TEC KNOW

KEY TO SUCCESS

E-MAGAZINE

COMPUTER SCIENCE DEPARTMENT

V. E. S. COLLEGE OF ARTS, SCIENCE AND COMMERCE

VERSION 2.0.0

Any sufficiently advanced technology is indistinguishable from magic.

– Arthur C. Clarke

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Top Recruiter's Interview(Tips to Crack Interview).

Whatpreparationsdidyoumakebe-foreappearingforthejobinterview?

First of all I checked my resume whether it is updated and all the information mentioned is correct. I viewed company's placement process and planned accordingly. I made sure I studied the basics of the technologies mentioned in my resume. I always stayed in a positive mindset before appearing although the nervousness was always there but I kept myself motivated.

What type of events according to you are worth participating in?

Again this depends on individual to individual. According to me, one shall participate in activities where he can develop his current strengths well and can also improve on his weaknesses. If one has a fear of communication, he can participate in anchoring the events or in activities which will involve more of communication.

Do you think that the reason you got selected in more companies than others is that you participated in extracurricular activities?

A big YES, by doing the extracurricular activities I developed confidence of handling various situations. I learnt tackling challenges for example while I was marketing for the fest I learnt how to communicate well and convince a person to invest in you or your events and many more.

How did you manage your studies and activities at the same time?

Managing time for both depends upon individual to individual, one can make sure he pays enough attention during lectures so that there is no need to study that topic again or one can study on weekends or one can also set a schedule and give ample time to his/her studies.

Did you face any issues regarding attendance due to participation in activities?

If you are really participating in helpful and beneficial activities the department willsupport you and most of the activities happen during non lecture times or post lectures.

Do you think marks matter more than your participation in activities?

Partially, as one has to satisfy eligibility criteria of companies to qualify for the placements. Marks and activities are two faces of a same coin and are equally important. One should make sure he gives equal importance to both but I will insist one should not take his exams and scores lightly and keep working on to improve them.

Is there a particular trait that you think you have which got you selected?

Being myself and always being honest in my resume and interviews.

Does participation in seminars increase the chances of a candidate getting selected in an interview?

Depends on the seminars you have being a part of. Instead of seminars one shall attend workshops and certification courses as participation and holding certifications and workshops certificates shows you have a wide skill set.

What essential qualities do you think are desirable in a candidate when interviewed?

Good communication skills, clarity of basics in technologies, multi dimensional and functional personality.

What tips do you suggest for those who will be appearing for job interviews in the near future?

Be confident and be yourself. Take every round seriously, answer with confidence, speak clearly and never lie to the interviewer.

-Pooja Lalchandani

ONE WHO SEES THINGS DIFFERENTLY...

To see differently, one must know this word i.e. Innovation. A term which defines the evolution of the human race, the cumulative contribution of something that transforms the lives, creating an impact on the lifestyle of the people. This word is heard by the most, but few understood its values. Let us understand how one can see things differently to enhance the quality of the product.

One can innovate irrespective of his field of research/ department but have the passion and persistence to shape his imagination in reality. The person must have a mindset to enhance the product even it's functional, to beat the status quo.

Ask yourself step by step when you initiate a project:
1. How can I MAKE IT BETTER?
2. Can this project be APPLICABLE in REAL WORLD?
And one more thing which is important….
3. Does this idea/vision UNIQUE AND CONTRIBUTIONAL?

To understand more finely, let's analyse the quote from the book STEVE JOBS by Walter Isaacson:

"When you're a carpenter making a beautiful chest of drawers, you're not going to use a piece of plywood on the back, even though it faces the wall and nobody will ever see it. You'll know it's there, so you're going to use a beautiful piece of wood on the back. For you to sleep well at night, the aesthetic, the quality, has to be carried all the way through."

-Steve Jobs

The best way to sight opportunistic ideas is to tackle people to share their demands. In basic commerce logic, "if there is demand, there is supply" and you will supply the product which not only fulfils the demands but also satisfied with it. But you have to hammer it until it moulds itself into a great product in reality.

"Combination of colours makes the rainbow over the sky."
-Anonymous

Inspiration is the one of the main key factors for one to be self-drive towards Innovation. To inspire yourself, read autobiography or biography of atleast one person related to your respective field. It not only inspires you but also reveals their beliefs, their method of thinking or their management skills which will enhance your boundary of knowledge.

"Work until your idols become your rivals."
-Anonymous

And one more thing….

"Know how to garnish food so that it is more appealing to the eye and even more flavourful than before."
-Marilyn Vos Savant

One should not only innovate the product but also its appearance. The product must be interactive, user-friendly and also attractive, leaving people satisfied while using it. Even small details are very important for the appearance of the product which in the case of Marilyn Vos Savant, is the 'cherry on top of the cake'.

In this way, you can see things differently, making a mark upon the people. Once you do that, you will never be the same again.

"This world is but a canvas to our imagination."
-Henry David Thoreau

At last when you finished the project, always be open to suggestions for the product. People do like to suggest as they have different perceptions to observe things in life. By anticipating their angle of observations and implementing it in the product, the product will be evolved better and compatible with the demands, making lives more comfortable.

-Hritik Bhat

TESLA "The Untold Legend"

YOU MAY KNOW WHAT TESLA IS, YOU MAY KNOW WHO OWNS THE TESLA BUT DID YOU KNOW WHO TESLA WAS?

One of the best companies specializing in manufacturing electric cars out now, was named as TELSA as a homage to NIKOLA TESLA (1856-1943) A Siberian inventor, engineer, futurist and physicist. Tesla's contribution has played an important role in shaping today's modern world.

FUN FACTS of NIKOLA TESLA:

TESLA had an unusual power of visualizing prototype of his invention in its full dimension.

• The thing that makes Nikola Tesla to be one of the greatest inventor's in histories was his ability to visualize his invention to its minutest detail.

•This Ability of Tesla was so substantial that it was difficult for him to distinguish between reality and hisvision.

This enabled him to modify his prototype to its complete working state only in his vision without use of any models or such.

" Invention is the most important product of man's creative brain. The ultimate purpose is the complete mastery of mind over the material world, the harnessing of human nature to human needs. " Nikola Tesla

"The inventions I have conceived in this way have always worked. In thirty years, there has not been a single exception. My first electric motor, vacuum tube wireless light, my turbine engine and many other devices have all been developed exactly this way." - Nikola Tesla

TESLA initiated many outstanding modern inventions, way more ahead than his time.

• Tesla was well known in the 19th century because of his marvellous inventions, his selfless contribution to the world has a major impact in advancements of today's modern technology.

• Apart from his contribution in inventing electric motors, oscillators, improved lights, radio and the high-voltage transformer known as TESLA COIL, Tesla obtained around 300 patents in his lifetime.

• Perhaps showing world how AC was a far more efficient alternative to DC can be still considered as the most important contribution of Tesla in energy history.

War of the currents

" War of the currents " took placed over the form of electricity (AC or DC) that would become standard.

-Tesla and ally George Westinghouse fought for alternating Current or AC where as their rival Thomas Edison promoted the use of DC.

- Direct Currents or DC was not as efficient as AC since transmitting DC over few miles required more thicker wires, whereas Tesla knew the efficiency of AC, he believed AC was a more efficient way to light up and does holds 7 patents for his AC related inventions.

- In order to be victorious Edison attempted to perform execution of animals and criminals with the use of electric chair invented by Edison himself to show how danger effects of using AC, however despite all this AC won over DC.

" All that was great in the past was ridiculed, condemned, combated suppressed - only to emerge all the more powerfully, all the more triumphantly from the struggle. "
-Nikola Tesla

Did You Know?

When Nikola tesla met Swami Vivekananda for the first time he was 45 years old and till that time he had already developed AC motor and also patented his other inventions, at that stage of life Nikola was very excited regarding his achievements and his invention had created the revolution in scientific field.

- Swami and Tesla had a good long conversation between them which really inspired Nikola; also he came to knew about the things that he thought was not possible.

- Swami Vivekananda told tesla about the Vedanta philosophy and Nikola Tesla replied by saying that whatever things that have been written in India's Scriptures, people today or tomorrow will definitely believe in it when science will prove everything that has been written in the scripture is the truth.

- Glimpse of Vedanta can be seen in tesla's description of natural phenomena, after understanding concept of Vedanta from Swamiji Tesla began to use Sanskrit word such as AKASHA, PRANA and concept of aluminiferous ether to describe the source, existence and construction of matter.

- It's also true that tesla was not completely successful in establishing relationship between energy (urja) and matter (padarth) mathematically, but having an influence of Vedanta he believed that there definitely exists a relation between energy (urja) and matter (padarth).

- Later, Albert Einstein proves the formula that described the relationship between energy (urja) and matter (padarth) and thus it was also proved that writings in Vedanta were also true.

" If you want to find the secrets of universe think in terms of energy, frequency and vibration. "
-Nikola Tesla

- Parag Sonawane

Google assistant makes lifelike calls

Everyone knows that Google is a company which continuously strives to develop better technologies and make people's lives better. Well, last year the CEO of Google Sundar Pichai gave a breathtaking demo of the upcoming Google Assistant which, you may not believe, can have a real-life conversation. Yes, you read that right, can you imagine that a computer program can have a real-life conversation and the other person won't even know. With Deep Learning and Natural Language Processing, the upcoming Google assistant will be able to conduct real time conversations. An example of this was showcased in the Google keynote where the Google assistant had a real-life conversation with a lady where the assistant booked an appointment for a haircut. These conversations are never handled by any person and a software named Duplex handles it. It can carry out its tasks fully autonomously and withoutany human involvement. Google used real-time supervised training in order to teach the assistant on how to have a conversation and how to handle complex situations.

In the Duplex system, the job of the instructor is carried out by experienced operators and AI engineers.

Withevery conversation, thesystem improvesitselfand also learns new things and phrases. These phrases are added or replaced to make the conversation smoother. Even after this much development, Sundar Pichai CEO of Google said that this technology is still under development and this clearly indicated the applications of this technology will be a head turner and we expect a lot from this technology.

-Pritish Chatterjee

Freeze the Seconds

Click Click Click!!!

Ok so everyone likes photography or loves to see beautiful pictures.
Let's see what actually makes a picture beautiful. Firstly we will take a look at some basic terms.

Single Lens Reflex :

A single lens reflex camera has a single lens that forms an image which is reflected to the viewfinder. Digital single lens reflex cameras or DSLR cameras are the most versatile of the digital cameras.

1. Exposure :

Exposure is how light or dark an image is. A dark photo is considered underexposed, or it wasn't exposed to enough light; a light photo is overexposed or exposed to too much light. Exposure is controlled through aperture, shutter speed and ISO.

2. Aperture :

This is the first common photography term you should learn. Simply put, aperture is the size of the opening in the lens. A wide open aperture will let more light into the image for a brighter photo, while a smaller aperture lets in less light. Aperture is measured in f-stops; a small f-stop like f/1.8 is a wide opening, a large f-stop like f/22 is a very narrow one. Aperture is one of three camera settings that determine an image's exposure, or how light or dark it is.

3. ISO :

The ISO determines how sensitive the camera is to light. For example, an ISO of 100 means the camera isn't very sensitive—great for shooting in the daylight. An ISO 3200 means the camera is very sensitive to light, so you can use that higher ISO for getting shots in low light.

4. Shutter Speed :

The shutter speed is the part of the camera that opens and closes to let light in and take a picture. The shutter speed is how long that shutter stays open, written in seconds or fractions of a second, like 1/200 s. Or 1", with the " symbol often used to designate an entire second. The longer the shutter stays open, the more light that is let in.

10 * tips for beginners :

- Don't go crazy buying the most expensive equipment.
- Keep your camera with you all the time.
- Consider a tripod.
- Don't overlook lame looking subjects for photography.
- Make a list of shots you would like to get.
- Always keep experimenting with your gear.
- Take the advantage of free resources to learn.
- Always keep enjoying the learning process.
- Never hesitate while clicking anything in the public. If you want to capture a portrait just ask that person.
- Always keep searching for new angles rather than going for the same old straight shots.

-Sharang Bhoir

How to Excel in Programming

Whether you want to uncover the secrets of the universe, or you just want to pursue a career in the 21st century, basic computer programming is an essential skill to learn. Learning to write programs stretches your mind, and helps you to think better, creates a way of thinking about things that are helpful in all domains.

Story.....

A couple of years ago I was quite interested in martial arts.

Hours upon hours of watching "The Karate Kid" growing up must've taken their toll on me...

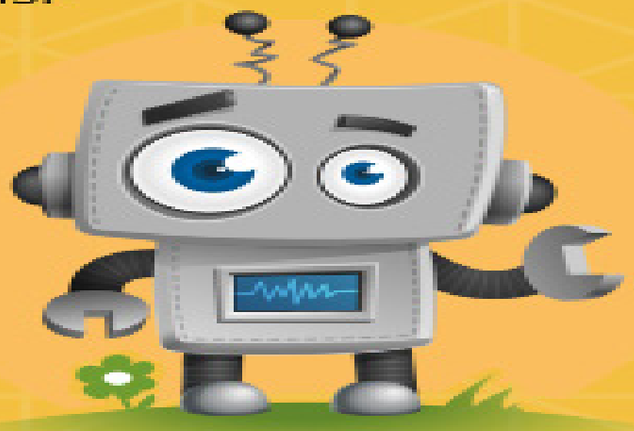
And so, I found myself at this smelly little gym, joining my first couple of karate practice sessions. I was at this dingy gym, working hard to learn how to count in Japanese and getting my hand-eye coordination under control..

[You know, karate practice feels more like learning to dance than learning how to fight. At least when you're a beginner.]

Moments later my friend kicks me in the face because I turned left when I should've turned right—My interest in karate waned quickly after that. Yeah...I'm a lover, not a fighter. Why am I telling you this?

I like to think mastering programming as a skill is quite similar to mastering a physical skill like karate. (Although I've had more success with the former.) Here, let me explain

With both, it takes a long time to build up the right foundation. But once "muscle memory" starts kicking in, your progress can skyrocket. It's all about making it through that first rough patch of slow learning progress without losing your motivation.



Mastering a programming language means lifelong learning. The topic is fractal—there's always a way to expand your knowledge in some obscure way. One can hit critical mass in terms of knowledge and be called an expert, but it's unlikely a single person will "know it all".

A seasoned programmer acts deliberately and with an economy of movement that a beginner can't yet understand. Biological differences like age, "IQ", play less of a role. The more experienced dev still codes circles around the eager newcomer.

There're road maps but no "One true path" to mastery. Learning progress will depend highly on the motivation and drive of the individual, and the peers they surround themselves with. Mentorship and community play the biggest role in becoming successful.

Like martial "arts" programming is more of an art than a science. It's a creative endeavor rather than a strictly mechanical affair. Brute force and applying 10,000 "IF this THEN that" rules might get one a job but doesn't lead to the true joy of programming.

➢ Know the different types of programming:

The largest difference between types of programming can be thought of like the difference between "front-end" and "back-end" programming. Front-end involves manipulating what a user sees directly, think of the interface you see when you log in to any web interface. The back-end is all of the magic that happens sight unseen - the way servers process your password and grant you access to all of your data.

➢ Read > Write Code >

Reading about code (books, blog posts, opensource code) will help you to see solutions and get a general understanding of a language or a system. But after that, you need to actually go and write code. It can be little coding exercises or side-projects. This iteration cycle should happen, not on a week by week basis or on a month by month basis, but on a day to day basis. The more you wait to use those skills, the more they will dull out.

➢ Talk to other programmers:

You'll probably learn a lot about libraries, programming languages, and patterns. But, most importantly, you'll learn how other people think about programming. You'll see that things you take for granted or had never considered are very different from person to person.

Programming efficiently involves putting your thoughts and logic into machine form as quickly as possible. Table of keyboard shortcuts will help you speed yourself up. Games such as TypeRacer will help you improve your words per minute count when it comes to typing, allowing you to transfer your thoughts more quickly into code.

➢ Take advantage of as many resources as possible, and give back when you can:

Go onto communities such as Hacker News and Quora. Look up questions on StackOverflow and even ask a few yourself if you're stuck on anything! Look up awesome Github repositories that contain all the resources you'd need to learn.

➢ Programming is the act of reducing complexity to simplicity.:

Simple is better than complex. Complex is better than complicated. Flat is better than nested. Sparse is better than dense. -The Zen of Python

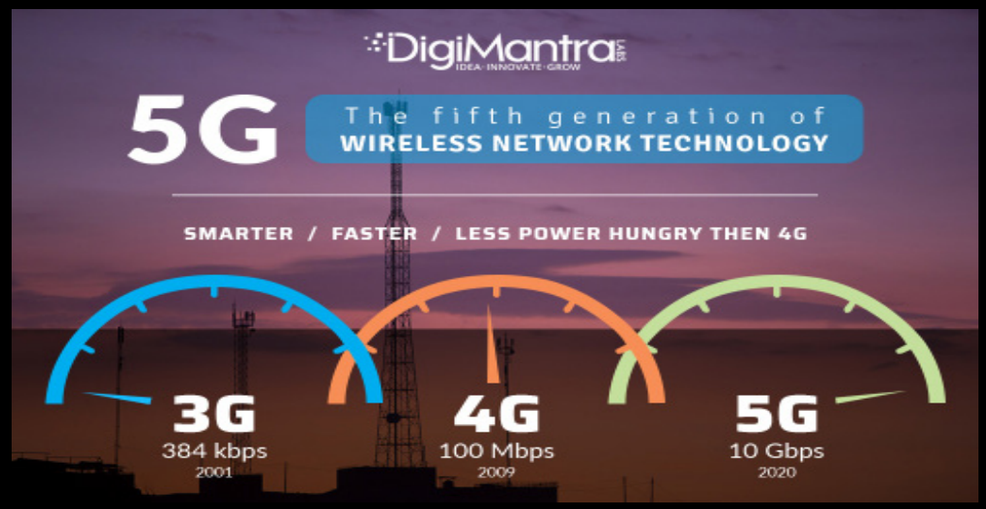
One should not learn to write code, but you should learn to write as little code as possible. The best programs are written so that computing machines can perform them quickly and human beings can understand them clearly.

"Nobody is naturally born a better programmer than somebody else. You must work hard and put in the hours if you want to improve your programming skills."

– Shweta Katkar & Ashish Nagaliya

FAST-FORWARD TO THE FUTURE OF 5G NETWORKS

Right now it seems like there are more questions about 5G than there are answers. People are wondering what 5G is, and if they'll ever see it in their surroundings, while others are more interested in 5G smartphones. If you have questions, we're here to help. Here's everything you ever wanted to know about 5G. Before we explain how 5G works, it's probably a good idea to explain what 5G is.



The 5G(Fifth Generation)is a wireless network based on the combination of existing wireless technologies like GSM (Global System for Mobile), Wi-Fi, LTE(Long Term Evolution) and new radio access technologies.
It has x100 times better capacity than 4G which dramatically improves internet speed.

For example: If you want to download a film on 3G it will take around 20 hrs or more, on 4G you'll need to wait for 6-10 mins but on 5G you'll be ready to watch a film in just 3.5 seconds that's the speed of 5G.

I] Spectrum:

LTE,5G operates on three different spectrum bands:

1. Low-band Spectrum:

Low-band spectrum offers great coverage area and penetration, there is a big drawback: Peak data speeds will top out around 100Mbps.

2. Mid-band Spectrum :

It provides faster coverage and lower latency than you'll find on low-band.

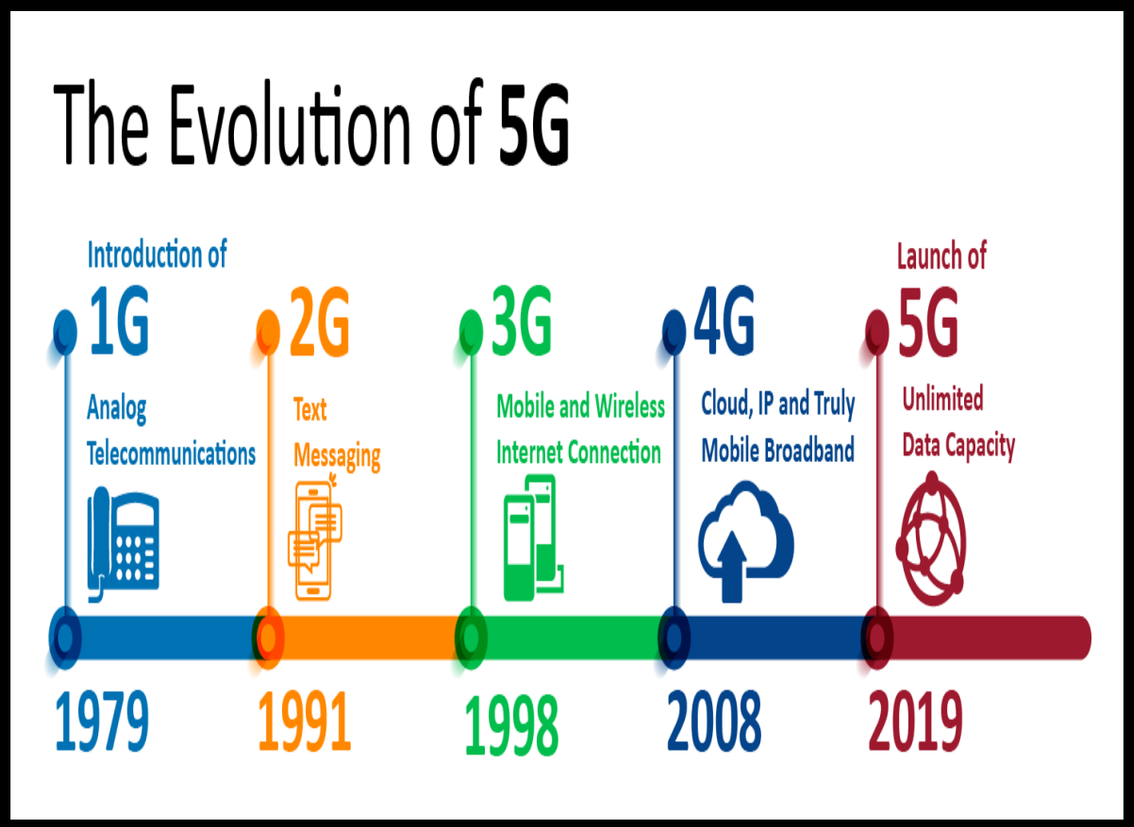
3. High-band spectrum:

It is often referred to as mmWave(mutilmeterwave). The high-band spectrum can offer peak speeds up to 10Gbps and has very low latency.

4. Massive MIMO:
To improve penetration coverage area on the mid-band.

5. Beamforming:
It is used to improve 5G services in mid-band.

6. Small cells:
Are low power base stations that cover geographical areas.



As every technology has it's own advantages and disadvantages, let's take an overview of this:

Advantages:

1. The 5G leaves us with a maximum download speed of 20 Gb/s, while that of its predecessor is 1Gb/s.
2. 5G will allow cities and other municipalities to operate more efficiently.
3. Monitoring will be easier, a governmental organization and investigating offers can monitor any part of the world.

Disadvantages:

1. The Internet of Things(IoT) devices and sensors will more demand complex authentication to prevent unauthorized access which makes it unsafe to hackers.
2. 5G network will be used to solve all radio signal problems and hardship of the mobile world, but due to some security reasons and lack of technological advancement in most of the graphical regions, it has shortcomings.
3. The 5G deployment and maintenance phases and 5G smartphones will be costly.

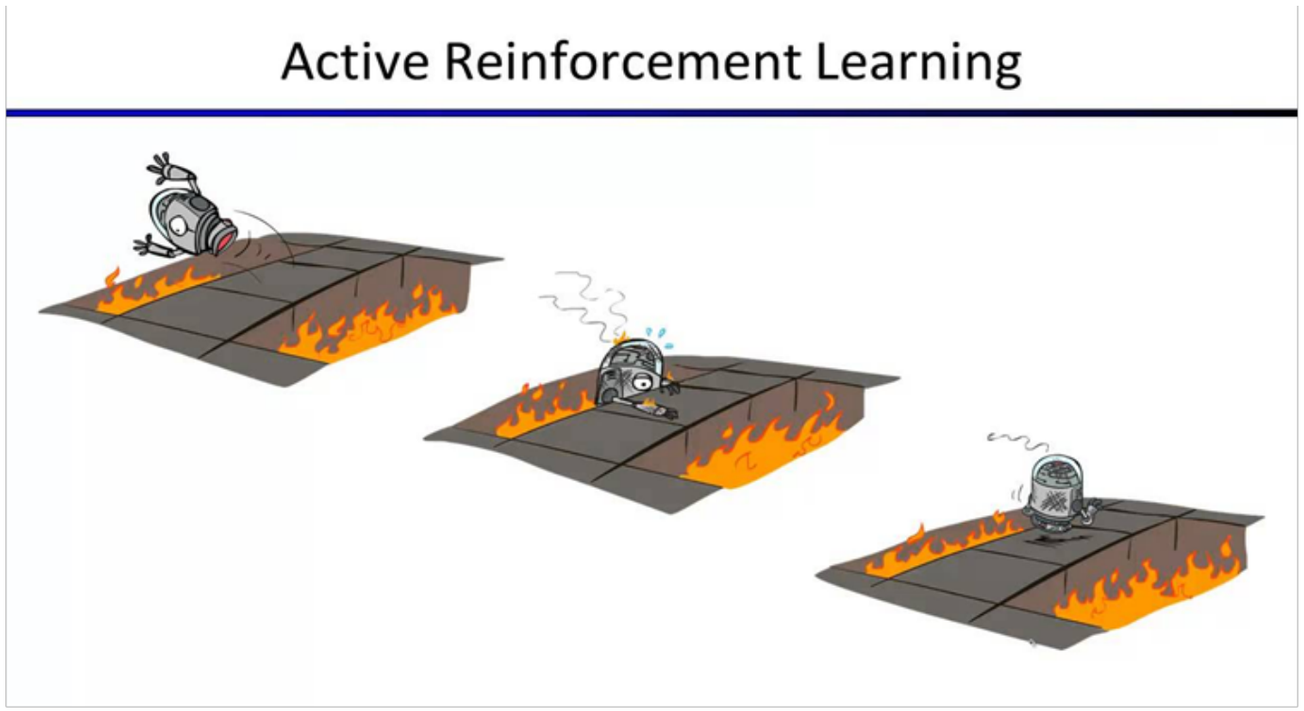
-Mansi Patil

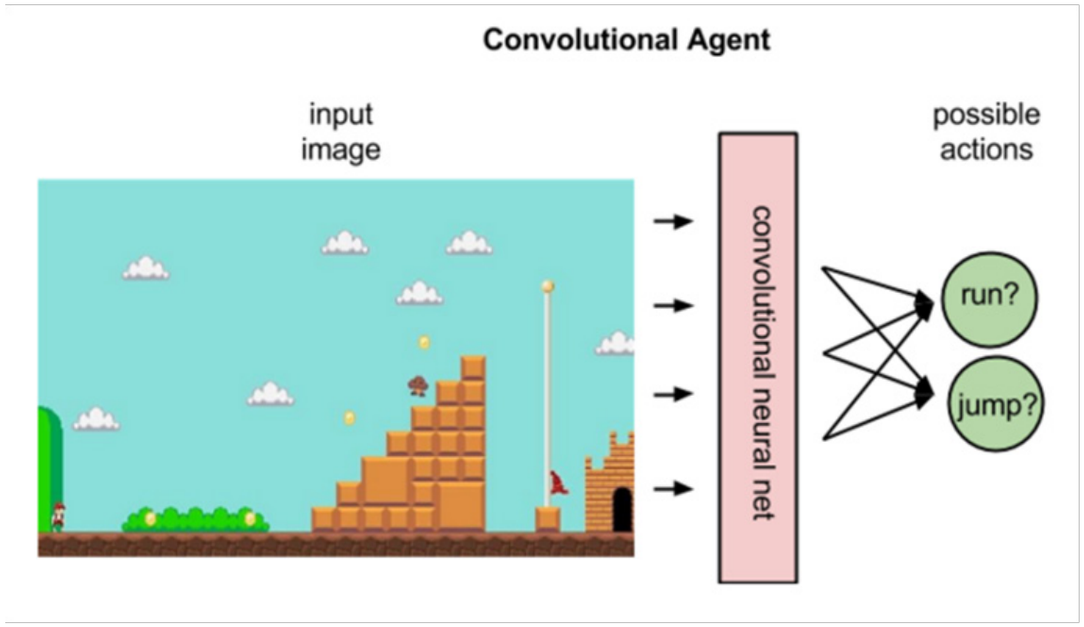
What is Reinforced Learning?

In today's time, the IT industry is very much occupied with the topic of Artificial Intelligence. This sector has a very high demand due to its applications in the industry as it will not only reduce the labor costs, but it will also ensure delivery of high-quality service and products. AI has also found its place in data handling where a human cannot simply compete with a computer as there are tons of data to be handled and processed.
Reinforced Learning is nothing but a form of AI. Here the algorithm doesn't need a human to feed it tons of data for it to learn it from. The algorithm collects its own data and processes the patterns and other factors which it needs in order to predict and handle operations.
Reinforced Learning learns like a human child, whenever it takes a right step, the algorithm is rewarded with some points. In simple words, the objective of the algorithm is to collect as much points as possible and reach the goal.

For an example, in the above diagram, the robot's goal is to avoid the blocks in which the fire is there and has to reach the block with the diamond. Whenever the robot takes the route with the safe block, the algorithm will be rewarded a point. In this case the goal is to reach the diamond block in less moves as possible.
The algorithm learns by making mistakes and accordingly changes its methods of taking a step. This may take hundreds or even thousands of tries but for us it will be simple a matter of minutes.

Here every box can be called a state and the decision taken by taken to move to a block can be called as the output. Every state has a certain value as well as every output. Using these values, the algorithm decides on which block to move onto. It is surprising to know that here mathematics is the major player and the code is just a method to make the computer follow the mathematics.





Reinforced Learning is considered to hold great potential, but in today's world, it is not considered reliable as the algorithm may get stuck on loops which will render it unusable. But with further research, Reinforced Learning may be the next great thing in the field of AI and is worth studying for students who aspire to work in the field of AI.

-Pritish Chatterjee

A MYSTERY OF THE DIGITAL WORLD!

Are you ready to get this mystery revealed?

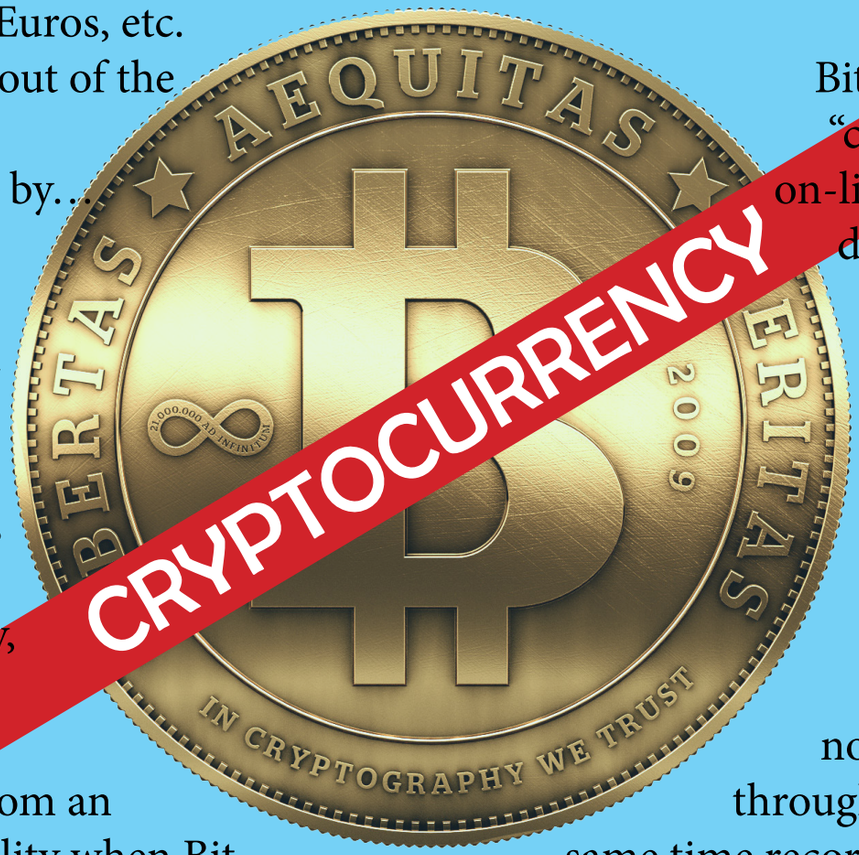
Now, you may be thinking what is this new currency??
We've heard currency in dollars, Rupees, Euros, etc.
But cryptocurrency… sounds something out of the box isn't it?

So, this cryptocurrency came into picture by…
"Combining an understanding of natural law and human nature", the creator of Bitcoin found a way to coordinate human actions to build a new economy.

According to him, to build this new-era of economy, you don't need to have notes, coins or currency in your hand.

This brings the concept of cryptocurrency, which is a digital currency created and managed through the use of advanced encryption technologies. It is a big leap from an academic traditional system to virtual reality when Bitcoin was introduced!

Now, no notes or coins need to be carried, no complicated tasks to link your bank accounts or add money to your Paytm Wallets.



CRYPTOCURRENCY

Bitcoin has its own cryptocurrency which may be used fully Risk-Free with $100,000 in Virtual money

How is that this possible? the solution is...

Bitcoin may be a suburbanized, peer-to-peer, "cryptocurrency" system designed to permit on-line users to carry-out transactions through digital units of exchange known as Bitcoins.

Started in 2009 by a mysterious developer, Bitcoin has gained lots of interest and disputation as a "third" form of currency and another to government flat currencies just like the U.S. greenback or the monetary unit or pure artefact currencies like gold or silver coins.

Bitcoin payments are processed through a non-public network of computers connected through a shared program. Every dealing is at the same time recorded in an exceeding "blockchain" on every laptop that updates and informs all accounts.

How is it private or non-public?

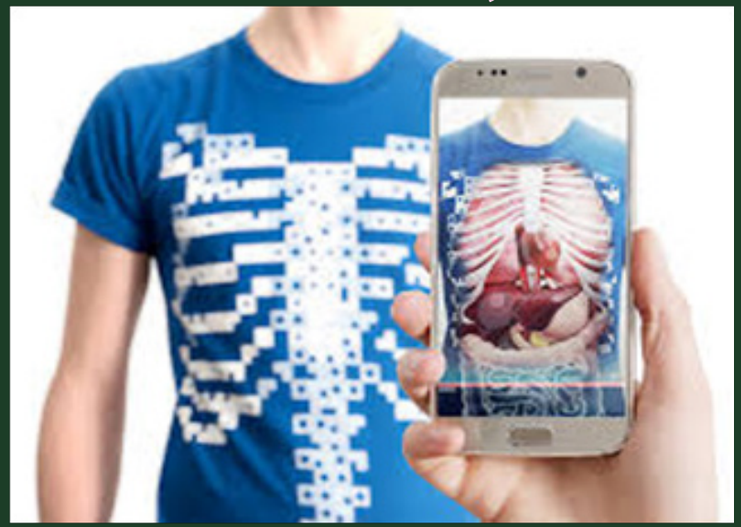
Bitcoin purchases are separate. Unless a user voluntarily reveals his Bitcoin transactions, his purchases are ne'er related to his individuality, very similar to cash-only purchases, and can't be traced back to him. In fact, the anonymous Bitcoin address that's generated for user purchases changes with every dealing or transaction.

This requires high-security checks through a "mining" method that needs powerful computers to unravel complicated algorithms and crunch numbers. They're presently created at the speed of 25 Bitcoins per ten minutes and can be capped at 21 million, a level that's expected to be reached in 2140.Test your commercialism skills with Bitcoin FREE Stock Machine. vie with thousands of Investopedia traders and trade you thanks to the top! Submit trades in an exceedingly virtual surrounding before you begin risking your own cash. Observe Commercialism Methods with Investopedia (an exchange Game) so once you are able to enter the $64000 market, you have had the observe you wish.

- TANYA TALREJA

Augmented Reality

Augmented reality (AR) is an interactive experience of a real-world environment where the objects that reside in the real-world are enhanced by computer-generated perceptual information, sometimes across multiple sensory modalities, including visual, auditory, haptic, somatosensory and olfactory. The overlaid sensory information can be constructive (i.e. additive to the natural environment), or destructive (i.e. masking of the natural environment).This experience is seamlesslyinterwoven with the physical world such that it is perceived as an immersive aspect of the real environment. In this way, augmented reality alters ones ongoing perception of a real-world environment, whereas virtual reality



The primary value of augmented reality is the manner in which components of the digital world blend into a person's perception of the real world, not as a simple display of data, but through the integration of immersive sensations, which are perceived as natural parts of an environment. The earliest functional AR systems that provided immersive mixed reality experiences for users were invented in the early 1990s, starting with the Virtual Fixtures system developed at the U.S. Air Force's Armstrong Laboratory in 1992. Commercial augmented reality experiences were first introduced in entertainment and gaming businesses. Subsequently, augmented reality applications have spanned commercial industries such as education, communications, medicine and entertainment. In education, content may be accessed by scanning or viewing an image with a mobile device or by using marker-less AR techniques. An example relevant to the construction industry is an AR helmet for construction workers which displays information about construction sites.

Augmented reality is used to enhance natural environments or situations and offer perceptually enriched experiences. With the help of advanced AR technologies (e.g. adding computer vision, incorporating AR cameras into smartphone applications and object recognition) the information about the surrounding real world of the user becomes interactive and digitally manipulated. Information about the environment and its objects is overlaid on the real world. This information can be virtual or real, e.g. seeing other real sensed or measured information such as electromagnetic radio waves overlaid in exact alignment with where they actually are in space. Augmented reality also has a lot of potential in the gathering and sharing of tacit knowledge. Augmentation techniques are typically performed in real time and in semantic contexts with environmental elements. Immersive perceptual information is sometimes combined with supplemental information like scores over a live video feed of a sporting event. This combines the benefits of both augmented reality technology and heads up display technology (HUD).

-Nutan Gondal

CYBERNETICS

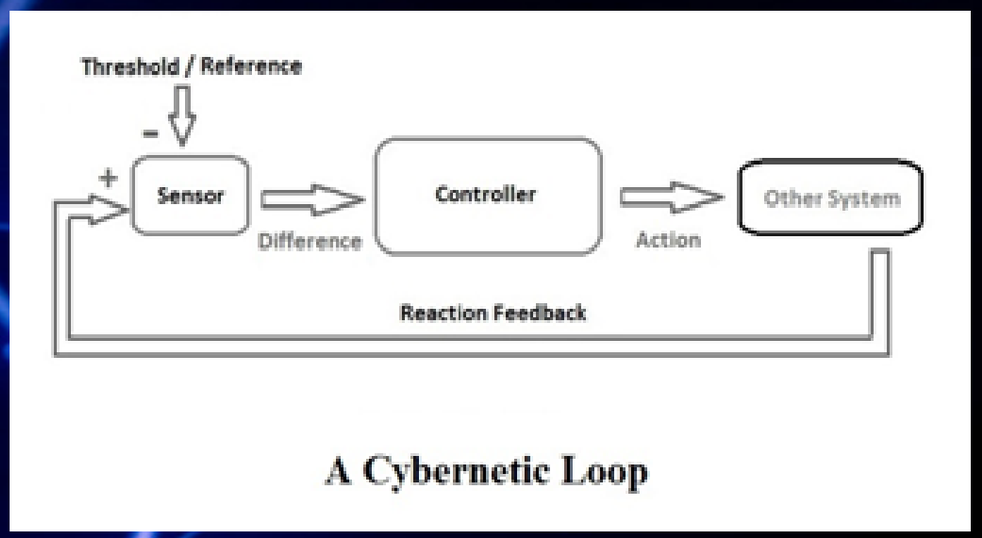
Cybernetics is the science of communications and automatic control systems in both machines and living things.

Cybernetics is derived from Greek word for steersman 'kybernetes'. It was first used by Norbert Wiener (an American mathematician and philosopher) in 1948. He defined cybernetics as "the scientific study of control and communication in the animal and the machine."

It is more specifically related to the recently developing "sciences of complexity", including AI, neural networks, dynamical systems, chaos, and complex adaptive systems.

The early contributions of Cybernetics were mainly technological, andgave rise to communication technology, feedback control devices, automation of production processes and computers.

Cybernetics basically is the science to understand and study how humans, animals and machines control and communicate with each other.



A Cybernetic Loop

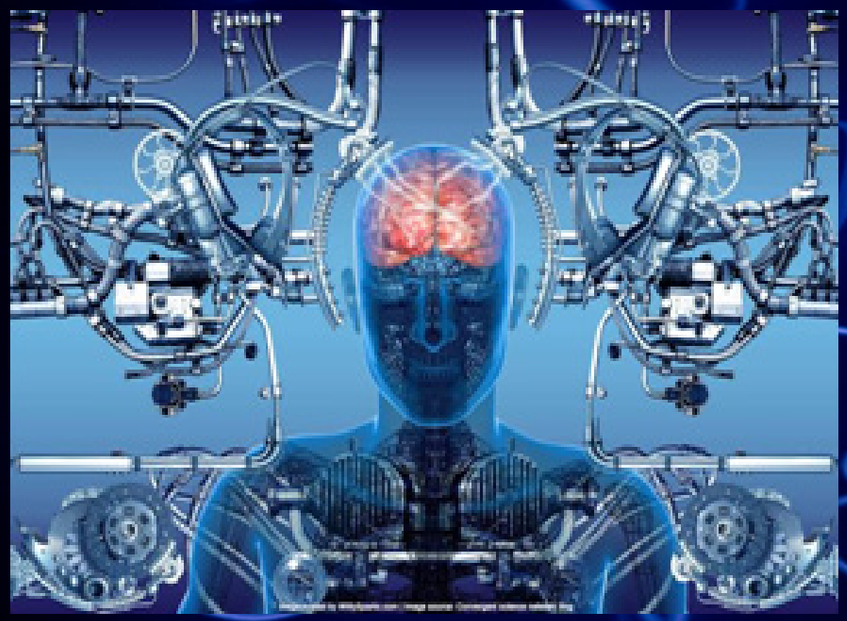
In a closed signalling loop, Cybernetics will be applicable to analyze the outcome of the system, how some change in the environment triggers a system change.

There are many concepts which are studied under Cybernetics such as learning, cognition, adaptation, social control, emergence, convergence, communication, efficiency, efficacy, and connectivity. These concepts are abstracted from the context of the specific organism or device.

Fields of study which have influenced or been influenced by cybernetics include game theory, system theory, perceptual control theory, sociology, psychology, philosophy, architecture and organization theory.

Cybernetics in computer science:
The concepts of cybernetics are directly applied to the control of devices and the analysis of information in:

· Cellular automaton
· Decision support systems
· Design patterns
· Robotics
· Simulation
· Formal languages
· Modal logic



-Nitesh Punjabi

JOY OF GIVING

"We would never learn to be brave and patient if there were only joy in the world."

-Helen Keller

Humans are called 'Social Animals' for a very prominent reason. In today's modern world, we all live together as a part of society. In this society, we socialize with people of different nationalities, religions, etc. The reason behind socializing with people is to make and maintain healthy relations so that we stay united and help each other during the day to day life issues or even a national crisis.

We often use our relations for our interests and we tend to ignore our responsibilities as members of society. One such responsibility that we all should address is the role that we play in the ***betterment of people with special needs***. Many of us believe in giving equal opportunities to people with mental or physical disabilities but the real question that we should ask ourselves is what are we doing for such individuals? No matter how bad situations seem to be, there is always hope for change. Even in today's world of harsh realities, we still have people who selflessly want to make a change in society. One such organization that we have amongst us is **NASEOH**.

Established in 1968, National Society for Equal Opportunities for the Handicapped, India (NASEOH, INDIA) has been constantly working towards the growth and betterment of disabled people. This organization has made a significant change in society by achieving various milestones. NASEOH mainly focuses on employing the disabled. They are trained by professional instructors so that their abilities can be maximized as much as possible. The nutrition, fitness, and health of such disabled people are also taken care of by the organization. Being a charitable organization, it is not easy for the people at NASEOH to provide the best facilities to the people linked to the organization. Even in such difficult conditions, this organization stops at nothing to serve the people.

It is rightly said that “Small things make big differences”. Similarly, the students of the Computer Science department of our college have taken a small initiative by going down to the organization and helping the specially-abled. It gives immense happiness to the volunteers by seeing few real giggles in this world of fake smiles. It is a two-way relationship between the volunteers and the people over thereof forming a new bond and taking back memories which would never be forgotten.

-ROHIT DASWANI

GAMING: AS A DEVELOPER OR A PLAYER.....

Video games have been around us since decades. From the classic Nintendo consoles to the modern-day Play Stations, Video games have always been close to the hearts of millions of gamers worldwide. In this world of video games, we have two types of people, gamers and game developers.

Just as the name suggests, A gamer is a person who plays the video game. On the other hand, A game developer is a person who uses his creative and technical skills to make a game for others to play. Being a gamer or a game developer are two different things but there is a very thin line which makes the two, different from one another.

A game developer needs to have proper knowledge about the various technologies required to develop a video game along with creativity. Technology and creativity go hand in hand when it comes to creating a good video game. If we ask a gamer, for him, the perfect video game would be the one with good performance combined with a great storyline.

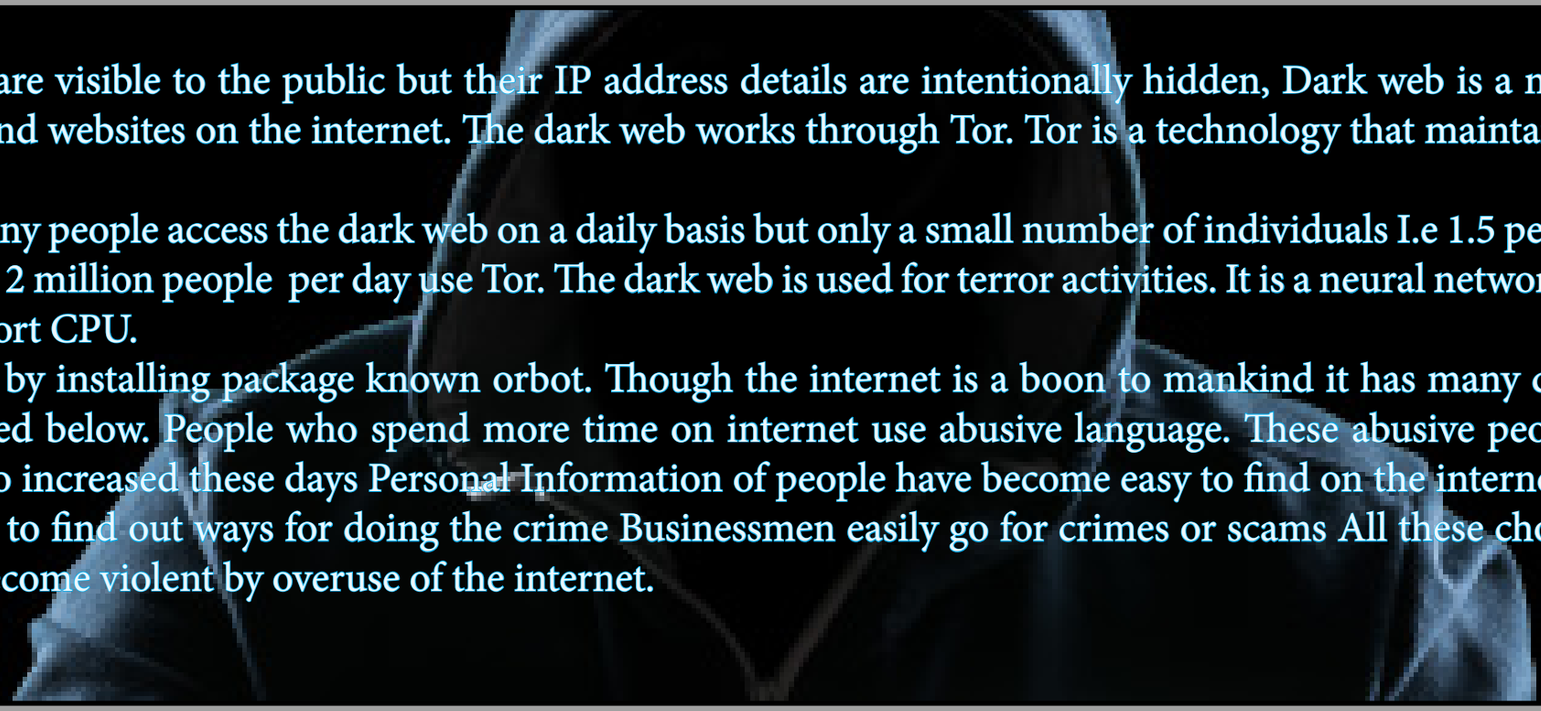
Many game developers create video games with stunning visuals and great performance but still, their games don't emerge as successful as they should be. This may be due to the lack of creativity in such game developers. Mostly, in such cases, the developers have complete knowledge of the technologies but they don't have the right vision required to make their games interesting. This is where the importance of creativity comes into the picture.

A good game developer needs to be a good gamer first. A gamer may or may not have great technical knowledge but he understands the needs of fellow gamers very well. This ability to think from a gamer's point of view is very important for a game developer. This enables a game developer to make a game that not only uses advanced technology but also makes the gamer's overall experience better.

So, In conclusion to this, We can say that the recipe for an extra-ordinary videogame requires a proper balance between technology and creativity.

-Rohit Daswani

Dark web



Dark web are websites that are visible to the public but their IP address details are intentionally hidden, Dark web is a network of the untraceable online activist and websites on the internet. The dark web works through Tor. Tor is a technology that maintains the user & anonymity.

It is difficult to trace how many people access the dark web on a daily basis but only a small number of individuals I.e 1.5 per cent is on its anonymity network and that 2 million people per day use Tor. The dark web is used for terror activities. It is a neural network framework, easy to install, fast and support CPU.

Tor is available for Android by installing package known orbot. Though the internet is a boon to mankind it has many disadvantages. These disadvantages are listed below. People who spend more time on internet use abusive language. These abusive people are called trolls. Cyberbullying has also increased these days Personal Information of people have become easy to find on the internet has become an easy source for criminals to find out ways for doing the crime Businessmen easily go for crimes or scams All these chores are called computer crime, children become violent by overuse of the internet.

They start viewing porn videos at an early age it is a kind of distraction from studies and other curricular activities children are no more interested in doing physical activities or games played physically. Nowadays, people are ambitious but everyone rush or urge to earn money in easy ways and quickly. So they go for computer crime, e-crime, hacking, fraud, bullying on the internet. It is true that limitations are not always disadvantages. Some are for Facebook. It cannot predict who you met today and automatically add them. It is limited to not having this feature.

One of the dark sides of the internet is isolation. Everyone in the family is like isolated busy with their phones, laptops.

Obesity and depression also result in spending more time on computer and mobile phones. The point of highlighting this deviant subcultures on the dark web is precise that they don& only exist digitally. Dissidents have been around for years and paedophilia has been in history books for thousands of years.

-Heena Kaur

TIME ME UP,TIME ME DOWN

What do you think can Time really be travelled ?

If (Opinion==yes) then
What are the consequences related to it lets explore this !
As per Einstein's special theory of relativity, time passes differently for different persons .We can travel faster than light. There's a limit of 300,000 km/sec to travel through space-time. If we travel at the speed tending towards speed of light, then time will pass slower for us. That is we will able to travel into future. Also time is relative so, if we travelled 1 year into space at very high speed ,then after coming back ,Earth would have passed 10 years or maybe 100 years. It depends upon how close your speed was to that of light while travelling into space.

As per physicists, one option to travel in time would be an Einstein's-Rosen Bridge, commonly known as wormhole. According to general theory of relativity, a rotating black hole can create a wormhole. So a wormhole can be made as a time machine to travel time. NASA stated that it is possible to create "wormholes" between points in space-time. While Einstein's equations provided for wormholes. Also, scientists haven't actually observed these wormholes yet. Also, the technology needed to create a wormhole is far beyond anything we have today.

Time Machines

It is generally understood that traveling forward or back in time would require a device i.e. a time machine to take you there. Time machines are often thought to need an exotic form of matter with so-called "negative energy density". Such exotic matter has bizarre properties, including moving in the opposite direction of normal matter when pushed. Such matter could theoretically exist, but if it did, it might be present only in quantities too small for the construction of a time machine

Theoretical proofs that time travel exists:

1) In Hindu mythology, the Mahabharata mentions story of king Raivata Kakudmi who travelled through heaven to meet creator Brahma and he was surprised when he returned to earth that many ages have passed.

2) The Buddhists Pali canon mentions the relativity of time. The Payasi sutta tells, one of the Buddha's chief discipline, Kamara Kassapa, Who explains to the Payasi that, "In the heaven of the thirsty three devas, time passes at a different pace and the people live much longer. "

ELSIF (OPINION==NO) THEN

IF TIME TRAVEL IS EVER DISCOVERED IN THE FUTURE THEN WHY HAVE WE NOT SEEN SOMEONE FROM THE FUTURE TODAY?????

(the most suspicious and a supportive valid question)

While time travel does not appear to be possible at least, it is possible in the sense that the humans would explore it with the physics that we use today, the field is constantly changing. Advances in quantum theories could perhaps provide some understanding of how to overcome time travel paradoxes. One possibility (although it would not necessarily lead to time travel) is solving the mystery of how certain particles can communicate instantaneously with each other faster than the speed of light.

-Tejal Rahate

Fest Memories!!

Vivekanand Education society college of Arts, Science and Commerce conducts many fests as there are more than 20 departments in our college.
The best part is that every department works so enthusiastically in their respective fests and all get united in short tenure and works as a whole team and proves this quote “UNITY IS STRENGTH”.

Our Computer Science Department has Fest Named as “VIHAAN” ~ first ray of light symbolizing students efforts to showcase their talent through skills.
Highlighting briefly about our fest that it is in month of January and we as a student of computer science department try to make our fest VIHAAN as best as possible. This fest is divided into teams such as ‘marketing team’ , ‘public relation team’ , ‘creative team’ , ‘security’ and ‘logistics team’.
In marketing team we have to see for sponsorship as this is very important because except this part fest will not glow like a bright sun and we try to maximise our effort in this, we search for various types of companies shops or industry who can give sponsorship and we gave them best opportunity to market their branch so they can get more customers seeing our adverstisement by our fest, we also see their’s as well as our profit.

Logistics and security teams handles crowd and manages their respective tasks.
Creative team plays an important role in Vihaan, they create awareness about our fest and make various types of events postures small banners as well as dummy models too.
In this way we all work together and make our Fest Best.

Besides this, our college has Science mela, it is a two day Fest in which all department make their own classrooms, computer lab, physics and chemistry lab a different look.
Many schools take part as well as Junior college students.
In this science mela every department has their own theme related to their streams and all give good message in form of by creative look in their labs, for example computer science department gave message of cyber security last year.
We made a trap by using theme of spider, we decorated whole lab as spider web and 5 to 6 spiders on each corner and we also made hacker as mummy was dummy model. Mummy tries to hack information and gets trap in spider web.
Science mela is complete VES mela, wherever you go you will feel differently, every floor of college is decorated and also have a game section in stilt area.

Goal:

Fests give opportunities to students to endure and emerge tasks uphill and also give a valuable platform to showcase once knowledge and talents in form of their technical and non technical skills. Competitive events allows student to test their aptitude, gain experience and knowledge. Student compete top honors in various competitions.

Every college school has their annual function, VES college also has it, named as “TALENTIA”. The most awaited fest of our college, its a two day event and it is conducted in the month of December. Students exhibit their talents in the variety of cultural events that fall under categories of Arts and Fashion.
We also have dress code in this and last but not the least, all teaching and non teaching staffs every student every commitee enjoys Talentia with DJ night at last.
I, as a student of Vivekanand College will have great life memories and always be thankful to all.

-Kirti Kapei

Mindful Yoga

Yoga imbibes the complete essence of the way of life. The elements of life integrate all the elements of the ancient knowledge resulting in a prayerful discipline, uniting body, mind and soul.

The goal of yoga shows that it is a holistic way of life leading to a state of complete physical, social, mental, and spiritual well-being and harmony with nature. Yoga, in fact, means union of individual consciousness with the supreme consciousness. It involves eight rungs or limbs of yoga, which include yama, niyama, asana, pranayama, pratyahara, dharana, dhyana, and samadhi. Intense practice of these leads to self-realization, which is the primary goal of yoga.

Yoga is a spiritual practice in India which is over 5000 years old. Yoga is an ancient physical, mental and spirital practice that originated in India. The word 'yoga' derives from Sanskrit and means to join or to unite, symbolizing the union of body and consciousness. It is a pearl of ancient wisdom known as the supreme science of life. For generations, this philosophy was passed on from the master teachers to the student.

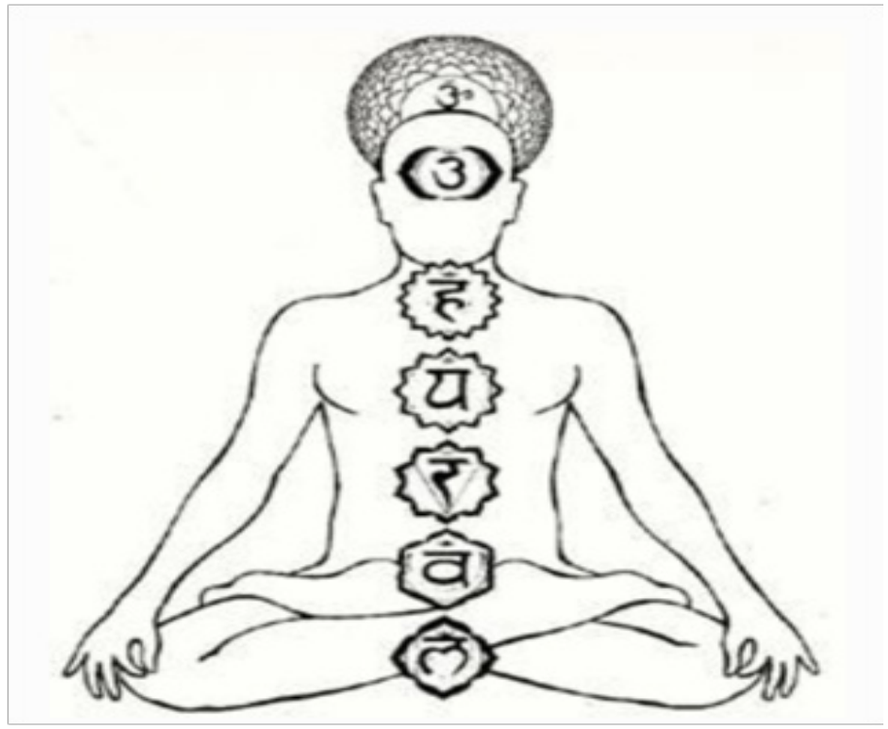
Why to go for Yoga? Yoga has the following features:

- Improves concentration and helps to stay focused.
- Helps in building strength.
- Improves posture and flexibility.
- Improves concentration and helps to stay focused BUILDING STRENGTH.

As the yoga fully consists of stretching exercises it helps by giving shape to our body but with this we are not giving chance to diseases to enter in our body. Yoga contains certain exercises where one can constantly transition into different positions. This helps to support the weight of our body and provides strength to it. By this our musclesbecomes tone and stronger. Yoga is not just an exercise but also helps in building strong muscle. It is often recommended by doctors to patients that are facing problem of back pain and arthritis.

The research has found that the practicing yoga every single day improves our IQ power and memory. As today's world is full of distractions like tv, cellphones, social media, it's very difficult for one to concentrate on studies. By regularly practicing yoga one can improve the coordination and reaction time. It also helps to be less distracted by their thoughts. Due to constant practice of breathing yoga helps us to shift the balance from sympathetic nervous system to parasympathetic nervous system and this helps us to lowers problems like heart rate, breathing, blood pressure.

There are several benefits of yoga those include stress relief, improve digestion and metabolism, gives flexibility to the body, reduce joint pain, help to boost the immune system, Enhance inner strength, brings inner peace, improve self-esteem, Clears the mind to focus, slows the aging process.



- Kajal Makhija,
Tejashree Kamble

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