich aroma brought a smile to her face.

"Father, what does this mean?" she asked.

He then explained that the potatoes, the eggs and coffee beans had each faced the same adversity—the boiling water. However, each one reacted differently.

The potato went in strong, hard, and unrelenting, but in boiling water, it became soft and weak. The egg was fragile, with the thin outer shell protecting its liquid interior until it was put in the boiling water. Then the inside of the egg became hard.

However, the ground coffee beans were unique. After they were exposed to the boiling water, they changed the water and created something new.

"Which are you," he asked his daughter. "When adversity knocks on your door, how do you respond? Are you a potato, an egg, or a coffee bean?"

In life, things happen around us, things happen to us, but the only thing that truly matters is what happens within us.

Which one are you?

## Jan Koum and Brian Acton



Brian Acton is the employee who are working for yahoo and later when the FACEBOOK become famous in 2009 he was willing to work for Facebook, but later he was Rejected in the Interview at Facebook. Like any other person he choose Twitter to express his disappointment:

" Facebook turned me down. It was a great opportunity to connect with some fantastic people. Looking forward to life's next big adventure." [Src: Twitter 3rd of August 2009]

Later that adventure was started by the Brian Acton along with his partner Jan Koum with an idea of Instant Messaging App as a service. They named it WhatsApp and it was one of the most Instant Messaging Application used by Millions of People. Interesting thing is that the company who rejected them now bought their WhatsApp for \$19 Billions!! :O Facebook owned WhatsApp on Feb 19 2014.

SACHIN AGARWAL

# ACHIEVEMENT



# *Post-Harvest Crop Management System Using IOT and AI Wins First Prize in Smart Odisha Hackathon*



Students of CS branch participated in **Smart Odisha Hackathon** with their project titled "**Post-Harvest Crop Management System Using IOT and AI**" held at Bhubaneswar, 13- 15 November, 2018. They won overall first prize and got Rs.1.25 Lakh cash money along with participation certificate, winning trophy and Memento.

**Team Members:** 1. Chakshu Sharma (CS IV Year)  
2. Astha Singh (CS III Year)  
3. Deepali Srivastava (CS III Year)  
4. Medha Gupta (CS III Year)

**Mentor Name:** Ms. Shruti Keshari

## **Abstract:**

This project aims to develop a high cost-effective system for food supply chain management system and connect our farmers, crop storage owners and government. The proposed solution uses IoT & AI enabled technology to monitor the food (crops) stored in the supply chain inventories. It provides status about the quality (state of deterioration) and estimate stock value/price of stored crop based on the environmental conditions of the storage unit. This solution helps in reducing workman hours and minimizing human error.

### **Commercial Applications:**

Cold storages condition in India are pathetic and crops face 20-30% of post-harvest losses. This loss can be compensated by using cold storages with IoT and AI application so that the farmer/cold storage owner and government face less loss and therefore can optimize the income and decrease the post-harvest losses.

## *INNOVISION Wins third prize in INNOTECH-2K18*



INNOVISION is a non-intrusive, non-annoying wearable device- an optical head mounted display. It is a automated digital system capable of presenting the digital world in front of your eyes , without distracting you from your real world. Get all the notifications , calls , emails in a blink of eye . Devices will be connected via bluetooth and have a powerful battery backup.

Team Members-

Utkarsh Upadhyay(Cs3 2<sup>nd</sup> year)

Kushagra Srivastava(Cs2 2<sup>nd</sup> year)

Suraj Jaiswal(Cs3 2<sup>nd</sup> year)

Upendra Singh(Cs3 2<sup>nd</sup> year)

Under the guidance of **Ms Shaili Agarwal**, Assistant Professor CSE Department.

This Innovision titled project won the 3<sup>rd</sup> prize at INNOTECH-2K18 organized at KIET ENGINEERING COLLEGE ,Ghaziabad on 1<sup>st</sup> November 2018 and get the cash prize of 3000/- along with certificate of merit and gift voucher .

This innovative project by these Cse department students also won the 3<sup>rd</sup> prize in CROSS-ROADS-2K18 organized at HI-TECH ,Ghaziabad held on 2/3 November 2018.They receive a cash award of amount Rs 2000/-.



People using large electronics waste a lot of time in watching the readings ,doctors often loose concentration while taking various readings, students working on projects wasted time in seeing mobile notifications and many more. So we wanted to make a device which could solve all these problems and we resulted in making our device INNOVISION: Visualizing the digital world. Smarter than smart watch, with more specifications, more convenient, less economical. This device can be used in any climatic conditions ,capable of standing with us in rain, storm, day, night without any loss in its efficiency.

Statement by team innovision-“ After observing the problems faced by people of all categories i.e., students faced problems in their concentration, electricians wasted a lot of time in taking multiple reading etc. We wanted a device which could solve all these problems and moreover be economically feasible so that any person in need of this device could easily afford it .GOOGLE GLASS is already in market but it is not affordable by everyone. So ,we started researching upon the methods and ways we could take so that the required device can be prepared in low cost which would be economical and feasible by every person. We took help of our teachers, seniors and various web sites ,and ended in finding many efficient ways. Reports by IDTechEx,2016\_shows that the market for wearable technology will reach accelerated growth with a yearly growth of 23% through to over \$100bn by 2023 and recach over \$150bn by 2026”.

## CONGRATULATIONS TO OUR PLACED STUDENTS !!!

Sr. No.	Roll No.	Name	Company Placed
1	1514310192	SHIVANG BHATNAGAR	ACXIOM CONSULTING
2	1514310199	SHRISTY MAHESHWARY	ACXIOM CONSULTING
3	1514310132	NISHANT SRIVASTAVA	ANR
1	1414310033	ANANYA SINGH (Re-Admit)	Capital Via
2	1514310006	ABHISHEK GUPTA	Capital Via
3	1514310008	ABHISHEK KUMAR PANDEY	Capital Via
4	1514310017	ABHISHEK TRIVEDI	Capital Via
5	1514310031	AMAN GUPTA	Capital Via
6	1514310036	ANAND .	Capital Via
7	1514310038	ANANT BHARDWAJ	Capital Via
8	1514310049	ANURAG SHAKYA	Capital Via
9	1514310054	ARPIT KUMAR	Capital Via
10	1514310068	CHANDAN MISRA	Capital Via
11	1514310069	DEEKSHA PAL	Capital Via
12	1514310077	GAURAV MISHRA	Capital Via
13	1514310080	HARI SHANKAR TIWARI	Capital Via
14	1514310082	HARSHIT GUPTA	Capital Via
15	1514310099	LABEEB AHMED	Deloitte
16	1514310167	RUPAL RATURI	Deloitte, TCS
17	1514310089	ISHIKA SHUKLA	Deloitte, TCS
18	1514310013	ABHISHEK SETHI	Genpect Headstrong
19	1514310063	AYUSH TRIPATHI	Gingerwebs
20	1514310106	MANNAT YADAV	Gingerwebs
21	1514310168	SACHIN GUPTA	Gingerwebs
22	1514310124	NAVEEN MISHRA	Instalocate, Testbook
23	1514310066	CHAKSHU	Moblezion
24	1514310045	ANSHUL KUMAR SAROHA	Moblezion, IndiaMart
25	1514310075	DIVYANSHU SRIVASTAVA	Moblezion, Polestar
26	1514310021	ADITYA PRATAP SINGH	Moblezion, TCS, UHG
27	1514310100	LAV AGARWAL	QA InfoTech
28	1514331037	HIMANSHU CHAUHAN	QA InfoTech
29	1514310138	OJAS MODI	QA InfoTech
30	1514310071	DEVYANSH AGRAWAL	QA INFOTECH, MOBILIZEON

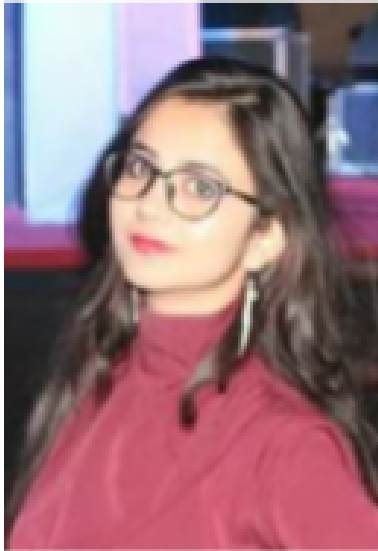
## CONGRATULATIONS TO OUR PLACED STUDENTS !!!

Sr. No.	Roll No.	Name	Company Placed
30	1514310059	AVIRAL RUHELA	QA Infotech, Moblizion, TCS
31	1514310200	SHUBHAM CHAURASIA	QA Infotech, Moblizion, TCS
32	1514310056	ASHWANI KUMAR	QA Infotech, Polestar
33	1514310001	A. RUPALI	TCS
34	1514310011	ABHISHEK RAI	TCS
35	1514310016	ABHISHEK SINGH CHAUHAN	TCS
36	1514310028	AKHIL	TCS
37	1514310053	ARPIT GARG	TCS
38	1514310060	AVNEESH JHA	TCS
39	1514310067	CHANCHAL KUMAR MISHRA	TCS
40	1514310072	DIKSHA KHURANA	TCS
41	1514310073	DIVYANSH TIWARI	TCS
42	1514310102	LOKESH KUMAR TIWARI	TCS
43	1514310108	MANVIR SINGH	TCS
44	1514310114	MOHAMMAD WASIUDDIN	TCS
45	1514310118	MOHIT BHARDWAJ	TCS
46	1514310128	NEETISH SINGH	TCS
47	1514310135	NITIN SAHU	TCS
48	1514310142	PRADEEP YADAV	TCS
49	1514310144	PRANSHUL GOEL	TCS
50	1514310146	PRASHANT SISODIYA	TCS
51	1514310150	PRIYVART RAGHAV	TCS
52	1514310160	REEDAM CHOUDHARY	TCS
53	1514310165	ROOPAK SINGH	TCS
54	1514310190	SHIVAM RAI	TCS
55	1514310195	SHIVANSH SRIVASTAVA	TCS
56	1514310198	SHREYA SINGH	TCS
57	1514310206	SOUMYA GUPTA	TCS
58	1514310209	SRISHTI ROBIN	TCS
59	1514310231	VASU AWASTHI	TCS
60	1514310239	VINEET YADAV	TCS
61	1514310242	VISHAL SINGH	TCS
62	1514310244	VRINDA SHARMA	TCS
63	1514331017	ANISH ANAND	TCS
64	1514310015	ABHISHEK SINGH CHAUHAN	TCS
65	1514310110	MEGHNA RAJ SAXENA	TCS

## CONGRATULATIONS TO OUR PLACED STUDENTS !!!

Sr. No.	Roll No.	Name	Company Placed
66	1514310194	SHIVANSH SRIVASTAVA	TCS
67	1514310207	SOURAV DAS	TCS
68	1514310230	VARUN TYAGI	TCS
69	1514310241	VISHAL AGRAWAL	TCS
70	1514310243	VISHAL SINGH	TCS
71	1514310245	VYOM MADHUR	TCS
72	1514331042	JAGVEER	TCS
73	1514310145	PRASHANT CHAUHAN	TCS
74	1514310032	AMAN RATHORE	TCS CODEVITA
75	1514310154	RAJARSHI SAHU	TCS CODEVITA
76	1514310105	MANISH BANSAL	TCS CODEVITA
77	1514310019	ADARSH KUMAR SINGH	TCS CODEVITA, Cleared 2nd Round
78	1514310148	PRATIYAKSHI KAPIL	UHG
79	1514310051	ARCHIT CHATURVEDI	VVDN

## EXPERIENCES SHARED BY FEW OF OUR PLACED STUDENTS



Pratiyaskhi Kapil, 4<sup>th</sup> Year

It's a pleasure to be a part of this organization. The years I spent here in this college are no doubt the best years. After being an average student in my BTech life, I somehow managed to get placed in UHG in the 7<sup>th</sup> sem.

The one thing that has helped me a lot to crack the very first interview I appeared to is confidence. I worked on my aptitude and basics of some of my favorite technical subjects (DBMS, DS and DAA) to clear the written test.

There were times when I felt low. But the faculty was always there to cheer me up for what I am good at. I do remember walking up to teachers to ask if I'll be able to answer the questions during the interview. I still remember talking to my teachers on the very day my result was declared. No matter how much I was scolded by them they'll be the first one to give credit of what I have achieved.

Of course, my parents have always been there for me no matter what. They are the highs I'll always try to reach up to.

I've been in touch with seniors since my very first year and they have helped me a lot. They are my all the dos and don'ts in college life encyclopedia. And the last but definitely not the least credit to the best friend this college has given me. No matter how late it was, it was never too late for me to call and talk about anything that crosses my mind. No matter how much I write it can never be enough to thank everyone who have been a part, so I'll thank the time I get to be a part of IMSEC.



Shubham Chaurasia, 4<sup>th</sup> Year

I have always been good in mathematics and programming languages. I used to make programs on a daily basis. Online coding challenges helped me in designing better algorithms and understand advanced concepts. With three years of coding experience, I gained a lot of confidence. Aptitude and soft skill classes were of great importance. Practicing with my friends helped me clear my doubts. The first round of QA Infotech consisted of java fundamentals. It was of average difficulty. Clearing it was easy. The next round was a coding challenge. It was challenging yet I cleared it easily. The final round was a personal interview. Non-technical questions were asked to check confidence and communication skills. I appeared for TCS drive through National Qualifier Test. The first round was an online test consisting of Aptitude, English, Programming concepts and coding section. Clearing it was easy. The next was a personal interview.

The questions tested my basic programming concepts. In the HR round, tricky questions like my strengths and weaknesses were asked.

The best part about the IMS is the transformation it had brought in me. When I came here, I was an introvert person but now I can feel the change. I can flawlessly speak in front of the people. However, now I can proudly say that whatever I invested here, I am successfully taking it back as a lifelong asset.



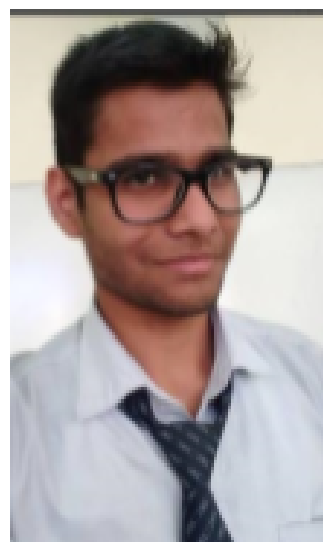
Vrinda Sharma, 4<sup>th</sup> Year

This is something that I would like to share with my juniors all about my preparation I did for qualifying TCS online test.

I appeared for "TCS National Qualifier Test" on 3rd September 2018, for this I started my preparation a month before the exam. I started solving quantitative aptitude questions from RS Agrawal, and also watched some good video lectures from YouTube and after this I started solving questions from prepinsta site; question from Logical reasoning remains my favourite all the time. Moreover for coding part I saw last year questions and tried to code them in a way the condition provided by them like- not to use scanf and some other input functions. I prepared technical C questions from different sites over the internet and our faculty also helped us by providing good set of questions for practice.

First round was of Online Test which includes Aptitude questions, English part, Technical questions from "C", and a coding section. Technical questions from "C" were easy as I prepared very well for this. After some days I got the mail that I cleared the "TCS National Qualifier Test".

Second round was of PI (personal interview) includes technical round, managerial round, HR round. Where from technical round, questions for me was from subjects like DBMS, Operating Systems, Data structure and also one programming question. Managerial rounds question were based on situation like "you are at this position in an organization and something happens accidentally so what would you do to control this?" total questions from this round were 4 for me. Then I appeared for HR round which was of "telling about yourself, your family and activities you do other than you mentioned in resume". He also asked me to tell him something about TCS. So, before appearing for any interview go through their website and collect some good information. He asked me about my hobby as I mentioned in the resume that I used to make handmade cards and sell them online on Instagram. He saw my Instagram page and products there he really got impressed by it. So, always mention your good activities. At last, he asked me that "do you want to ask any question from me?" and I asked two questions from him about TCS, it always show your interest towards a company. Guess what I cleared the PI and received an Offer Letter on 9th October 2018. At last I would say remain CONFIDENT towards your answers because it matters a lot.



Devyansh Agarwal, 4<sup>th</sup>

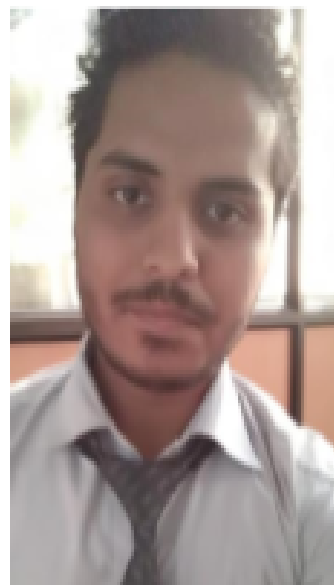
I have got placed in 2 companies. One is "QA Infotech" and another one is "mobilizeOn". Both were the campus placements. I am thankful for college support & CDC.

In "QA infotech" Drive some MCQs on JAVA were asked as a first round. After that second technical round was held at the company premises. In which they asked us to write code for some problems. Then I had a general discussion as the final HR interview.

In "mobilizeOn" Drive there was a quite good online technical test questioning the coding & problem-solving skills and knowledge of a chosen programming language. After that, there were two rounds of long F2F & interactive interviews. In which they asked lots of technical and situational questions. I was positive and very very genuine to all questions. They accessed my LinkedIn & GitHub accounts to find my

works.

College's approach of extra classes for aptitude and soft skills is very supportive. And helpful and knowledge-full friends also play a quite good role in your success.



Aditya Pratap, 4<sup>th</sup> Year

Hi ! This is Aditya from 4th year 2CS. I'm sharing my experiences that might be useful for people of CS/IT or others looking for a start in IT. In the beginning of my first year I started learning programming and developed a lot of interest in that later. Back then, there was a coding group being run by seniors. They would conduct regular coding contests on Hackerran .I got more exposure of programming by participating in those contests. Later on, I started practising on Hackerearth and SPOJ. My programming skills improved gradually and then I started doing Codechef contests and learning more about Data Structures and Algorithms. Whoa ! I found my interest then. I would like to suggest all the juniors that "If you love doing something, then it's great. Otherwise try many things like IOT, ML,Web Dev, Android, Competitive programming etc and then you'll surely find your interest".

Recently I got offers from Unitedhealth Group, TCS, Mobilizeon and GlobalLogic. I'm heartily thankful to Pankaj Sir (HOD-CSE) ,the Placement cell and the respected faculties for the support they have given at different point of time. In case you need any guidance, please feel free to reach out to me. I'd love to help.



Rajarshi Sahu, 4<sup>th</sup> Year

Hi guys! Myself Rajarshi Sahu, from 4th year CS-2, I got offer from TCS through Codevita. My interest in Computer Science goes back to then when I was in 12th class. I started coding in mid of my first year. Initially it was very frustrating, but with the help of seniors I polished my skills further. I started from a very famous platform known as codechef, later on I started to use Hackerearth and Spoj too. In my 2nd year I learned about various coding contest such as Facebook Hackercup, ACM ICPC, Google Code jam ,Codevita and lot more. By the end of 2nd year I developed good grip over Data Structure and Algorithms.

I want to suggest my juniors that coding cannot be learned overnight, it requires some dedication and lot of efforts. Usually students try to learn lot of technology and languages, but end up having distorted knowledge of everything. Having a lot of things in your bucket is not important, only the quality matters. Developing logic is important. This can make you technology independent.



# UPCOMING EVENTS



## UPCOMING CONFERENCES & WORKSHOPS

1) *SPACE 2018 8th International Conference on Security, Privacy, and Applied Cryptography Engineering ( IIT Kanpur, Uttar Pradesh)*

15 December 2018 - 19 December 2018

<http://space2018.cse.iitk.ac.in/>

*"The International Conference on Security, Privacy and Applied Cryptography Engineering (SPACE) is an annual event devoted to various aspects of security, privacy, applied cryptography, and cryptographic engineering. The conferences started in 2011, and SPACE 2018 is the eighth in this series."*

2) *CSCCC 2018 IEEE Conference on Secure Cyber Computing & Communication*

*VENUE:- NIT Jalandhar, Punjab*

15 December 2018 - 17 December 2018

<http://www.nitj.ac.in/icsc2018/>

3) *1st International Conference on Machine Learning, Image Processing, Network Security and Data Sciences 3 - 4 March, 2019 |*

*NIT Kurukshetra, INDIA (MIND-2019)*

4) *Techfest IIT Bombay Workshops 2018, IIT Bombay, Mumbai, Maharashtra, 14-16th December 2018.*

*Event Details:*

*Knowledge is of no value unless put into practical use. To gain practical wisdom and have an uncompromised learning experience, Techfest, IIT Bombay*

*Event Date:- 14-16th December 2018*

5) *KSHITIJ 2019, IIT Kharagpur, Techno Management Fest, KHARAGPUR, West Bengal, 18-20th January 2019*

*Event Name KSHITIJ 2019*

*Category Techno Management Fest*

*Organiser IIT Kharagpur*

*Location KHARAGPUR, West Bengal*

*Event Dates 18-20th January 2019*

# DEPARTMENTAL EVENT

# Alumni Meet of CS Branch 2018

17 Nov 2018





Department of Computer Sc. & Engineering organized an Alumni meet 2018 on **17 Nov 2018 specifically for the alumni of CS branch.**

Following alumni members were invited

- 1. Kushal Johri- (ATL & BTL) Marketing Head- Topwise Communication.** IMSians – Batch -2002-06 (First Batch of IMSEC Ghaziabad)
- 2. Mr. Gaurav Jain- Project Manager – At&T.** IMSians – Batch-2002-06(First Batch of IMSEC Ghaziabad)
- 3. Mr. Manish Singh- Lead Business Analyst-EXL Services.** IMSians-Batch-2002-06 (First batch of IMSEC Ghaziabad)
- 4. Sandeep Sharma- Group Technical Architect-G4S Global Development Center.** IMSians-Batch-2002-06 (First Batch of IMSEC Ghaziabad)
- 5. Chirag Mittal- Manager Business Intelligence- Genpact.** IMSians- Batch 2006-10.
- 6. Ambuj Sharma- Team Leader- Nagarro Softwares & Founder of [Mechanicalbaba.com](http://Mechanicalbaba.com).** IMSians- Batch-2008-12.
- 7. Mr. Nikhilendra – Sr. Software Engineer- QA Infotech.** IMSians- Batch-2011-15.
- 8. Mr. Shivani- System Engineer- TCS.** IMSians- Batch-2012-16

**Alumni shared their work experiences and challenges of the IT industry today. A fruit full discussion took place among the alumni & current ongoing students of the branch. Alumni answered the queries & doubts of many students with great deal of enthusiasm. Demonstration on “*How to remain in touch with Alumni & get access to jobs using Alma Connect system of IMSEC*” was made to all listeners.**

**Alumni also appreciated the growth of the college. They expressed their willingness to extend their help to juniors for their placements & skill development.**

## ALUMNI TALK



I am extremely honored to be a part of IMS Engineering College. Our college not only provide placements but also aim at the overall development of the students in terms of personality development corporate etiquettes, different google certification courses and a cordial environment to study and play. I am really very thankful to all my faculties members and my college in building up my career.

**Mr. Nikhilendra Kishore Pandey (2012-16)**  
**Sr. Software Engineer, QA Infotech**

IMS Engineering College is the known place for best discipline, best support in terms of education and career guidance. The best part is that it equally focusses on academics and extra-curricular activities. It is the inner talent of an individual which leads to success but you cannot ignore the fact that a good platform and appropriate guidance is must for that. The guidance provided by our faculty members is really applause worthy as they were guiding us all the time when required.



**Mr. Kushal Johri (2002-2006)**  
**Marketing Head, Topwise Communication**



**CURRENT AFFAIRES**  
**&**  
**CODING CHALLENGE**



# CURRENT AFFAIRS

## **1. Revised GDP Back Series data: All you need to know about new GDP data**

Nearly four years after moving to a new GDP series, the Union Ministry of Statistics & Programme Implementation (MOSPI) on November 28, 2018 released the revised Gross Domestic Product (GDP) data for the years 2004-2005 to 2010-2011.

Modifying the data of past years using 2011-12 as the base year instead of 2004-05, the Central Statistics Office (CSO) lowered the GDP growth rate under the United Progressive Alliance (UPA) Government from 10.3 percent in financial year 2010-11 to 8.5 percent.

## **2. Emergency Response Support System: Himachal Pradesh becomes first state to launch Single Emergency Number '112'**

Himachal Pradesh on November 28, 2018 became the first Indian state to launch a single emergency number '112' which will connect to police, fire, health and other helplines through an Emergency Response Centre (ERC) in the state.

For this purpose, state established an ERC in Shimla along with 12 District Command Centres (DCCs) covering the entire state. The emergency number was launched by Union Home Minister Rajnath Singh under the Emergency Response Support System (ERSS).

## **3. 8 States achieve 100% household electrification under Saubhagya; total 15 States now have 100% household electrification**

RK Singh, Union Minister of State for Power and Renewable Energy, on November 29, 2018 announced that 8 States have achieved 100 percent saturation in household electrification under Saubhagya Scheme. With this, there are now total 15 States in the country that have 100 percent household electrification.

These eight states are Madhya Pradesh, Tripura, Bihar, J&K, Mizoram, Sikkim, Telangana and West Bengal. As many as 2.1 crore connections have been released under Saubhagya or Pradhan Mantri Sahaj Bijli Har Ghar Yojana so far. States like Maharashtra, Uttarakhand, Himachal Pradesh, Arunachal Pradesh, Chhattisgarh, etc. are left with small number of un-electrified households and expected to achieve saturation any time.

## **4. ISRO successfully launches HySIS satellite aboard PSLV-C43**

The Indian Space Research Organisation (ISRO) on November 29, 2018 successfully launched a hyperspectral imaging satellite (HySIS), an earth observation satellite along with 30 foreign commercial satellites from Sriharikota launch centre in Andhra Pradesh. HySIS is an earth observation satellite developed by ISRO. It is the primary satellite of the PSLV-C43 mission. The mass of the satellite is about 380 kg. The primary goal of the satellite would be to study the earth's surface in visible, near infrared and shortwave infrared regions of the electromagnetic spectrum. The foreign satellites launched along with HySIS include 1 Micro and 29 Nano satellites from 8 different countries.





### **5. Maharatna, Navratna & Miniratna Status: NPCC is now a Miniratna**

The Union Government on November 27, 2018 conferred the 'Miniratna status: Category -I' on the National Projects Construction Corporation Limited (NPCC). The empowerment of Miniratna Status will help NPCC in taking speedy decisions by enhancing the delegation of powers to the

Board. NPCC has also been awarded with the ISO 9001:2015 Certification.

The government grants the status of Maharatna, Navratna, and Miniratna to Public Sector Undertakings (PSUs) and Central Public Sector Enterprises (CPSEs) based upon the profit made by these enterprises. The Maharatna, Navratna and Miniratna statuses give financial and administrative power to the companies to a certain extent.

### **6. BCCI announces two-year ban for age fraud**

The Board of Control for Cricket in India on November 27, 2018 announced that a cricketer guilty of age fraud will be barred from all its recognised tournaments for a period of two years.

The BCCI statement relayed that from the 2018-19 season, any cricketer who is found guilty of tampering his or her date of birth will be disqualified and barred from participating in any BCCI tournament for a period of 2 years i.e. 2018-19 and 2019-20 seasons.

### **7. India marks 10th anniversary of 26/11 Mumbai terror attacks**

India on November 26, 2018 marked the tenth anniversary of 26/11 Mumbai terror attacks that left 166 people dead and over 300 people injured. President Ram Nath Kovind paid tributes to the victims of terror attacks. Ten years back in 2008, 10 terrorists of Lashkar-e-Taiba terrorist group sailed into Mumbai and carried out coordinated attacks that lasted for three days.

The terrorists carried out bomb explosions and gun firings at Taj Mahal Palace hotel, the Oberoi Trident, Chhatrapati Shivaji Terminus railway station, Leopold Cafe, Cama Hospital, Nariman House Jewish community centre, the Metro Cinema and St. Xavier's College.

### **8. 69th Constitution Day observed across India**

The 69th Constitution Day was observed across India on November 26, 2018 to mark the adoption of the Indian Constitution by the Constituent Assembly. The Constitution of India was adopted by the Constituent Assembly on November 26, 1949 and it came into force on January 26, 1950.

The Constitution of India is a supreme law of India, which lays down the framework that defines the political principles, establishes the structure, procedures, powers and duties of Government



### **9. Mary Kom clinches gold in World Boxing Championship**

Mary Kom created history on November 24, 2018 by winning her sixth world championship gold at the 10th World Women's Boxing Championships, held in New Delhi, India.

Speaking on her historic win, Mary Kom said that it is very special as she was under pressure, especially because of the change in her weight category. "I won my last Worlds gold in 2010 and then the change of weight for Olympics hap-

pened. The pressure was something I always felt but don't know how to put this gold alongside the earlier five," she reasoned.

### **10. Allied and Healthcare Council of India to be set up: Cabinet approval**

The Union Cabinet chaired by Prime Minister Narendra Modi on November 22, 2018 approved the Allied and Healthcare Professions Bill, 2018 for regulation and standardisation of education and services by allied and healthcare professionals.

The Bill provides for setting up of an Allied and Healthcare Council of India and corresponding state allied and healthcare councils, which will play the role of a standard-setter and facilitator for professions of allied and healthcare.

### **11. Government decides to set up a domestic Gold Council in India**

The government on November 23, 2018 has decided to set up domestic Gold council in India to promote the growth of the sector and boost exports of jewellery. Commerce and Industry Minister Suresh Prabhu said this while inaugurating the 2nd Edition of India Gold and Jewellery Summit in New Delhi.

The gold council will have representations from all stakeholders including artisans, traders, miners and purifiers. The council would work in the direction of promoting the gold and jewellery industry, job creation, building of regional clusters. It will also extend domestic support for exports.

### **12. Open Defecation in India: Rural Jharkhand declared ODF**

The rural Jharkhand was declared Open Defecation Free (ODF) on November 15, 2018 during a regional review meeting of the eastern states held in Kolkata, West Bengal.

The workshop comprised discussions on sustaining Open Defecation Free (ODF) status, Solid and Liquid Waste Management (SLWM), and rural water supply. It saw participation from teams belonging to West Bengal, Jharkhand, Bihar and Odisha.

### **13. 33rd ASEAN Summit, 13th East Asia Summit and 2nd RCEP Summit: Major Highlights**

The 33rd edition of the ASEAN Summit concluded on November 15, 2018 at Suntec Singapore Convention Centre, Singapore. The Summit also saw the conclusion of other related summits like 13th East Asia Summit (EAS), 2nd Regional Comprehensive Economic Summit, (RCEP) and ASEAN plus summits.

The Summit began on November 13, 2018. The opening ceremony of the summit was addressed by Lee Hsien Loong, Prime Minister of Singapore, Chairman of this year's Summit. In his speech,

#### **14. Flipkart co-founder, CEO Binny Bansal steps down**

Flipkart co-founder Binny Bansal on November 13, 2018 announced his resignation as the CEO of the group, effective immediately.

The decision came to light after Flipkart and Walmart released a statement informing the same. The statement read, "Earlier today, Binny Bansal announced his resignation as CEO of Flipkart Group, effective immediately. Binny has been an important part of Flipkart since co-founding the company, but recent events risked becoming a distraction and Binny has made a decision to step down."



#### **15. Delhi Air Pollution: NGT forms committee to check air quality during functions at hotels, banquets**

The National Green Tribunal (NGT) on November 13, 2018 formed a committee to stop activities that lead to degradation of the environment, taking note of pollution and traffic congestion during functions at banquet halls, farmhouses and hotels in Delhi.

The Committee will be headed by the Delhi Government's Urban Development Secretary. Justice SP Garg, former Delhi High Court judge, will also oversee the working of the committee. The Chief Secretary of Delhi will provide all the requisite logistic support and assistance for functioning of committee.

#### **16. Delhi's Signature Bridge: All you need to know**

Delhi Chief Minister Arvind Kejriwal on November 4, 2018 inaugurated the long awaited Delhi's Signature Bridge, the first asymmetrical cable-stayed bridge in India.

The bridge was constructed by the Delhi Tourism and Transport Development Corporation (DTTDC) at an expenditure of Rs 1,518.37 crore. The 675-metre bridge aims to reduce travel time and traffic congestion between the north-eastern and northern parts of Delhi.

The bridge was first approved in 1997 after school bus fell off the narrow Wazirabad Bridge into the Yamuna, killing 22 children. However, a number of hurdles and budget modifications led to the delay in its completion.

## CODING QUESTIONS



1. How many times "BYTE" is get printed?

```
#include<stdio.h>
int main()
{
    int x;
    for(x=-1; x<=10; x++)
    {
        if(x < 5)
            continue;
        else
            break;
        printf("BYTE ");
    }
    return 0;
}
```

- A. Infinite times
- B. 11 times
- C. 0 times
- D. 10 times

2. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    int i=0;
    for(; i<=5; i++);
    printf("%d", i);
    return 0;
}
```

- A. 0, 1, 2, 3, 4, 5
- B. 5
- C. 1, 2, 3, 4
- D. 6

### 3. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    int i=1;
    if(!i)
        printf("BYTE");
    else
    {
        i=0;
        printf("C-Program");
        main();
    }
    return 0;
}
```

- A. prints " BYTE, C-Program" infinitely
- B. prints "C-Program" infinitely
- C. prints "C-Program, BYTE " infinitely
- D. Error: main() should not inside else statement



### 4. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    int i;
    i = printf("How r u\n");
    i = printf("%d\n", i);
    printf("%d\n", i);
    return 0;
}
```

- A. How r u  
7  
2
- B. How r u  
8  
2
- C. How r u  
1  
1
- D. Error: cannot assign printf to variable



*Dear Readers*

*Editorial Board welcomes articles  
for the next issue of "THE BYTE",  
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