*Nadar Saraswathi College of Engineering and Technology*
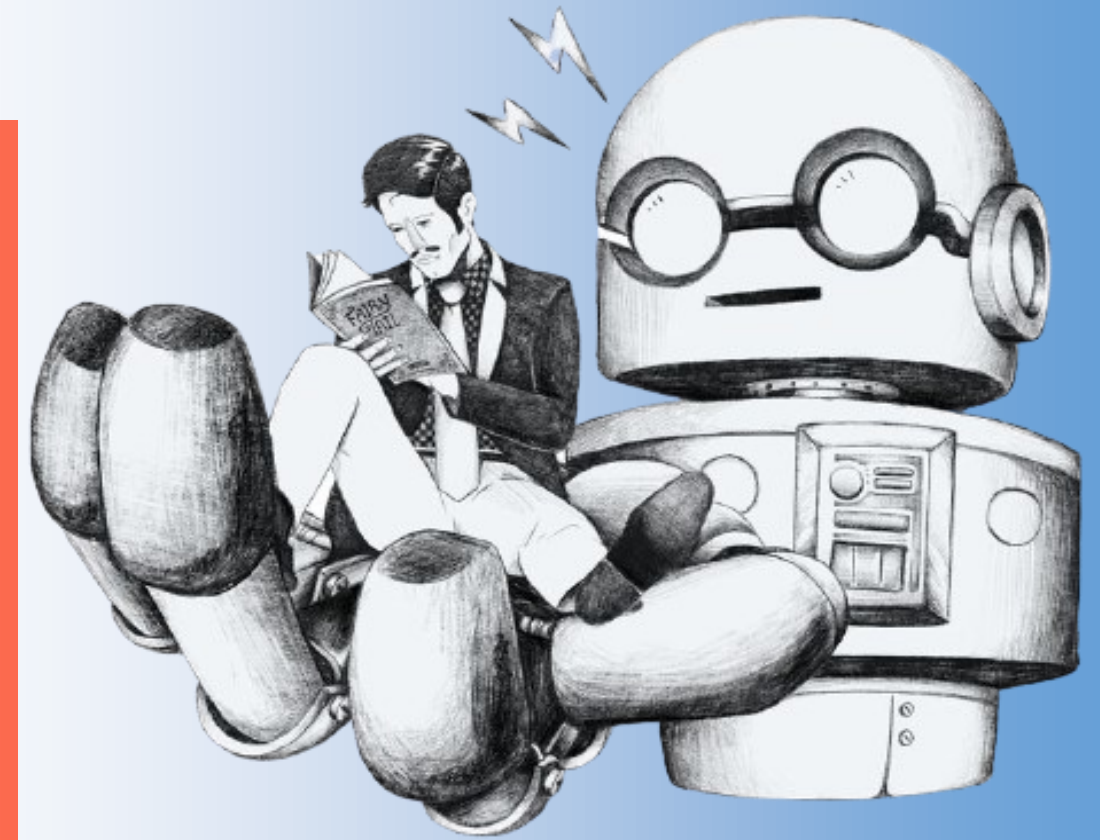
*Department of Computer Science & Engineering*

*FISTAZINE 2020*

*Magazine*

**Department of Computer Science & Engineering**

**Fraternity of Immortal Software Technocrats**

I S F T

**THE WINTER EDITION**

# COLLEGE VISION & MISSION

## VISION

◊ Place for Technology Revolution Mission

## MISSION

◊ Promote and undertake all - inclusive developments.

◊ Develop high quality technical education with academic excellence and innovative research with ethics.

◊ Create an atmosphere where teacher enjoys facilitation and learners (students) enjoy learning through Foster innovation.

◊ Collaborate with industry and academic to meet the changing needs of society.

# DEPARTMENT VISION & MISSION

## VISION

Become an international hub for Computer architects (or) Soft Computing Professionals.

## MISSION

◊ Providing a strong theoretical and practical background with an emphasis on software Development.

◊ Encourage self-Learning, Foster Interactions and Partnership with world class computer technocrats for technical growth.

◊ Inculcating Professional Behavior, Strong Ethical values, innovative research capabilities and Leadership abilities.

# ABOUT THE DEPARTMENT

- The Department of Computer Science and Engineering is noted for research and teaching excellence.

- Our faculty aims at delivering top class education blending their experience with classroom teaching.

- The Department offers 4 years B.E Degree in Computer Science and Engineering with the following facilities

*"YOU'RE BRAVER THAN YOU BELIEVE STRONGER THAN YOU SEEM, AND SMARTER THAN YOU THINK "*

*- CHRISTOBHER ROBIN*

# ABOUT THE FISTAZINE

கேடில் விழுச் செல்வங் கல்வி யொருவற்கு
மாடல்ல மற்றை யவை

Fraternity of Immortal Software Technocrats Magazine (FISTAZINE - 2020) was born as part of FIST Association Inaugural which held on October 4th 2020. We planned to publish as editions per three months namely winter (October, November and December), spring (January, February and March), summer (April, May and June) and autumn (July, August and September). The aim of FISTAZINE is to collect best technical articles covering each class and division of Computer Science. The articles collected are based on innovative trends along with some nontechnical articles that impact our daily life. We also covered all the important technical events and programs that were organized by the Department of Computer Science and Engineering. This issue includes Alumni, Industries, Faculty and Students along with their achievements. We hope that all the readers will enjoy this issue as much as we have enjoyed while creating it.

# PEOs , POs & PSOs

**PROGRAM EDUCATIONAL OBJECTIVES (PEOs):**

1. To enrich the knowledge of students to get graduation in the field of computer science and engineering and pursue professional development in the software field or as entrepreneurs.

2. To participate in research and thrive in multi-disciplinary, systems oriented work environment in team work with professional ethics.

3. To contribute the solution to the complex problems as a professional engineer for society and strive to promote a practice of integrity, tolerance, leadership and respect in the work place.

**PROGRAM OUTCOMES POs:** Engineering Graduates will be able to:

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. **Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

**PROGRAM SPECIFIC OBJECTIVES (PSOs)**

1. To analyze, design and develop computing solutions by applying foundational concepts of Computer Science and Engineering.

2. To apply software engineering principles and practices for developing quality software for scientific and business applications.

3. To adapt to emerging Information and Communication Technologies (ICT) to innovate ideas and solutions to existing/novel problems.

## INDEX

## HOD's MESSAGE

Mr.C.Prathap

HOD / Chief Editor
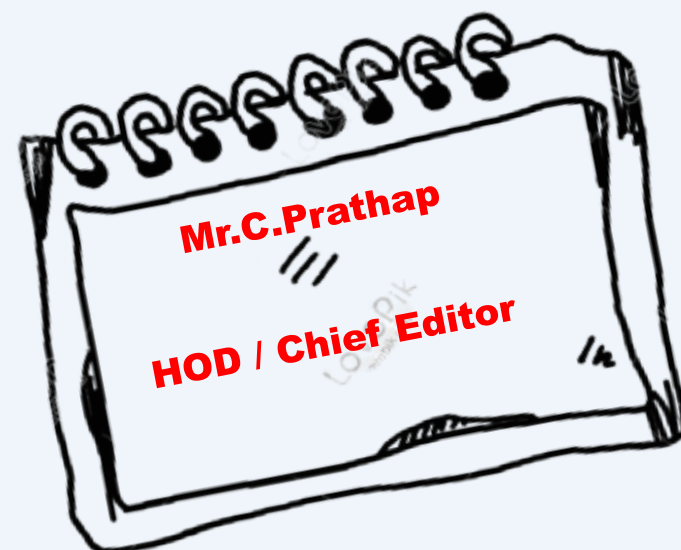
Congratulations to the students and faculty associated to magazine committee for successfully publishing the first issue of departmental technical magazine " FISTAZINE " "FISTAZINE" is creating platform which provides an opportunity to the students and staff to express their original thoughts on technical topics. The magazine plays an instrumental role in providing exposure to the students to develop written communication skills and command over the language. It is a step towards building professional and ethical attitude in them. The entire journey of creating "FISTAZINE "is an outcome of rigorous effort made by students and faculty. Students not only gain the knowledge about the latest techno-logical developments and advancements through reading and writing articles but they also develop verbal and written communication skills." This issue has expanded its scope by introducing articles by major stakeholders. Apart from students and faculty, inputs have been collected from alumni, parents and industry experts. "On concluding note, I would like to thank all the stakeholders for their involvement and encouragement and wish all the best for their bright future.

# Surprising Facts about Google

**An Article by**

**Mr.C.Prathap**

**Assistant Professor/ HOD**
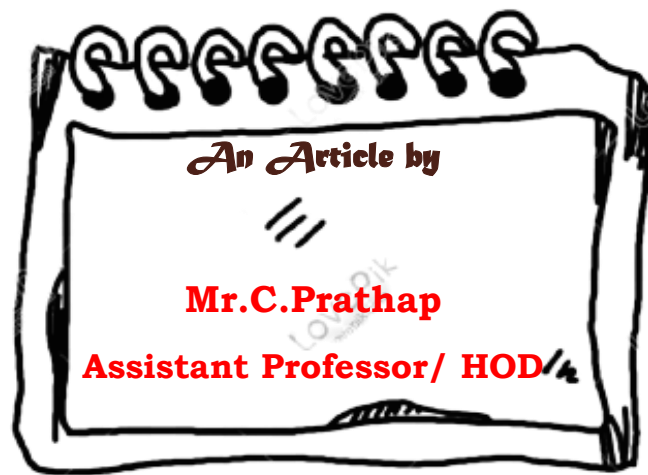
Here's a fact that everyone owning a piece of technology is aware of: Google is your number one search engine. Not only is it a portal to access everything you'd like to know, but it also acts as an amazing backup when your parents come to check up on you (don't give me that look, we know that whenever you notice anyone else looking at the screen over your shoulder, you change tabs to Google.com and just stare at it until they leave). However, here are some, rather interesting facts about Google that you may not know.

## FACT 01:

Google Was Originally Known As "Project BackRub"

Catchy, right?

When Brin and Page first developed an algorithm for searching the net, they dubbed it "BackRub". This algorithm was then used to measure and rank the importance of webpages based on inbound links; the skeleton of what would become Google Search was formed.

Changing the name from Backrub to Google was probably a smart choice. Can you imagine what life would be like constantly saying "Let me just BackRub it" every time you needed to look up the answer to something?

## FACT-02 :

Google Is A Multi-Billion Dollar Spelling Mistake

That's right – Google is perhaps the biggest and most public spelling mistake ever made. Page and Brin settled on "Googol" as the name for their search engine, referring to the impossibly large number of the same name (the number 1 followed by a hundred zeros).

When it came time to register the domain name, they were delighted to find that Google.com was available. Good reason for that – until then, Google wasn't even a real word! When they later discovered the word they'd looked up was an incorrect spelling of "googol", they decided to roll with it anyway.

***Bonus Fact**: The term "googol" to describe the number $10^{100}$ was originally coined by a nine-year-old boy. At one point, his family considered suing Google for their use of the word.*

## FACT 03:

The Founders Originally Didn't Get Along

Despite similar visions and interests in the World Wide Web, Page and Brin certainly didn't start off as friends. As soon as they met, the pair clashed on nearly every topic they discussed and both referred to the other as "obnoxious".

Despite (or even because of) their passion for arguments, the two ended up becoming friends and would later join forces on a research project that would change the internet forever.

## FACT 04:

**When you perform a Google search, Google ranking systems are designed to do just that: sort through hundreds of billions of webpages in our Search index to find the most relevant, useful results in a fraction of a second, and present them in a way that helps you find what you're looking for.**

### Meaning of your query

This involves steps as seemingly simple as interpreting spelling mistakes, and extends to trying to understand the type of query you've entered by applying some of the latest research on natural language understanding. For example, our synonym system helps Search know what you mean by establishing that multiple words mean the same thing. This capability allows Search to match the query "How to change a lightbulb" with pages describing how to replace a lightbulb. This system took over five years to develop and significantly improves results in over 30% of searches across.

## FACT 05:

Google owns a cluster of domains such as,

Google.com

Gogle.com

Googlr .com

which directs to Google.com, which is completely reasonable.

However,

Google also owns 466453.com. If you take a look at your telephone keypad, you will notice that the numbers match up to the letters as so: 4 - GHI, 6 – MNO, 6 – MNO, 4 – GHI, 5 – JKL. 3 – DEF, thus making 466453 as Google. So, if on typing any of these knowingly or unknowingly, it doesn't take you to some strange page. Instead, you'll land up on Google.com only.

## FACT 06 :

When Google was founded in September 1998, it served ten thousand search queries per day .

Although Google does not share exact numbers, as reported by SEOTribunal.com, Google handles 3.8 million searches per minute on average across the globe.

That comes out to 228 million searches per hour, 5.6 billion searches per day, or 2 trillion searches per year! That's a lot of searches!
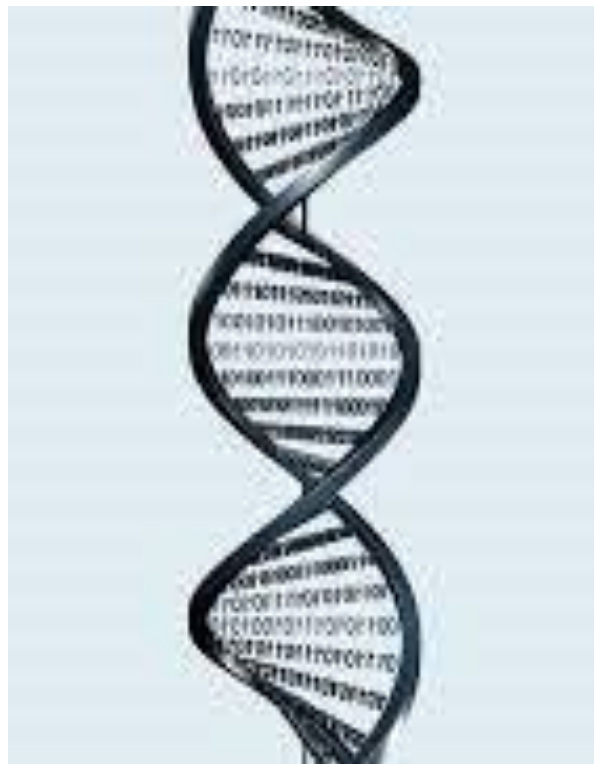
## FACT 07 :

Best Educational Apps for Students from Google.

- Google Classroom
- Google Docs
- Google Slides
- Google Translate

# DNA & DATA STORAGE SEQUENCE -1

An Article by

**Mr.L.S.Vignesh**

**Assistant Professor**

DNA digital data storage: In recent years, digital data is a very important part of our life. Our personal data such as personal information, our digital keys, digital wallet information, passwords and bank details are some of the crucial data that must be stored very securely.

The computer stores our data on its physical storage devices having a capacity of several gigabytes. The first data storage device was the Williams tube which is later replaced by magnetic drums.

Cassettes, CDR, floppy, pan drive, micro SD card and now cloud storage are some of the known storage units we are using since long. Sequentially the size of the device becomes reduced and the storage capacity is increased. The world's total data are stored in magnetic and optical media.

The traditional data storage units have several limitations: each storage unit has a limited data storage capacity, it can be lost or damaged, it can be corrupted and we cannot store data even for a longer period of time.

## SO, WHAT WILL BE THE FUTURE OF DIGITAL DATA STORAGE?

DNA will be the next big thing for digital data storage in the future. DNA is a future of data storage technology.

**Yes, Data storage in DNA is now a reality.**

In this article, we are going to see the actual process of how digital data can be stored in DNA.

**"A gram of DNA can store 1 exabyte of data for as long as 2,000 years".**

The global data burden is increasing every day and data storage companies have to invest millions of dollar for new storage facilities each year.

## HOW THE DIGITAL DATA IS STORED IN DNA?

DNA is a heredity unit of all living organism on earth. It inherits characters from parents to their generation so it is almost like a memory storage device of all living organism. By taking this information as a base for the DNA data storage, the Soviet scientist, Mikhail Neiman published his paper regarding the use of DNA as a digital data storage unit, in 1964.

The first form of data which is encoded into DNA was in the form of HTML text template, published by George Church at Harvard University in 2012. This was the first milestone finding in DNA data storage technology.

**"An organic molecule used for storing digital data is called an organic data storage. This may be DNA, RNA or protein".**

## How does DNA digital data storage work?

The digital data is encoded in a DNA sequence, the corresponding sequence information is synthesized into an artificial DNA and the information is decoded by sequencing the artificial DNA strand. This is the exact path of storing and retrieving digital data from DNA.

| STORAGE UNIT | STORAGE CAPACITY | STORAGE DENSITY PER MM3 |
|---|---|---|
| Magnetic tap | 185 TB | $10GB/mm^3$ |
| Optical disc | 1PB | $100GB/mm^3$ |
| DNA sequence | >1XB | $1EB/mm^3$ |

This image represents the general process of DNA digital data storage.
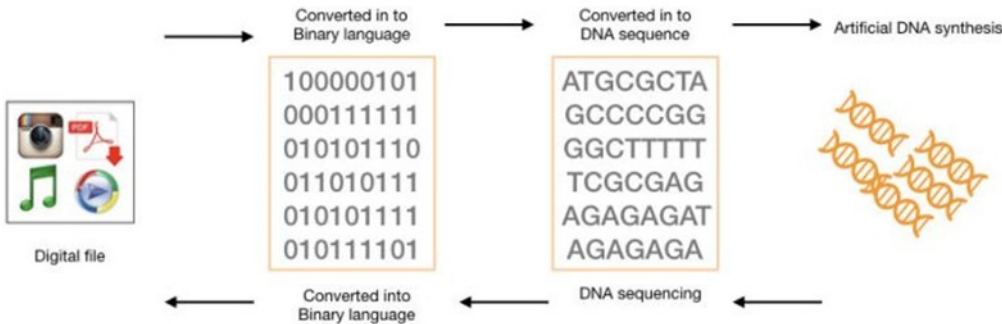


-To be Continued
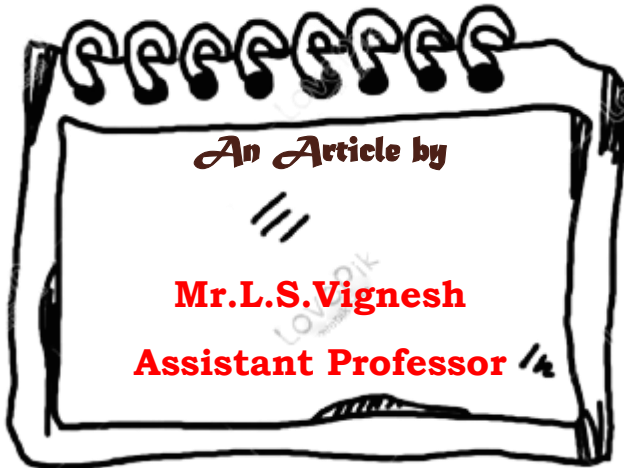
# India's cloud Journey – the Road ahead

An Article by

**Mr.A.Durai Murugan**
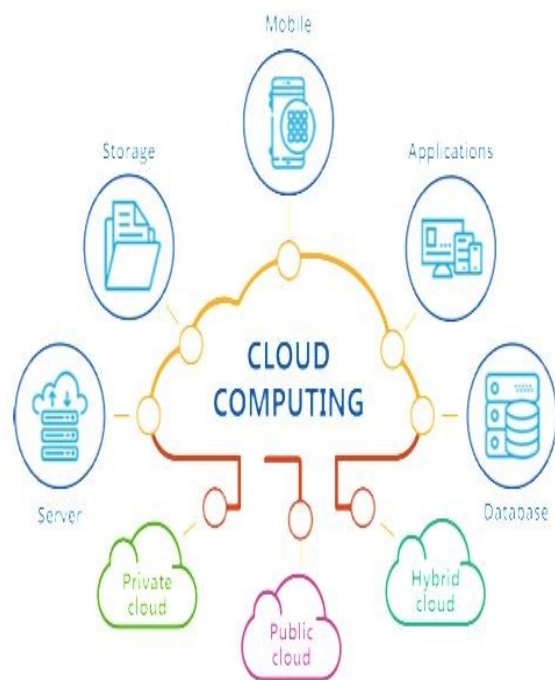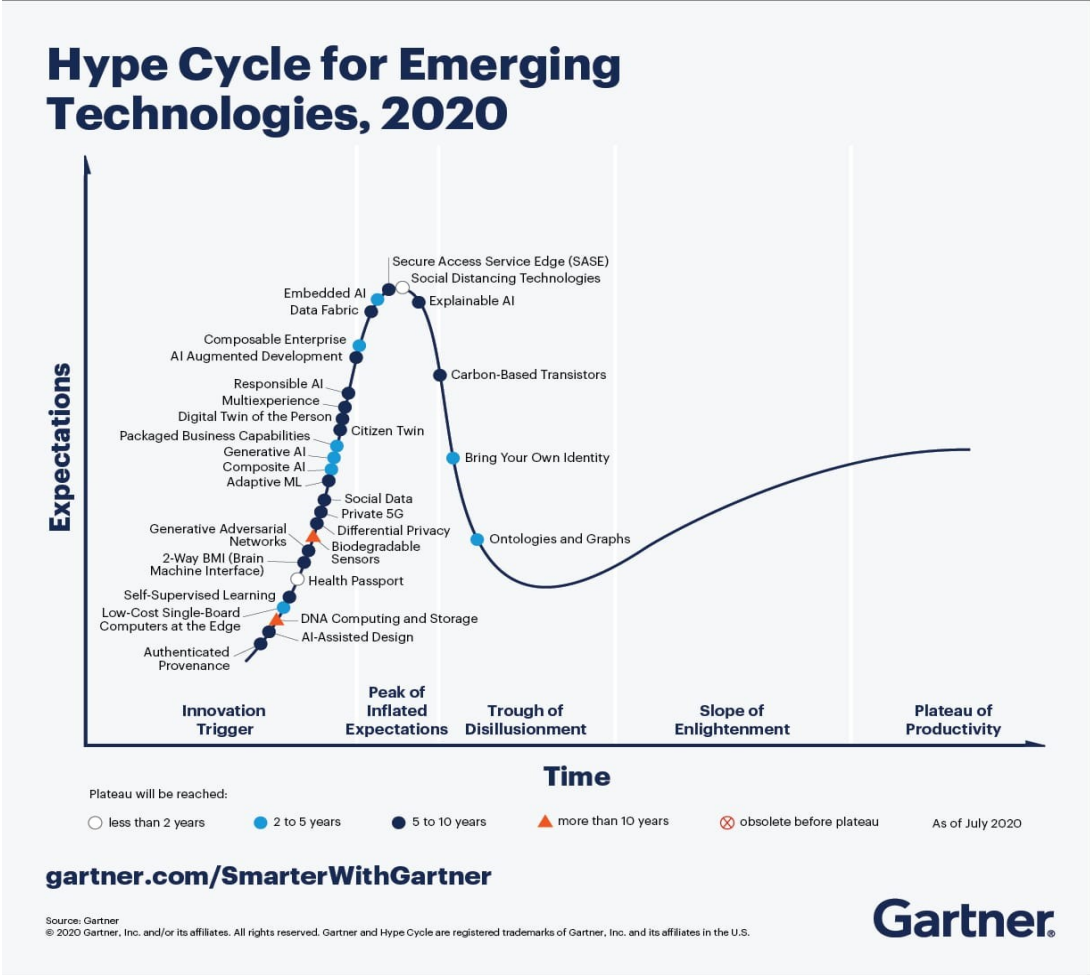
**Assistant Professor**

Cloud computing in India has leapfrogged considerably over the last decade with best in class processors powering the core. Advanced processors at the heart of the cloud made it possible for cloud service providers to scale solutions for India and introduce competitive infrastructure-based service pricing models. Since then, subsequent generations of processors have helped advance the cloud by integrating innovative and powerful features that delivered a flexible, secure, and scalable solution for enterprises. Driven by customer demand for on-demand accessibility and increasing market pressures, modern Indian enterprises now consider the cloud to be an essential investment that lies at the heart of their digital transformation efforts.

## The Cloud Business Opportunity, Growth Sectors & Opportunities:-

♦ A recent IDC report states that 64 percent of Indian companies expected to increase demand for cloud computing as a result of the pandemic and 56 percent of organizations are expected to increase demand for cloud software. Even the SME sector that was just embarking on its digital transformation journey is now looking at accelerating cloud adoption to ensure business security.

♦ The country's will to rapidly move to the cloud has opened a world of new opportunities for cloud providers to grab a bigger share of the growing everything-as-a-service (XaaS) market. NASSCOM estimates that by 2025, the global addressable market for SaaS will be around $400 billion and the pure-play India SaaS industry has the potential to grow by 6X to $13-15 billion.

♦ Transforming digitally and increase business agility. The shift allows organizations to democratize innovation and reduce time to market for new products and services, all while making it cheaper to access cutting-edge technologies and services. This is also helping accelerate deployments of other emerging technologies such as artificial intelligence (AI), machine learning (ML) and Internet of Things (IoT).

♦ Cloud technology is expected to grow an additional 5-10 percent from the expected CAGR of 30 percent. The Indian startup ecosystem has given rise to SaaS unicorns with global impact and the country continues to create more value by nurturing new and emerging local ecosystems in sectors such as agriculture, education, energy, financial services, healthcare, and logistics.
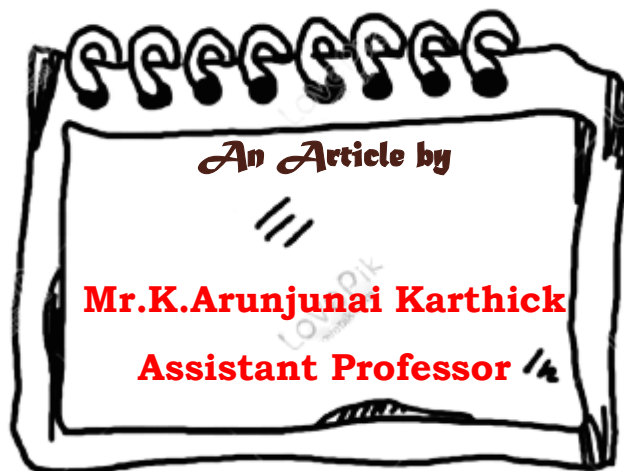
# Hype Cycle for Emerging Technologies - 2020

An Article by

**Mr.R.Udhaya Kumar**

**Assistant Professor**

# Hyperloop

An Article by

**Mr.K.Arunjunai Karthick**

**Assistant Professor**

## What is Hyperloop? Everything you need to know ab out the race for super-fast travel

Hyperloop technologies could revolutionise travel: here's everything you need to know about the technology and the companies involved.

Essentially, hyperloop is a vacuum tube where a pod slides along a single track that is magnetized so that there is very little resistance. This pristine environment allows the pod to move at extremely high speeds using minimal electricity, which makes it fairly low-cost to build and operate–and so potentially much less expensive for passengers to buy tickets.

While today's bullet trains travel at 200 miles per hour and commercial airplanes cruise at 500-600 mph, the hyperloop has projected speeds of 700-800 mph. And since a hyperloop can avoid the take off and landing that an airplane needs to get to cruising altitude, it can shave additional time off the journey and create a more efficient trip.

The initial hyperloop designs are for elevated tracks that look similar to the monorail at Disney World–except with an enclosed tube on top of the pylons. This works great for flat, straight routes, and these are likely to be the targets for the first hyperloop deployments.

## Which companies are working on hyperloop?

Since Musk's hyperloop manifesto five years ago, a number of companies have sprung up in earnest to commercialize the idea:

♦ **Virgin Hyperloop One**: Perhaps the largest team working on the concept is the group at Hyperloop One, which has been toiling away on bringing hyperloop into reality since 2014 and is now backed by the Virgin brand, thanks to an investment from Richard Branson. ZDNet's sister site TechRepublic interviewed Virgin Hyperloop One CEO Rob Lloyd at CES 2018 about the company's roadmap to bring hyperloop into reality in the next several years.

♦ **Hyperloop Transportation Technologies**: The other company that is the furthest along in bringing hyperloop to market is HTT, which has been working on it since the end of 2013. It takes more of an open source approach, with a number of engineers contributing time to the effort while still holding down other day jobs. It's been working on potential routes in Europe, Asia, and the Middle East, and it's even toyed with the idea of smaller, slower hyperloops in big cities that ease commutes and could potentially deliver passengers faster to the big, fast loops.

♦ **SpaceX**: After initially put the idea into the public because he said his companies didn't have time to work on it, Elon Musk has since spun up a Hyperloop division within SpaceX. While it's playing from behind, SpaceX has successfully launched a series of Hyperloop competitions that are aimed to overcoming some of the concept's challenges. For 2018, they are running a Hyperloop Pod Competition, for example.

♦ **ET3 Global Alliance**: Evacuated Tube Transport Technologies (ET3) is taking a different–and longer-term–approach to vacuum tube travel. It wants to create a network of smaller capsules that can travel at about 375 mph. Think of it as a hyperloop-powered superhighway full of automated capsules. It claims that this can be built for a tenth of the cost of high-speed rail and a quarter of the cost of a freeway. That's why it sees the potential of traveling from the US to India in 3 hours for under $50, as its CEO Daryl Oster told TechRepublic in 2017.

# Data Fabric



An Article by

Mr.P.G.Siva Sharma Karthick

Assistant Professor

## WHAT IS A DATA FABRIC?

An Adaptive Analytics Fabric answers enterprise demand for agile, data-centric architectures for advanced analytics. Some of the top trends that data and analytics leaders need to address to be relevant and impactful in advancing their critical business priorities have been outlined in Gartner's latest global market study. Gartner predicts these trends will have significant disruptive potential over the next three to five years. Specifically, the ability to enable frictionless access and sharing of data in a distributed environment (called a data fabric) will enable companies to overcome the challenges that data silos present. In short, a data fabric is a combination of architecture and technology that is designed to ease the complexities of managing many different kinds of data, using multiple database management systems, and deployed across a variety of platforms. With increasingly distributed, dynamic and diverse data (440x more data by 2020 from IDC Worldwide Big Data and Business Analytics Market Through 2022

## DATA FABRIC DEFINED

Data fabric enables frictionless access and sharing of data in a distributed data environment. It enables a single and consistent data management framework, which allows seamless data access and processing by design across otherwise siloed storage. Data fabric like AtScale, as defined by Gartner, adds more definition to the model and connects software and systems without adding the complexity of another data platform.

## WHY A DATA FABRIC?

To extract value from data, it must be easy to explore, analyze and understand. After all, the ultimate goal of using data is making decisions from it. Business intelligence and data science in the hands of citizen data analysts does just that. But the volume of data requires a more holistic approach to helping companies innovate faster while addressing the increasing complexity and scarcity required of data engineering resources.

Today's global enterprise organization has data deployed on-premises and in multiple cloud environments. The types of data (outside of the immense volume of data) include data in relational databases, flat files, data lakes, data stores, and more. Managing data workloads spans technologies from batch ETL to stream processing. The sheer number of applications, platforms and data types makes it difficult (and sometimes impossible) to manage the processing, access, security, and integration across multiple platforms. A data fabric consolidates data management into one environment, automatically managing disparate data sources and technologies in both on-premises and cloud environments. It does the work of hard to hire and retain data engineers.
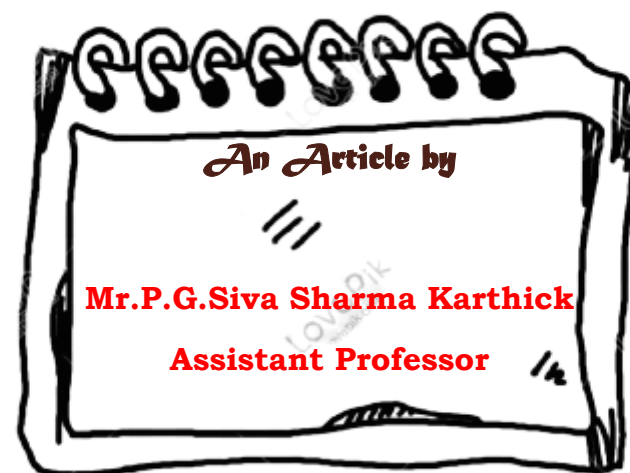
The pace and diversity of change are increasing faster than is humanly possible to manage. As new technologies, new kinds of data and new platforms are introduced, the data fabric acts as a unifier—doing the translation and integration that's needed and eliminating the manual methods. Because it is centralized and policy-based, it's possible to govern and protect in a self-service deployment. Even more critical, a data fabric only moves data if it's required (e.g. moving from a legacy data warehouse to the cloud).

The evolution of the data fabric concept is the use of 'autonomic' approaches to explain how modern systems employ AI/ML driven automation to adapt based on how they interface with data platforms and consumer behaviors. With AtScale's A3 platform, Machine Learning (ML) delivers its autonomous capabilities with the goal to reduce human labor (or chores). The benefits deliver agile and governed analytics to the enterprise just-in-time, shifting resources from managing trillions of rows of data—to analyzing it.

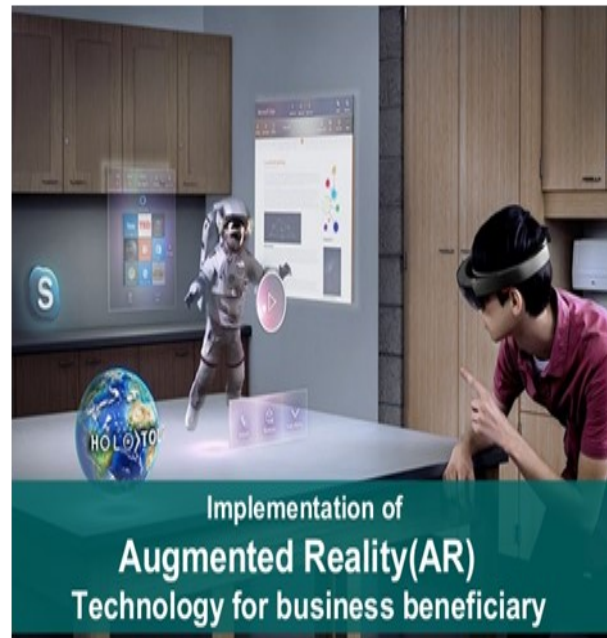A true data fabric solution should have the following capabilities:

- **Autonomous data engineering:** Just-in-time query optimization for speed and usage consumption that can anticipate the needs of the data consumer in a single framework, reducing the complexity of data management and adapting to the needs of the data consumer.

- **Unified data semantics:** A workplace for all data for consumers to define business meaning and get a single-source-of-truth point regardless of structure, database technology, and deployment platform for a cohesive analytics experience.

- **Centralized data security & governance:** A centralized security policy to decentralize access using the tenets of Zero Trust that are applied consistently across the infrastructure for all data whether in cloud, multi-cloud, hybrid, or on-premises deployments.

- **Data management visibility:** The ability to measure data responsiveness, availability, reliability, and risk in a centralized workspace.

- **Agnostic to platform and application:** An ability to quickly integrate with data platform or BI/ML application for freedom of choice for data managers and consumers alike.

- **Future-proofs infrastructure:** Reduce the disruption of new technologies and data types while modernizing legacy systems to maximize investments. New infrastructure deployments are integrated without impact to existing infrastructure and deployments.

**No need for data movement**: Intelligent data virtualization creates a single representation of data from multiple, disparate sources without having to copy or move the data.

# *Augmented Reality*



Implementation of
**Augmented Reality(AR)**
Technology for business beneficiary

An Article by

**Mrs.P.Mahalakshmi**

**Assistant Professor**

Augmented reality (AR) is one of the biggest technology trends that combine virtual reality with reality. AR is an enhanced version of the real physical world that is achieved through the use of digital visual elements, sound, or other sensory stimuli delivered via technology. It is a growing trend among companies involved in mobile computing and business applications in particular.

**Equipment**
AR images can be displayed on a multitude of devices including eyeglasses and goggles, headsets, and heads-up displays like helmet visors, but the most common way to use AR these days is on a smartphone, in a variety of apps and games.

## Types of AR

1. Marker-based AR - Uses image recognition to identify objects that have been preprogrammed into AR device or app.
2. Markerless AR – Nothing has been preprogrammed. It has to recognize items on the fly. The recognition algorithm in device looks for patterns, colors, or other features that might tip it off.

**Augmented Reality toolkits for Mobile Apps**
Availability of most relevant and appropriate toolkits based on the set of features it provides.
1. Vuforia
Vuforia is a leading portal for augmented reality application development that has a broad set of features.
Best for: Marker based apps
Supported platforms: iOS, Android, Universal Windows Platform, and Unity.
2. ARToolKit
ARToolKit is an open-source computer tracking library for creation of strong augmented reality applications that overlay virtual imagery on the real world.
Best for: Location based apps
Supported platforms: Android, iOS, Linux, Windows, Mac OS and Smart Glasses.

4. Apple ARKit

ARKit is Apple's augmented reality (AR) platform for iOS devices. It enables developers to produce apps that interact with the world around using the device's cameras and sensors.
Best for: Marker based apps
Supporting devices: iPhone 6s and higher, iPad Pro (9.7, 10.5 or 12.9)

5. Maxst
MAXST Visual Simultaneous Localization and Mapping for tracking and mapping environments. MAXST have two SDKs available: a 2D SDK for image tracking and a 3D SDK for environment recognition.
Best for: Marker based apps
Supported platforms: Android, iOS, Mac OS and Windows.

6.Wikitude
Wikitude Augmented Reality empowers iOS, Android & Smart Glasses apps with Image & Object Tracking, Instant tracking (SLAM), Geo AR, and more.
Best for: marker based apps
Supported platforms: Android, iOS, Smart Glasses

**Trends of AR**
Upon entering the 21$^{st}$ century, the evolution of augmented reality technology has been increasing rapidly. The most leading companies like Microsoft, Amazon, Apple, Facebook and Google are making serious commitments towards AR for commercial support. The following trends will shape the future of augmented reality over the next couple of years.

Trend 1: Mobile AR: Apple announced ARKit 3.0, Google's ARCore is rapidly growing its installed base

Trend 2: Augmented Reality as a novel way of shopping

Trend 3: AR for navigation solutions

Trend 4: AR-powered solutions for the enterprise.

Trend 5: Augmented Reality enhanced by Artificial Intelligence

Trend 6: WebAR
Trend 7: Remote assistance via shared Augmented Reality

Trend 8: AR in the automotive industry

Trend 9: The market evolves and remains open to innovative business-driven solutions

# How job roles and skills in top technology fields changed in 2020

An Article by

**Mrs.S.Arul Jothi**

**Assistant Professor**

*Covid-19 completely changed the way we work. Here is how the job roles and skills changed in the top technology fields in 2020.*

### HIGHLIGHTS

Covid-19 has changed the way industries work and the job roles and required skills have shifted too.
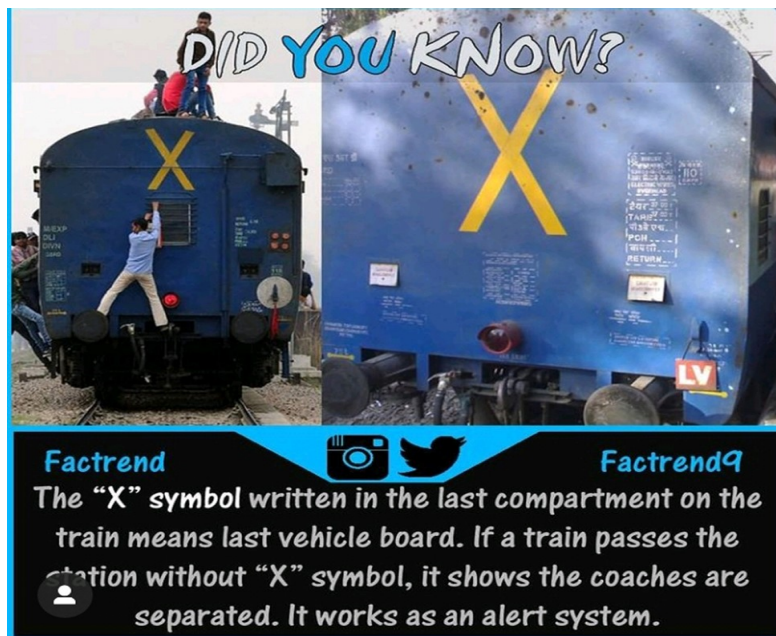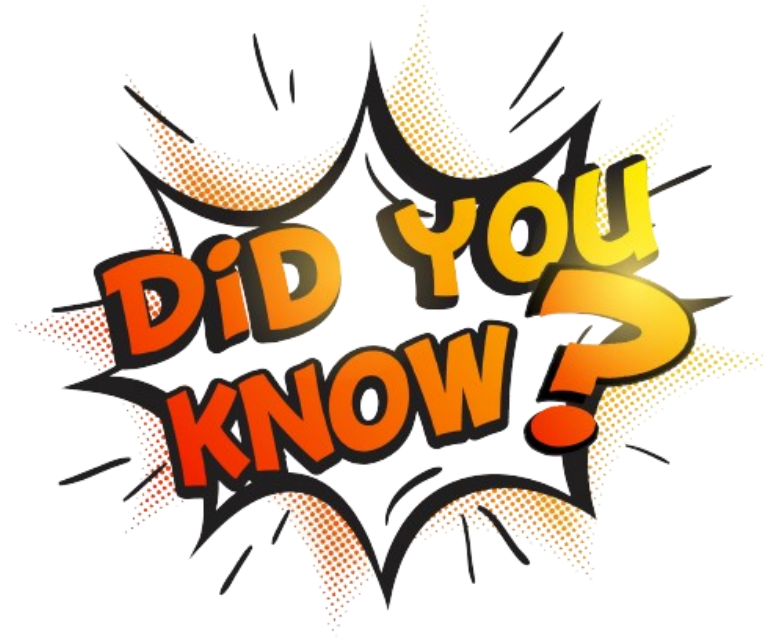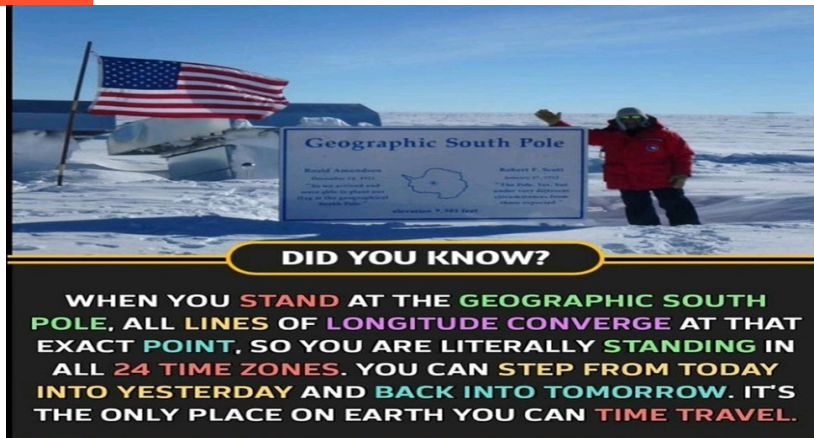
Technology industries have levelled-up and new skill sets are now in demand.

The year 2020 has brought in a new order of learning and with that, there is a digital shift in roles, skills and the rapidly evolving pace of education. Companies and firms are seeking specialist roles where people are proficient in one or a mixed bag of skills. Newer job roles are being introduced and people have to be on their toes in terms of up skilling and staying relevant.
.

| TOP TECHNOLOGY | |
|---|---|
| **JOB ROLES** | TOP SKILLS |
| **Data Science**<br>    **Data Analyst,**<br>    **Data Engineers,**<br>    **Database Administrator,**<br>     **Machine Learning Engineer,**<br>    **Data Scientist,**<br>     **Data Architect,**<br>    **Statistician,**<br>     **Business Analyst,**<br>    **Data and Analytics Manager** | ◆  Machine Learning,<br>◆  Statistics,<br>◆  Research,<br>◆  Prediction,<br>◆  Visualisation,<br>◆  Recommendation,<br>◆  Optimisation,<br>◆  Deep Learning,<br>◆   Natural Language Processing<br>◆   Regression |
| **Search Engine Optimization (SEO) Specialist** | ◆  Google tools,<br>◆  Link Building,<br>◆  Keyword research,<br>◆  On-page SEO,<br>◆  HTML + CSS,Technical SEO,,Local SEO,,Mobile SEO |
| **Lead Generation Specialist**<br><br>    **Digital Marketing Manager,**<br>    **Ads Managers,**<br>    **Facebook Ads Specialists,**<br>    **Search Engine Marketing specialists,**<br>    **Performance Marketers,**<br>    **Account Executive,**<br>    **Chief Marketing Officer,**<br>    **Communications And Marketing Director** | ◆  Sales,<br>◆   Marketing,<br>◆  Business Development,<br>◆  Google Analytics,<br>◆   SEO,<br>◆   Salesforce,<br>◆   Social Media,<br>◆   Project Management,<br>◆  CRM,<br>◆   Email Marketing,<br>◆   Digital Marketing, |
| **Full stack developer** | ◆  Rust and Dart are both lightweight programming languages<br>◆  Java and JavaScript may be the most bankable programming languages to learn if you are just starting out.<br>◆  Python is popular with data scientists |

**DID YOU KNOW?**

WHEN YOU STAND AT THE GEOGRAPHIC SOUTH POLE, ALL LINES OF LONGITUDE CONVERGE AT THAT EXACT POINT, SO YOU ARE LITERALLY STANDING IN ALL 24 TIME ZONES. YOU CAN STEP FROM TODAY INTO YESTERDAY AND BACK INTO TOMORROW. IT'S THE ONLY PLACE ON EARTH YOU CAN TIME TRAVEL.



DID YOU KNOW?

Factrend                    Factrend9

The "X" symbol written in the last compartment on the train means last vehicle board. If a train passes the station without "X" symbol, it shows the coaches are separated. It works as an alert system.



**Did You Know?**

@ factsnation.india

In New Delhi, if a tree falls sick, an ambulance is dispatched to treat them. This came into effect in 2009 and takes four people to do the job.



**DID YOU KNOW?**

Truth Inside Of You

**Iceland is the only country** in the world without any mosquitoes, snakes or other reptiles. They also have a very few species of spider, none of which are harmful to humans.



Water and bleach in a plastic bottle reflects and refracts light, creating a light bulb 💡. Much Needed For Rural Areas!

An Article by

**Mrs.B.Sri Chithra Devi**

**Assistant Professor**

# Alumni's Message

First of all I feel gratitude to note here. I'm Subash.I have studied BE- CSE (2016-2020 batch) at Nadar Saraswathi College of Engineering and Technology. During my final year, I got selected on TCS by participating in TCS NQT off campus drive. On 26th November 2020, I felt immense pleasure to be placed in TCS.

When I look backward to the path before the TCS journey, I remembered project expo of our college, my team members including me did projects in our own and we never download any projects from internet, which really helped me to won the prizes and make us to gain enough technical skills and experience .

I would like to express my deep gratitude to my family & secretary, joint secretary, principal, vice principals, Placement officer, HODs and all the faculties for your kind support throughout my studies. And a special gracias to all my friends for to succeeded my college days with their support. Without such friends, it's not easy to get succeed. (To all my juniors) "You will learn better, if you taught others". So, keep supporting your friends & Share your skills with them. "If you can understand what you are studying, surely you will get succeed".

Wish u all success in your journey without possible by putting tons of efforts for your better career.

An Article by

**Subash M,**

**ASE- Trainee ,**

**Tata consultancy services**

I'm Roshan ,I have completed B.E-CSE in Nadar Saraswathi College of Engineering and Technology.

During my final year, I got selected in Hexaware Technologies by on-campus drive.0n 5th November -2020, I started my journey towards Hexaware Technologies. Before this, I am very glad to thank all the staffs and friends for their support and motivation.

Our staffs were giving lot of motivation and support to achieve and use opportunities in our life.

I got an opportunity to participate in "SMART INDIA HACKATHON-2019 "and we got FIRST RUNNERUP in that project named "SOFTWARE ROBOT FOR STATISTICAL INFORMATION AND COMPILATION". This SIH project plays a major role in my interview and now i placed in Hexaware Technologies because of using opportunity.

I would like to express my deep gratitude to my family & secretary, joint secretary, principal, vice principals, Placement officer, HODs and all the faculties for intense support throughout my studies.
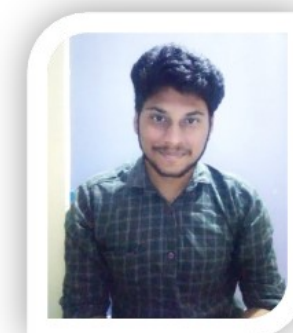
To all my juniors
    "Don't miss your opportunities"
    "Failures boost up you and it is key for success and don't be depressed for failures"
    "Explore innovative ideas and update yourself daily"
All the best and I hope you all will get placed and you will get pleasant future.

An Article by

**Roshan Kumar R**

**Trainee,**

**Hexaware Technologies**

"SUCCESS ALL DEPENDS ON THE SECOND LETTER."



"Dreams is not what you see in sleep is the thing which doesn't let you sleep

- A. P. J. Abdul Kalam
www.oksxsa.com

## Evolution & Technology

A few decades ago, our ancestors might not have even imagined the future we have today. Everything we do today, from video calls to online dating, would be classified to be trickery and alien if anyone had mentioned them during the 70s. Such advancement is now available to us for granted. While that ease of access to magical technology is beneficial to the collective human society, it has also made us ignorant of the possibilities it holds. When humans first had access to a bicycle, most of us saw an easier way to commute. Commuting was made easy for millions of us. Had it stopped there, we would still be in the past. Luckily, it did not. The invention of the bicycle provoked a group of forward thinkers who saw it as the future of commuting. They are the ones who laid the foundation for modern transportation. The pace at which this transformation happened is so dramatic: it took 2000 years for humans to settle and civilize but only 50 years to send the first email. The same is happening with technology today. While hundreds of millions of us enjoy access to bleeding-edge technology, somewhere among us is a tiny group of protagonists who refuse to see technology the way it is. They believe in the greater good that modern technology could bring if used rightly. They firmly believe the fact that technology is our key to the future. This belief enables them to communicate with their future selves and gives them the potential to craft reality and invent the future. Innovation is when a part of the future is crafted in the present. Sarcastically, it can be called a journey through time. But it does not happen overnight. Like the early adopters who revolutionized mobility, firm belief and persistence will open our doors to the future one day. We are already experiencing a taste of the future through technologies like Augmented Reality, Artificial Intelligence. Yet, we have hardly reached the surface. There is still a lot of room for improvement and innovation. Students in this age have the maximum benefit as they can enjoy all the benefits of technology while using it to advance humanity. The future belongs to the ones who join the race today and begin their journey towards it.
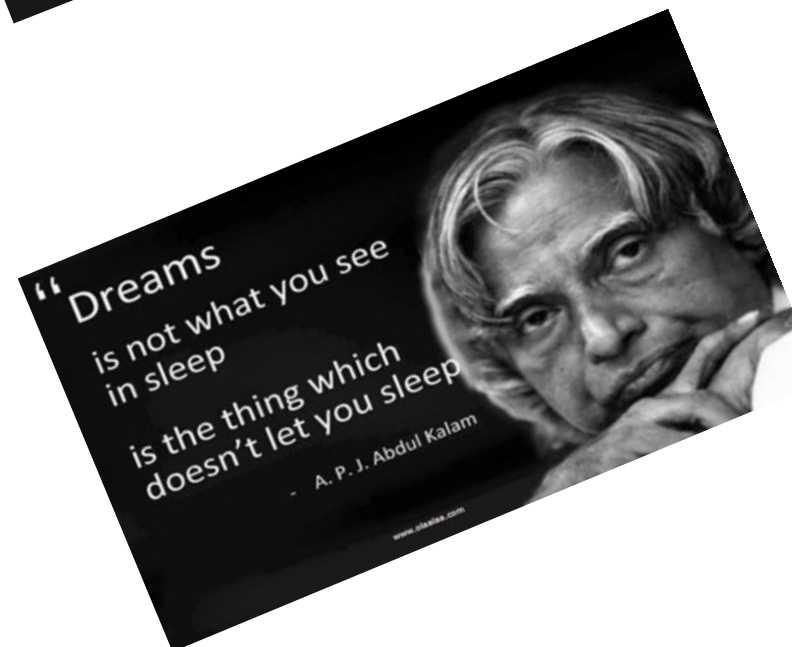
Vignesh MK,

Co-Founder, Engineer @ Silitrox Digital Realm



Silitrox

# ARTIFICIAL INTELLIGENCE

An Article by

**Mr.Manoj Kumar**

**II - CSE**

For the last couple of years, artificial intelligence (AI) has received a lot of attention. It is developing at an exponential rate. Today even machines can learn from data completely by themselves.

"In January 2018, Google CEO Sundar Pichai claimed that artificial intelligence (AI) will be more transformative to humanity than electricity."

"PWC analysis has reported that by 2030, the global GDP could rise by 14 percent as a result of AI enabled activities."

## What is AI?

The field of AI is more fascinating and tremendous then shown on sci-fi films. The machine that's take its own decision is AI machine. Generally speaking it is an umbrella term used for a branch of computer science. It stands for the ability to acquire and apply knowledge, and perform naturally like a human. In Computer Science different terms are used while talking about artificial intelligence like Machine learning, Deep Learning, Reinforcement Learning and few others.

## FACTS :Most AI Bots Are Females

**MACHINE LEARNING:** It is a learning technique where machines can learn from huge data sets.

**Deep learning:** It is one of many approaches for machine learning research. It works similarly to the human brain - Artificial Neural Networks (ANN's).

In last 5 years university course enrolment in AI and ML is increasing all over the world. Not only on academics but many companies started investing n AI. ''From 2015 to 2018, active AI start-ups increased 2.1x, while all other active start-ups increased 1.3x". Global revenues from AI for enterprise applications is projected to grow from $1.62B in 2018 to $31.2B in 2025.

Even in our daily life many AI machines helps human kind like tesla's self-driving car , Google's assistant, Amazon's Alexa….etc.

*Musk has said that he has concerns about artificial intelligence: "At least when there's an evil dictator, that human is going to die. But for an AI, there will be no death — it would live forever. And then you would have an immortal dictator from which we could never escape."*

*Musk has said that he has concerns about artificial intelligence: "At least when there's an evil dictator, that human is going to die. But for an AI, there will be no death — it would live forever. And then you would have an immortal dictator from which we could never escape."*

I think most used programming language for machine learning is python. As I said Artificial Intelligence is the field of computer science many big tech companies are researching and developing AI machines daily. Some popular frameworks of Machine learning and Deep Learning are,

Tensorflow - https://www.tensorflow.org/

Keras - https://keras.io/

PyTorch - https://pytorch.org/

Most of things are open source we can learn and use them for free of cost.

*FACTS: Top scientists and technologists like Stephen Hawking, Bill Gates and Elon Musk believe that AI is a very dangerous threat to humanity.*

# RULING ROBOTS 2020

*An Article by*

**Ms.V.Vedhanayaki**

**IV - CSE**

**A High-Tech Tutor (Van Robotics ABii)**

Robots fascinate Van Robotics CEO Laura Boccanfuso. But while getting her Ph.D. in computer science, she felt most were too expensive and technical for real-life applications. So she developed ABii, a robot tutor aimed at closing the math and reading proficiency gap for K-5 students. This is no mere toy: the 16-by-8-in. Device is designed to work with teachers—and, increasingly, parents now that so many children are learning from home—with a curriculum created by certified educators. Its edge: using a camera to detect changes in student attention and optimizing its tutoring approach to resonate with individual learners. "Schools more than ever need individualized learning help," Boccanfuso says. "[They] don't have enough teachers in the classroom." Schools that buy ABii for $999 receive 30 student licenses that come with lesson plans that are updated regularly to meet national standards; the home version ($599) offers the same features with just three licenses.

**A Skill-Building Robot (Embodied Moxie)**

Don't let the cutting-edge AI and robotics fool you—Moxie is more like a Mister Rogers' Neighborhood character than HAL. Created by vets of the children's show as well as Pixar, Jim Henson Productions, and experts in education and child development, the robot is designed to help boost the social and emotional skills of 5- to 10-year-olds. In Moxie ($1,699), children find a compassionate pal who encourages reading and drawing, and sends them on missions meant to spur engagement with adults, siblings and peers, such as writing kind notes for their family to

find or talking to a friend about feelings. Paolo Pirjanian, CEO and founder of Embodied, Moxie's creator, says it is intended to offer "a springboard into the real world."

# PC Buying Guide

*An Article by*

**Mr.M.Saravanan**

**II - CSE**
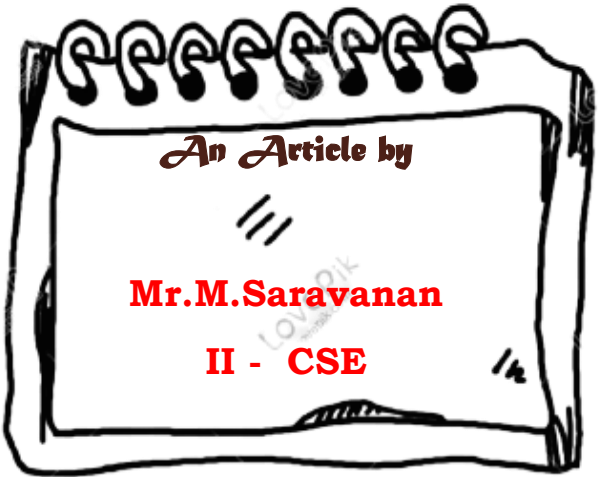
**Minimum PC Requirements:**

As a computer engineers we want to make sure our PC can run all kinds of programming related applications. Usually programming request require large amount of RAM and CPU power . When comes to CPU it want to have at least 4 cores with "HyperThreading" and base clock frequency of 3.7Ghz, for memory it wants to be 16 GB or above is highly recommended (dual channel/quad channel).For storage go for SSD for OS and applications, storage size >=500gb is recommended.

If you are planning learn machine learning or anything related to Artificial intelligence you want to use nVidia graphics cards. You can use Radeon GPUs but it comes with lots of complications and it won't support Tensor Flow natively.

Because it has native support for tensor flow GPU and Tensor cores(RTX cards only) which highly increase parallel processing capabilities if you choose AMD GPUs or APUs it won't work that easily with tensorflow GPU.

**"Cheap doesn't means value for money"**

### Standard PC Component list

| COMPONENTS | 30K | 50K | 65K | 75K |
|---|---|---|---|---|
| MOTHER BOARD | Gigabyte B450 DS 3H | MSI B460m Pro-vdh | Asrock B550m pro4 | Asrock B550 pro4 |
| CPU | AMD Ryzen 3 3300x | Intel i5 10400 | AMD Ryzen 5 3600x | AMD Ryzen 5 3600xt |
| RAM | Corsair vengeance 8gb DDR4 | Corsair vengeance 8gbx2 DDR4 | Corsair vengeance 8GB x 2 DDR4 | Corsair vengeance 8GB x 2 DDR4 |
| STORAGE | WD green 240GB m.2 | Kingston 500GB nvme m.2 | Kingston 500GB nvme m.2 | Kingston 500GB nvme m.2 |
| GPU | MSI Geforce GT1030 | MSI nVidia Geforce GTX 1650 Ventus | Zotac nVidia GTX 1660 super | Zotac nVidia RTX 2060 super |
| CABINET | Any mAtx Cabinet | Any mAtx cabinet | Any mAtx cabinet | Any mAtx cabinet |
| PSU | Corsair 450 watt | Corsair VS550 watt | Corsair VS550 watt | Corsair VS550 watt |
| MONITOR | Samsung 20" | Samsung 24" F390 | Samsung 24" F390 | Samsung 24" F390 |
| *monitor prices not included | | | | |

# Success Comes From Trying One More Time With Determination

An Article by

**Ms.B.Prathiksa**

**II - CSE**

Have you ever wondered how easy it is to fail? You just need to give up! By giving up, you agree to fail. Just think if everyone born in this world would have taken this easy way out, humanity would have perished. The truth is, it is very immature and foolish to give up. Determination is the anti-dote to giving up. More often, determination is the only thing that really determines success.

There is a story about a donkey that once fell in a dry well. The farmer tried his best to take him out, but could not. So he decided to cover the well and began shoveling dirt and soil into the well. The farmer called his friends to help him in covering the well with dirt and soil. The donkey understood that he has been abandoned to die soon. With renewed vigor and determination, he began shaking off the dirt that was being dropped over him. As more and more dirt was dropped, he would shake it off and take a step up. Finally, as the dirt kept on dropping, he reached the top of the well and climbed out of the edge, alive.

Life will keep on throwing challenges in the form of problem. Giving up would mean certain and immediate defeat. The only chance one has is to keep trying, one more time. Continuing one's efforts is the only guaranteed way to success.

## How to Develop Determination

There is a plethora of literature on these topics. You will be reading a lot about them and forgetting them the next week. Any learning that is not experiential is lost after some time. To develop the qualities of determination and persistence, you will have to work on them. Doing leads to mastery, and practice makes perfect.

So start doing, not just following these steps.

♦ **Visualize Your Goals Clearly**

♦ **Start Every Day on a Positive Note**

♦ **Carpe Diem – Seize the Day**

♦ **Do Not Let Failures Stop You**

♦ **Keep Your Focus Despite Ridicule and Criticism**

## Visualize Your Goals Clearly

Unless you know where you are going, you will never reach there. That is why companies focus so much on "Vision". Deliberate on what you want to achieve. Then think of it such that you are able to see it. The more clear the vision, the more focused your actions will be. Write them down and keep the note at a safe convenient place.

## Start Every Day on a Positive Note

A new day means another twenty-four hours of opportunity. Start your day with a few minutes concentrating on your vision. This will empower you for the day.

## Carpe Diem – Seize the Day

Seize the day, put very little trust in tomorrow; that is what Carpe Diem means. The Indian saint **Kabir** had said, *"Do today what you want to do tomorrow, do now what you want to do today!"*

## Do Not Let Failures Stop You

Accept failures as a part of life. Often, failures are just a way of telling that the particular method does not work and you have to take the next option. Failures are like the several en-route stations that you come across while making a journey. They only mean that you need to go further.

## Keep Your Focus Despite Ridicule and Criticism

Often you will come across others who will ridicule you for your passion. They do not know your story nor have they ever worn your shoes. Do not let your mental peace and internal equilibrium get disturbed by this.

## Conclusion

Success is imprinted in the genes of every human born. Being born, in itself is a success story. It is just a matter of overcoming the barriers that leads to success. Giving up is your own willing acceptance of immediate and certain defeat. Once you stop, you eliminate every chances of getting it right. If you try one more time, you are giving life to hundred of hopes. You never know your success is lurking behind which one of these hopes, waiting for you to discover it.

# OPPORTUNITIES NEVER KNOCKS TWICE………!

An Article by

**Ms.V.Abirami**

**II - CSE**

Opportunity! You might have heard this word many a times and must be waiting for one. You must be wondering what opportunity is? And how can I come to know about this? Answer to the above question is very simple. Opportunity is an appropriate or favorable time or occasion. It is a situation/condition favorable for attainment of a goal or a good position. It is a chance or a prospect for advancement or success.

Opportunities are present around us all the time. Recognizing these opportunities is dependent on our intentions and mindset which is influenced by our belief system. It is a powerful attraction tool that creates our thinking and our attitude. Do you believe you are all worthy and deserving of the abundance that are waiting for you out there? While your conscious and logical mind may be inspired to receive the abundance, your true belief system is your inner self that chooses to see or not see the opportunities that are showing up on your doorsteps. The contradicting thoughts within us create a limiting belief that will blind us into making the necessary decisions and changes crucial to accomplishing our goals or intentions. A limiting belief makes us see opportunities as difficulties and unfortunately hinders our success.

There's an aged old proverb that says "opportunity only knocks once." However with a positive mindset, "life always offers you a second chance and it's called tomorrow." While waiting for tomorrow to come, learn to listen to our inner self, that subtle whisper that comes from the back of our head and take the initiatives to understand;

♦ **Our purpose in life**
♦ **Our personal values**
♦ **Our passions**
♦ **Our strengths**
♦ **Our weaknesses**
.

Understanding these five values is an important step towards overcoming our limiting belief. It keeps us on track on our life's journey with a destination in sight. Opportunities are the means that will help us get there but it would be meaningless to open our door when opportunity knocks unless we are sure where we are heading.

"**The price of success is hard work, dedication to the job at hand, and the determination that whether we win or lose, we have applied the best of ourselves to the task at hand.**"

"**The will to win, the desire to succeed, the urge to reach your full potential… these are the keys that will unlock the door to personal excellence.**"

"**If you have the opportunity to play this game of life you need to appreciate every moment. Lot of people don't appreciate the moment until it's passed.**"

"**When I can run, I will run; When I can walk, I will walk; When I can only crawl, I will crawl; I will sat least always be moving forward.**"

A great man once said, "Opportunity may knock **only once, but temptation leans on the doorbell**". It is true that opportunities don't come to us every day. After working hard, we may be entitled to an opportunity. But one has to be aware of opportunities that may come his/her way. Today, many people are too involved in their own work that they miss many opportunities.

When opportunity knocks, know when to open the door...

Ms.K.Divya

IV CSE

Ms.R.Ridhunaa

III CSE

# Chitchat with God

Hey…!Buddy why humans hate me more

Did I failed on my assigned job

No…But their need from you is on high

And I am gonna stop these

Well…! May I know your plan please

Just gonna add  religious marks

On each tree to save you and the future

And the end is near for this…!

Wait are you coming here to save me

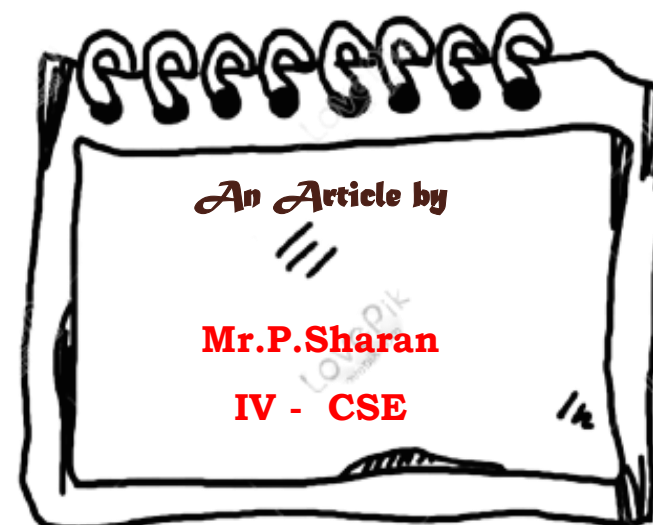Hey I am already in..!

I will paint you soon lets meet there..!

An Article by

**Mr.M.Sarath Kumar**

**IV -  CSE**
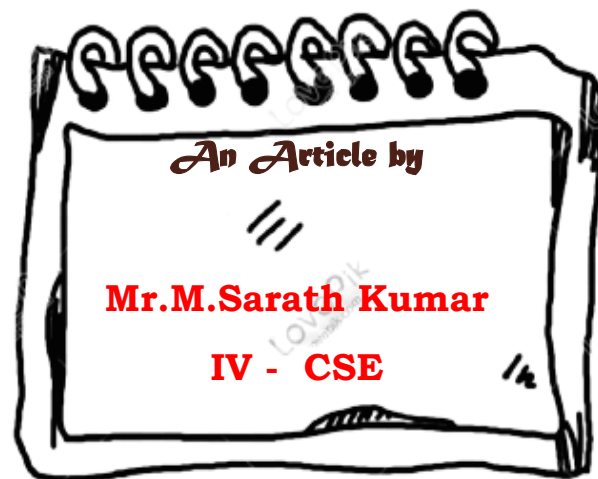
# Unforgettable Moments

Hey readers I am very excited and happy to share these moments and let's begin….! That was the final year of my school education and I was the leader of my team in the chess game.Hey…yes I am a chess player and that was the Final chance to get placed in the state team. The state team is divided into zones and I am qualified for the south zone meet. If I succeed here I will be placed in the state team. But the reputed players from south zone are already present and no other players in the last two years none of them defeated including me. The pain you get after losing a completely winning game of yours is unacceptable and you should wait for the one year for the next chance. But this was the only final chance for me to show off my skills…one wrong move will end my game. On the day 12th September 2016 match held in my school, with fully supported of my friends and teachers on that final match against a big player who plays for Tamil nadu for the last 2 years. That match took around 2 hours 45 minutes and we both fight till the end. At the final crucial movements I made a mistake the whole crowd disappointed but that was a trap I made unknowingly and that trap brings me to the winning path. Everybody was shocked on that move even my coach didn't know the final masterpiece and finally I have won and selected for the state team in the final chance and celebrations all over there with my teammates and friends.

Moral: kindly fight till the end one day God will give you a chance unknowingly. Since it happens to me and many of us and let it happen for you on the next day.
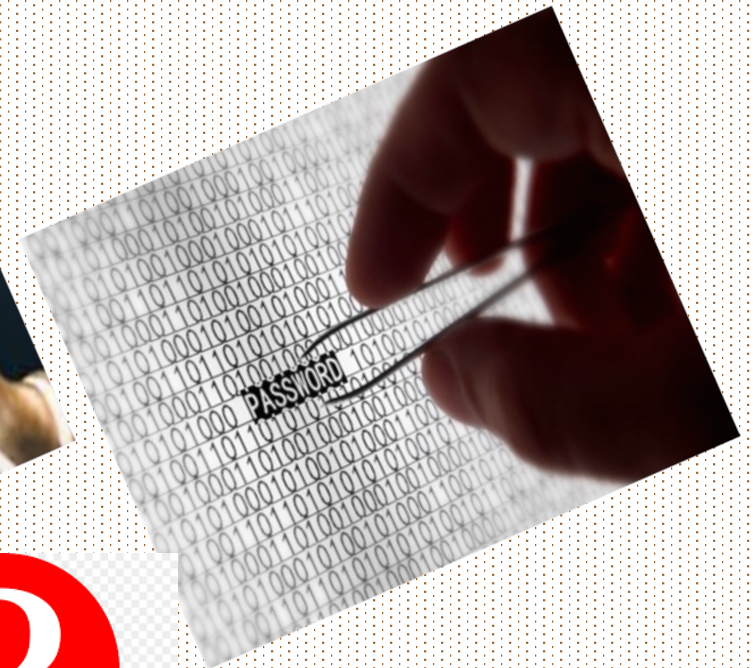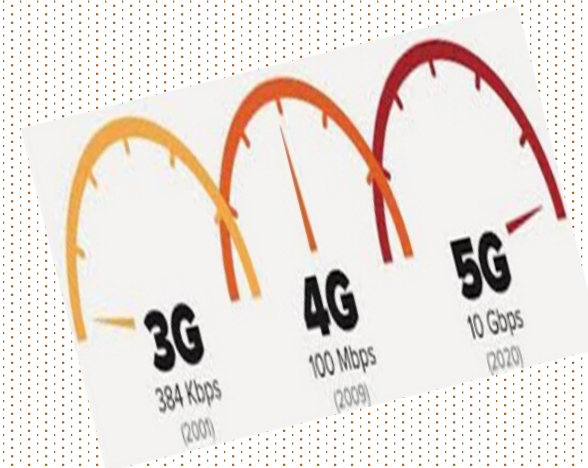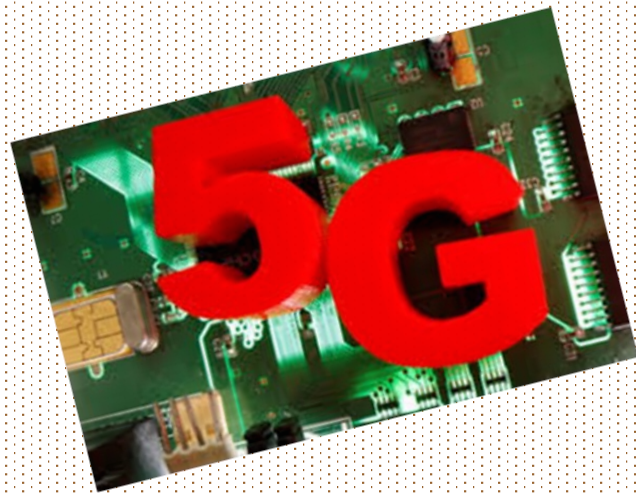
Thanking you

An Article by

**Mr.P.Sharan**

**IV -  CSE**

❶



❷



❸



❹

# CONNECTIONS

**5G**

**5**

**6**

Prepared by
**Ms. R.Keerthana -IV CSE**

**7**

ANSWERS:

1. BLOCK CHAIN

2. ETHICAL HACKING

3. MACHINE LEARNING

4. DOWNLOAD

5. TECHNOLOGY

6. WHAT'S APP

7. SCREENSHOT

# PUZZLES

**1**

What can you see
once in a minute,
twice in a moment,
and never
in a thousand years?

**2**

There are 3 doors in front of you.
You have to go through one of them.
Behind the first door, a fire is raging;
a gunman lurks behind the second one;
behind the third one, there is a lion
that hasn't eaten in 3 years.
Which door will you choose?

**3**

Who makes moves
while being seated?

© BRIGHTSIDE.ME

**4**

We kill, and we give life.
We are either poison
or fruit — you choose.
What are we?

© BRIGHTSIDE.ME

# PUZZLES

## 5

What flies when it's born,
lies when it's alive,
and runs when it's dead?

© BRIGHTSIDE.ME

## 6

What gets wet when drying?

© BRIGHTSIDE.ME

Prepared by
**Ms. M.Kalaivani**
**IV CSE**

## ANSWERS

1..THE LETTER 'M'

2.THE LION HAS'NT TAKE FOOD FOR 3 YEARS SO ,IT ALREADY DIED

3.CHESS PLAYER

4.WORDS

5.SNOWFLAKES

6.TOWEL

**DID YOU KNOW?**

*TheMindsJournal*

Listening to 5 to 10 songs a day can improve memory, strengthen immune system and reduce depression risk by 80%.

The Age Of ENLIGHTENMENT

**DID YOU KNOW?**

The World's Most **Expensive Material** is "Antimatter". i.e, 1 Gram $25 Billion. Just 1 Gram of this **Material** is enough to **destroy** entire New York City.

**DID YOU KNOW?**

**LiFi**

LIFI IS HUNDRED TIMES FASTER THAN WI-FI AND USES LIGHT INSTEAD OF RADIO FREQUENCIES.

**DID YOU KNOW**

psychology says that people who are lying to you tend to look up and their left.

**DID YOU KNOW**

A RECENT RESEARCH & STUDY FOUND THAT INSTAGRAM HAS THE WORST EFFECTS ON THE HEALTH IN ALL SOCIAL MEDIA NETWORKS. USING INSTAGRAM FOR 3 HOURS A DAY HAS THE SAME EFFECT ON HEALTH AS SMOKING A CIGARETTE. USING INSTAGRAM DAILY CAN ALSO REDUCE YOUR LIFE BY 2 YEARS.

An Article by

Ms.M.Monisha

IV - CSE
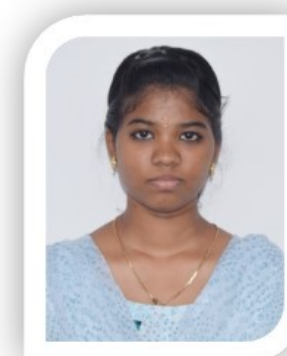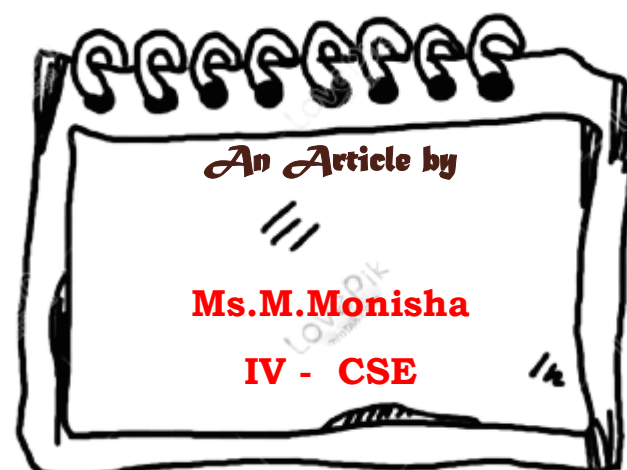
# DEPARTMENT EVENTS



NSCET-CSE-One Day National Level E-Workshop Session 2 on " Ethical Hacking and Cyber Security "

107 views • Streamed live on Oct 3, 2020

👍 4   👎 0   ↪ SHARE   ≡+ SAVE   …



**Department of Computer Science and Engineering Organizes**

**Webinar on**
**" PROBLEM SOLVING & IDEATION "**

MoE's INNOVATION CELL (GOVERNMENT OF INDIA)

INSTITUTION'S INNOVATION COUNCIL

**Mr. SAKTHIVEL KALIAPPAN**
**FOUNDER & CEO**
**RAINMAN ENVIRO SOLUTIONS, MADURAI.**

**DATE : 30th Dec 2020**     **For Students, Academicians &**
**TIME :  02.00 PM to 03:00 PM**     **Research Scholars**



NSCET-CSE-FIST ASSOCIATION INAUGURAL MEET

144 views • Streamed live on Nov 4, 2020

👍 10   👎 0   ↪ SHARE   ≡+ SAVE   …



**Department of Computer Science and Engineering**
**&**
**FIST ASSOCIATION**
**Jointly Organizes**
**An Awareness Session on**
**" THE DARK SIDE OF SOCIAL MEDIA "**

/the social dilemma

**A NETFLIX DOCUMENTARY**
**DATE : 31st Dec 2020**     **VENUE :**
**TIME :  02.00 PM to 03:00 PM**     **SIR C.V RAMAN AUDITORIUM**

If you're not paying for the product, then you are the product.

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**IV CSE**

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Congratulations!

# CHRISTMAS FACTS-BIRTH OF JESUS ON DECEMBER 25th

**Anitha:** Hai Geetha,Do you know when it(Jesus Birth) happened?
Geetha: Long ago 2000 years

**Anitha:** Which king ruled over in that time,Geetha?
Geetha: King Herod

**Anitha:** Can you please tell the name of Angel sent by God?
Geetha: Gabriel

**Anitha**: To Whom Angel sent?
Geetha: Young lady (Virgin) named Mary (who was engaged to Joseph)

**Anitha**: oh!What Message given to Mary by Angel?
Geetha:  'Peace be with you! God has blessed you and is pleased with you', 'Don't be afraid, God has been very kind to you. You will become pregnant by the Holy Spirit and give birth to a baby boy and you will call him Jesus.

**Anitha**: Is it? What was the reaction of Mary?
Geetha: Yes,Mary was very afraid but she trusted God

**Anitha**: ok,In which place this incident happened?
 Geetha: In Northern town of Nazareth.

**Anitha**: Then,What about Joseph?
Geetha: In his dream,Angel appeared and asked him to 'Don't be afraid to have Mary as your wife

**Anitha**: Whether Joseph accepts Mary?
Geetha: Yes, Joseph accepted her as his wife

**Anitha**: Then,What happened next?Tell me Geetha
Geetha: Roman Government ordered everyone to return to the town where their families originally came from, and enter their names in a register (or census) there. Joseph's family originally came from Bethlehem have to travel from Nazareth with his pregnant wife

**Anitha**:, What happened in Bethlehem?
Geetha: When they reached Bethlehem they had problems finding somewhere to stay. The only place to stay that they could find was with the animals. So in the place where the animals slept, Mary gave birth to Jesus, the Son of God.

**Anitha**: Oh!Goodness ,To whom first, the Birth of Jesus was declared by Angel?
Geetha: To the Shepherd

**Anitha**: Thanks Geetha for making me better clarity. May I Know, why stars are hanging outside the home?
Geetha: When Jesus was born, a brand new bright star appeared in sky. Some Wise Men (Astronomer) in faraway countries saw the star, filled with joy and guessed what it meant. They studied the stars and had read in very old writings that a new star would appear when a great king was born. They set out to find the new king and bring him gifts to Jesus, new born baby and worshipped him. Star represents sign of happiness in their heart.

May God filled all your heart with full of peace and Happiness.

# EDITORIAL BOARD
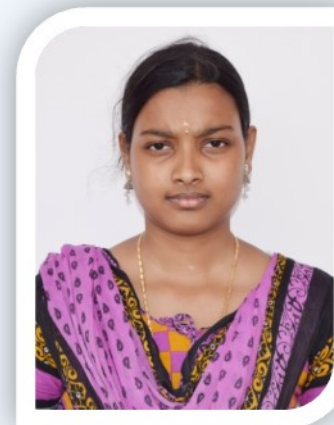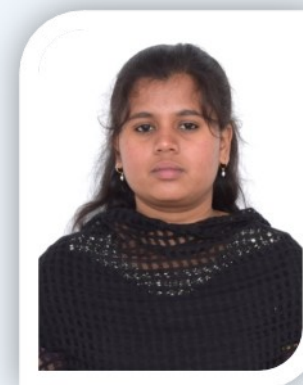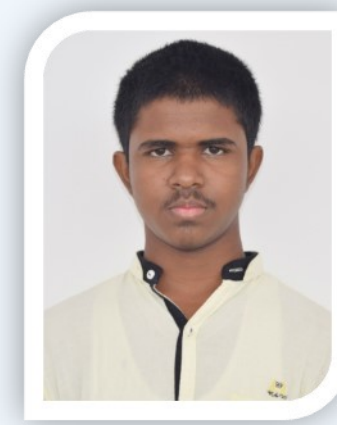
# Acknowledgements

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-**The Editorial Team**

**Fistazine**

Looking back on the months gone by,
As a new year starts and an old one ends,
We contemplate what brought us joy,
And we think of our loved ones and our friends.

Recalling all the happy times,
Remembering how they enriched our lives,
We reflect upon who really counts,
As the fresh and bright new year arrives.

And when we ponder those who do,
we immediately think of you.

Thanks for being one of the reasons We'll have a Happy New Year!