



INFORMATION SCIENCE AND ENGINEERING

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ITsttig

Information Technology Students Technical Talent In Gist

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About the Department

Established in the year 1998, the programme of Information Science & Engineering aims at carving a niche in producing In-formation Technology professionals who will be ready to meet the persona of the corporate world.

The department purports to have dexterous mentors adept at molding the student talent pool. A team of well

qualified faculty members under the leadership of Prof. Syed Mustafa navigates issuing priceless guidance and tapping the potential of student.

Mission

To impart high quality engineering education in the field of Information Science & Technology with strong theoretical and extensive practical training meth-

odologies through innovation and research to make world class engineers

Vision

To train skilled and ethical professionals with an ability to plan, design, develop, organize and manage modern and traditional information systems with the knowledge of Information technologies, services and organizations globally

Programme Soughts After Accreditation:

In order to escalate the teaching learning process to standardized level the programme currently soughts after NBA accreditation Efforts have yielded fruits and the programme has successfully submitted the SAR. The programme hopes to reap fruitful rewards in terms of a 5 year accreditation.



Infosys Campus Connect

In times of fast changing era it is imperative to keep the students upbeat with the latest technology and also make them industry

ready professionals. The Infosys Campus Connect programme aims at bridging the academia -industry gap. The department

rolls out Infosys Campus Connect programme each year under the leadership of Dr. Syed Mustafa.



Web 1.0, Web 2.0 and Web 3.0 with their difference

Web 1.0 –

Web 1.0 refers to the first stage of the World Wide Web evolution. Earlier, there were only few content creators in Web 1.0 with the huge majority of users who are consumers of content. Personal web pages were common, consisting mainly of static pages hosted on ISP-run web servers, or on free web hosting services.

In Web 1.0 advertisements on websites while surfing the internet is banned. Also, in Web 1.0, Ofoto is an online digital photography website, on which user could store, share, view and print digital pictures. Web 1.0 is a content delivery network (CDN) which enables to showcase the piece of information on the websites. It can be used as personal websites. It costs to user as per pages viewed. It has directories which enable user to retrieve a particular piece of information.

Four design essentials of a Web 1.0 site include:

- Static pages.
- Content is served from the server's file-system.
- Pages built using Server Side Includes or Common Gateway Interface (CGI).
- Frames and Tables used to position and align the elements on a page.

Web 2.0 –

Web 2.0 refers to world wide website which highlight user-generated content, usability and interoperability for end users. Web 2.0 is also called participative so-

cial web. It does not refer to a modification to any technical specification, but to modify in the way Web pages are designed and used. The transition is beneficial but it does not seem that when the changes are occurred. An interaction and collaboration with each other is allowed by Web 2.0 in a social media dialogue as creator of user-generated content in a virtual community. Web 1.0 is enhanced version of Web 2.0.

The web browser technologies are used in Web 2.0 development and it includes AJAX and JavaScript frameworks. Recently, AJAX and JavaScript frameworks have become a very popular means of creating web 2.0 sites.

Five major features of Web 2.0 –

- Free sorting of information, permits users to retrieve and classify the information collectively.
- Dynamic content that is responsive to user input.
- Information flows between site owner and site users by means of evaluation & online commenting.
- Developed APIs to allow self-usage, such as by a software application.
- Web access leads to concern different, from the traditional-

Internet user base to a wider variety of users.

Usage of Web 2.0 –

The social Web contains a number of online tools and platforms where people share their perspectives, opinions, thoughts and experiences. Web 2.0 applications tend to interact much more with the

end user. As such, the end user is not only a user of the



What is Web? *"The Web is basically a system of Internet servers that support specially formatted documents. The documents are formatted in a markup language called HTML that supports links to other documents, as well as graphics, audio, and video files."*

application but also a participant by these 8 tools namely: Podcasting, Blogging, Tagging, Curating with RSS, Social bookmarking, Social networking, Social media and Web content voting.

Web 3.0 –

It refers the evolution of web utilization and interaction which includes altering the Web into a da-

Project xCloud : Microsoft's Netflix for Games

The Gaming Industry has been one of the most rapidly growing Industries across the world, and its development continues to accelerate at an increasing rate every year; this being a consequence of technological development and increase number of gamers. There are about 2.2 billion gamers in the world out of the approximate 7.6 billion world population as of July 2018. This means almost a third of the people on the planet are gamers.

However, the gaming Industries are quite fragmented. Approximately 1.4 billion gamers game on PC, while about another 677 million prefer consoles. Microsoft's Xbox, Sony's PlayStation, Nintendo's Switch are some of the gaming platforms other than a standard PC that occasionally receive a lot of exclusive games which generally can't be played on any other platforms or devices. This results in

some games left unplayable just because the gamer owns a console but not a PC, or that he owns a PC but not a console, or because he just doesn't own the supported console for that game. One of Microsoft's new major project, reportedly called Project xCloud, is an attempt to overcome this barrier for Microsoft supported games.

The company's CEO, Satya Nadella accurately described this service as "Netflix for games", in shorthand. Project xCloud aims at providing a game streaming network that provides console quality gaming on any device. Yes, this includes mobile phones as well. A service that presents gaming, with gamers at the center without any trade-offs in richness and quality of the experience. This means you can play all the games you own on

any of your supported devices using your Xbox Game Pass. Microsoft's powerful first party Cloud, Azure, which has data centers in over 54 regions in about 140 countries will act as the infrastructure to this service. Imagine playing games like Forza Horizon, Gears of War, Halo on any of your devices, anywhere you go! Through this service, Microsoft intends to scale and deliver an epic experience in gaming to the world.



**Interested in gaming?
Explore Xbox!!**

**Name: Bopanna N S
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LG SIGNATURE OLED TV

LG (life's good) Electronics is a South Korean multinational electronics company employing 82,000 people around worldwide. It is the most intelligent television and has the Google assistant and Alexa built in.



KEY FEATURES:

Perfect black and breathtaking Dolby version meets the A9 gen2 for intelligent processor and deep learning. An algorithm to deliver another level of



LG

realistic imagery like never before. Efficient technology like beautiful ON/OFF, A television can take the ultimate in minimalism. This is a TV that's there when you want it and disappears when you don't.. (ROLLABLE INNOVATION)

Eagerly waiting for the product to launch by the end of 2019..

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How do you explain to a ten-year-old how information is passed through thin air (WiFi, data networks, 3G, etc)?

Forget ten-year-olds, how would you explain that to an educated adult? How many of us really understand what goes on when you text your friend across the ocean and they get the *ping*, almost instantaneously! Allow me to entertain you with a little thought experiment.

When you press “send” on your favorite messaging app, where’s your message really going?

“Into the air,” you’d say, “like radio waves..” But let’s back up a bit. When you press send on WhatsApp, you’re essentially sending instructions to your mobile processor via tiny copper wires on a printed board circuit in your smartphone. Now, these instructions are essentially electrical impulses, right? And electrical impulses are just electrons flowing along the potential difference. How exactly does your message “jump” into thin air from being electron flows in copper wires? At one stage you had a circuit board that you could touch and feel and then suddenly you have radio waves in the invisible part of the spectrum, flying away into thin air at light speed. What’s in between is this odd looking device:

It’s an antenna, which translates to a “pole” in Latin. In simple speak, an antenna is a metal-tongued voodoo device that swallows electrical impulses and spits out radio waves. It is silent as the dead, but its screams can be

heard for miles.

Specifically, a Wi-Fi antenna like in the picture, screams at 2.4 GHz (2 billion beats per second!) and spits

out waves of length 12.5 centimeters. Unlike visible light, these waves can pass through walls, and even bend around the corners!

How does an antenna produce radio waves?

To produce radio waves, you need to create fluctuations in EM field. And to create those fluctuations, you need electrons moving around in a conductor! The act of radio wave synthesis is a carefully choreographed, rhythmic dance of electrons in tiny copper wires. Like perturbations in still water that radiate outward from the point of disturbance, the electron flows in an antenna cause perturbations in EM field which radiate out into space like EM waves.

When you press “send” on your favorite messaging app, your mobile OS sets off a chain of events that ultimately encode the message as a careful choreography of



electron dance. This dance results in rhythmic ebbs and flows in the EM field in the surrounding space, which radiate outward towards a cell tower. The receiving antenna on the cell tower *feels* these ebbs and flows on its conducting surface, inducing an electron dance very similar to the one at the transmitter. This electron dance is again a set of electric impulses in tiny copper wires, which are decoded by the hardware at the cell tower. The decoded information is then carried on high-throughput cables for thousands of miles across countries, continents and even oceans to a cell tower near your friend across the ocean. From the tower to your friend’s phone is another *wireless* jump. And finally, your friend hears the familiar *ping*.

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Message from Head of the programme

The programme is happy to release "ITsttig"- A specialized magazine of the programme. It reflects students technical passion and emphasizes technical happenings of the programme. The ignited young talent needs a stage for articulation and "ITsttig" is just the right place. I seek to keep tapping the students ability pool. May the Almighty help us in accomplishing our undertakings.



Dr. Syed Mustafa A



From the Editorial Team

It gives us immense joy and satisfaction to re-introduce our department magazine. The technical articles exhibited by students stand declaration to the advanced range of abilities of the students. The magazine continues to expand its reach to achieve its vision of being a truly representative student publication. In its own modest approach " itsttig " would keep on emphasizing the technical abilities of students in its future releases.

We hope you enjoy reading this issue as much as we have enjoyed making it

Happy reading!

Dr. Syed Mustafa A , HOD ISE

Prof. Aseema Sultana, Asst. Prof, ISE

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