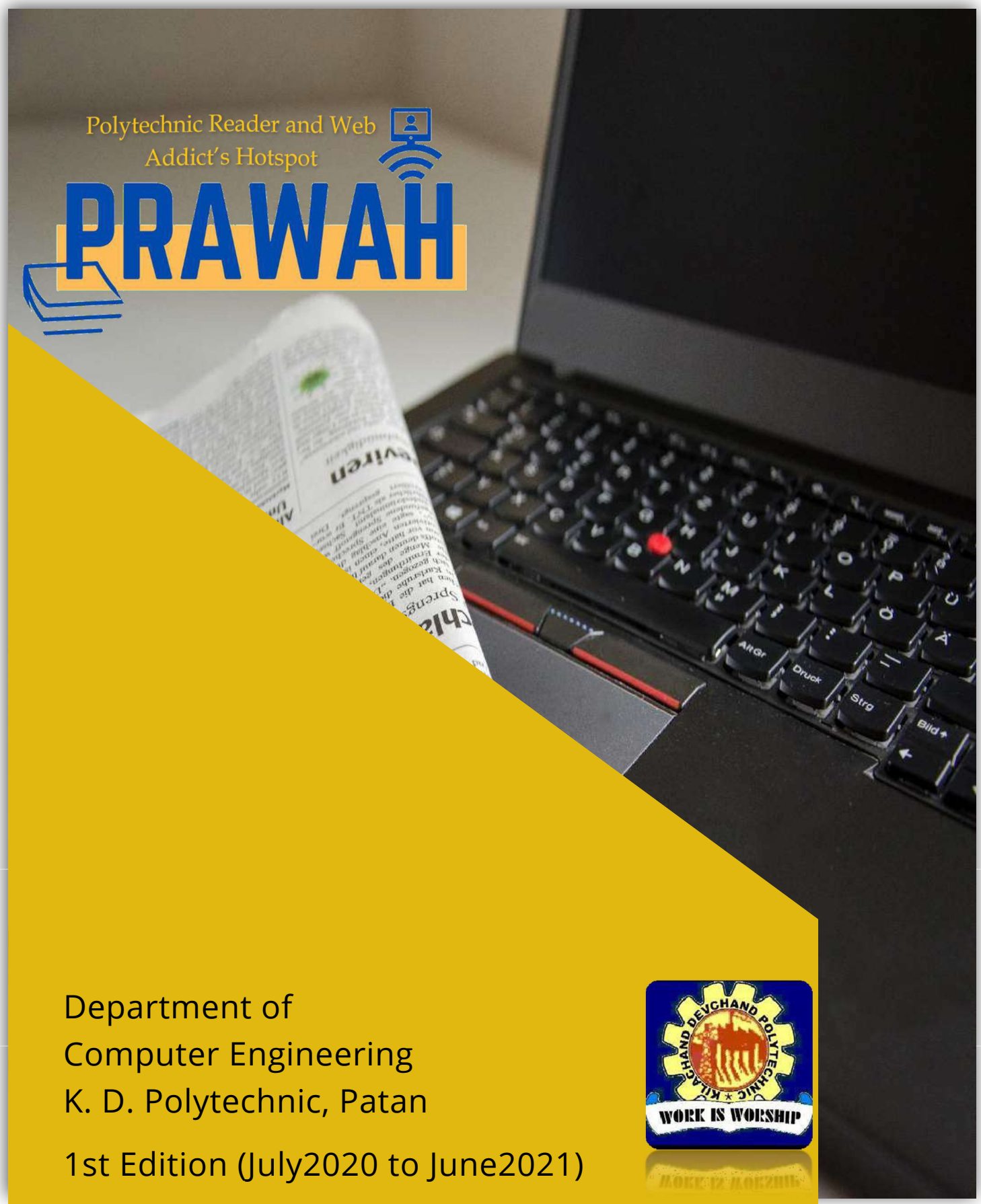


Department of
Computer Engineering
K. D. Polytechnic, Patan

1st Edition (July2020 to June2021)

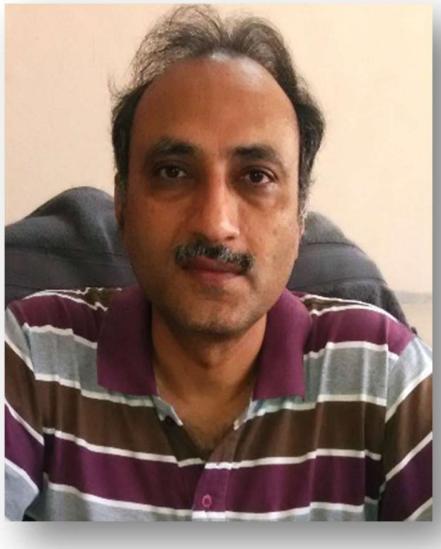
DEPARTMENT OF COMPUTER ENGINEERING

ABOUT DEPARTMENT:

K. D. Polytechnic, also known as **Kilachand Devchand Polytechnic**, was established in **1961** in **Patan**, **Gujarat**. Department of Computer Engineering is established in the year of **2001**. Department has Total Intake: **180**. Under the leadership of ***Shri J. M. Joshi*** Department of Computer Engineering is moving forward. The use of online teaching-collaborating tools like MS Team by Microsoft, for sharing the resources, assessment and related activities help as a mixture of traditional as well as active learning pedagogy to support contemporary ICT based technical education.

HEAD MESSAGE:

કમ્પ્યુટર ઈજનેરીનું ક્ષેત્ર એટલે ક્યારેક ઝડપી તો ક્યારેક ધીમુ પણ સતત પરિવર્તનશીલ અને પ્રગતિશીલ જ્ઞાનનો પ્રવાહ. મિત્રો, મારા માટે આ ખુબ જ આનંદની વાત છે કે આપણા કમ્પ્યુટર વિભાગે "PRAWAH - Polytechnic Reader And Web Addict's Hotspot" દ્વારા એક નવા અધ્યાયની શરૂઆત કરી છે. વિભાગના વ્યખ્યાતા સતત વિધ્યાર્થીઓની રુચિ ટેક્નિકલ, સાંસ્કૃતિક તથા રમત પ્રવૃતિમાં જળવાય તે માટે પ્રયત્નશીલ રહ્યા છે. આ PRAWAH એ વાતને પ્રમાણીત કરતા સાક્ષ્ય નો ભાગ છે. PRAWAH વિભાગની વિવિધ પ્રવૃતિઓને તો પ્રતિબિંબિત કરે જ છે પણ સાથે-સાથે વિધ્યાર્થીઓને સર્જ્નાત્મક પ્રેરણા પણ પુરી પાડે છે. સંપાદકોની સમગ્ર ટીમને આ કાર્ય માટે અભિનંદન અને ભવિષ્ય માટે શુભકામનાઓ પાઠવું છું. PRAWAH હમેશા તેના વાચકોના હદયમાં સ્થાન પામે તે જ અભ્યર્થના...



Shri J. M. Joshi
Head of the Department,
Computer Engineering

FROM EDITORIAL DESK

If we attempt to replay the memories of the last 18 months, common ingredients in all of these would be grief, confusion, concern and definitely helplessness. And all these could be attributed to one factor, the Pandemic of a magnitude never ever seen by mankind. Another factor which got a boost invariably by this Health disaster was the role played by technology in almost every other sector. Be it the Health management information system, education sector or logistic system, technology has tried to provide a much needed support system, if not complete solutions. Though this transition was gradual and with its own flaws, hits and misses, but now it has interwoven itself into all domains and this phenomenon seems inseparable.

E-learning for students:

E-learning resources play an important role during Pandemic.

- Swayam portal is one of the resources which provide world class e-learning to students. From Basic to advance level students and Faculty can use this platform. Link for Swayam is https://swayam.gov.in/. This is free portal for learning. You have to pay nominal fee for certification.
- Udemy is one of the world's largest platforms that offer massive online open courses to individuals looking to learn a variety of disciplines. Udemy along with a select few is not your average e-learning website for it provides support for one-on-one tutorials, group learning, and individual pursuits. https://www.udemy.com/
- Coursera.com is an e-learning platform available to engineering students looking to complement classroom studies with some professional knowledge from external educators. The platform is better described as a massive open online course platform where both lecturers and students can interact to exchange knowledge. Modules on Coursera are treated in a structured format reminiscent of the classroom. https://www.coursera.org/

B. I. Saini
Chair Person
Editorial Committee

COMPUTER ENGINEERING DEPARTMENT

VISION

To produce competent diploma engineers through quality education with moral values to meet need of the society.

MISSION

i) To provide quality education in both theory and practical to solve the problems.
ii) To encourage students for cocurricular activities.
iii) Provide exposure to latest technology.
iv) Transform students into socially responsible and ethical professional.

PROGRAM EDUCATIONAL OBJECTIVES

The diploma holders will be:

i) Competent with knowledge of Computer Engineering to pursue higher education.
ii) Sound knowledge in basic science, mathematics and engineering fundamentals.
iii) Proficient to solve problems that are technically, economically, socially and environmentally acceptable.
iv) Efficient team leader, effective communicator and entrepreneur with ethics and moral values.

PROGRAM OUTCOMES

i) **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
ii) **Problem analysis:** Identify and analyze well-defined engineering problems using codified standard methods.
iii) **Design/ development of solutions:** Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
iv) **Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
v) **Engineering practices for society, sustainability and environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.
vi) **Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
vii) **Life-long learning:** Ability to analyze individual needs and engage in updating in the context of technological changes.

PROGRAM SPECIFIC OUTCOME

After the completion of the program, in future students will be able to have

i) An ability to analyse, design, develop and test software using different programming language
ii) An ability to setup, analyse, design and troubleshoot network and computer hardware issues.

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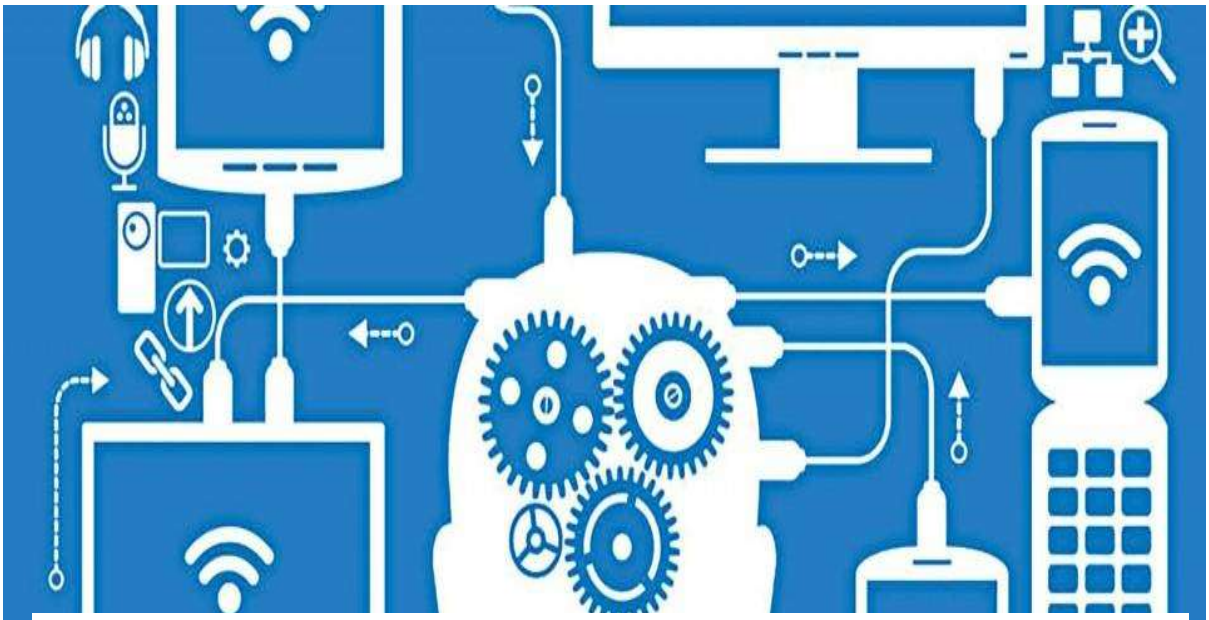


ENGINEERING: IMPORTANCE IN THE MODERN WORLD

Engineers don't Sit Back and Watch – ***They Make Things Happen***. Using innovation, creativity and a wealth of knowledge, engineering graduates are impacting the world unlike any other.

The world is changing, and engineers are the ones behind so much of this development. The majority of today's services and products have some element of engineering involved in their conception at least, paving the way to long, fulfilling and healthy lives for the people influenced by them.

Engineers must be *critical* yet *creative*; *curious* yet *capable*; as well as ready to handle the constantly changing world. The wide range of disciplines that fall under the engineering title mean that no matter what the prospective student's interest, there's bound to be one facet of the sector they'll find enticing and engaging. Whether it is a civil, electrical, chemical, or mechanical engineering, if you like tinkering, creating, designing or building, the engineering sector has a place for you.

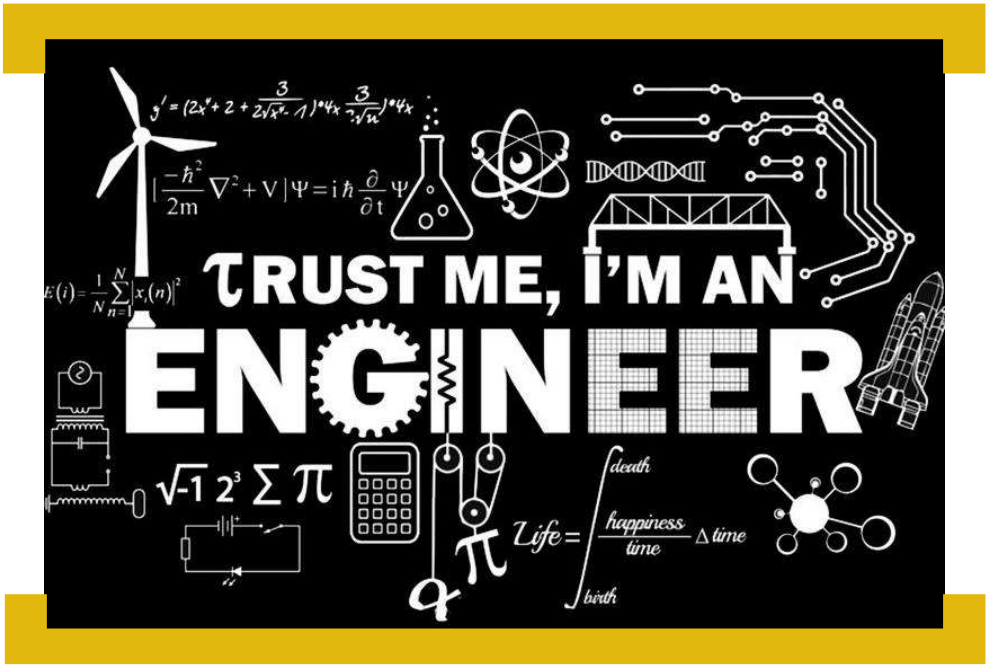
In an advanced technological world, we need engineers to bring

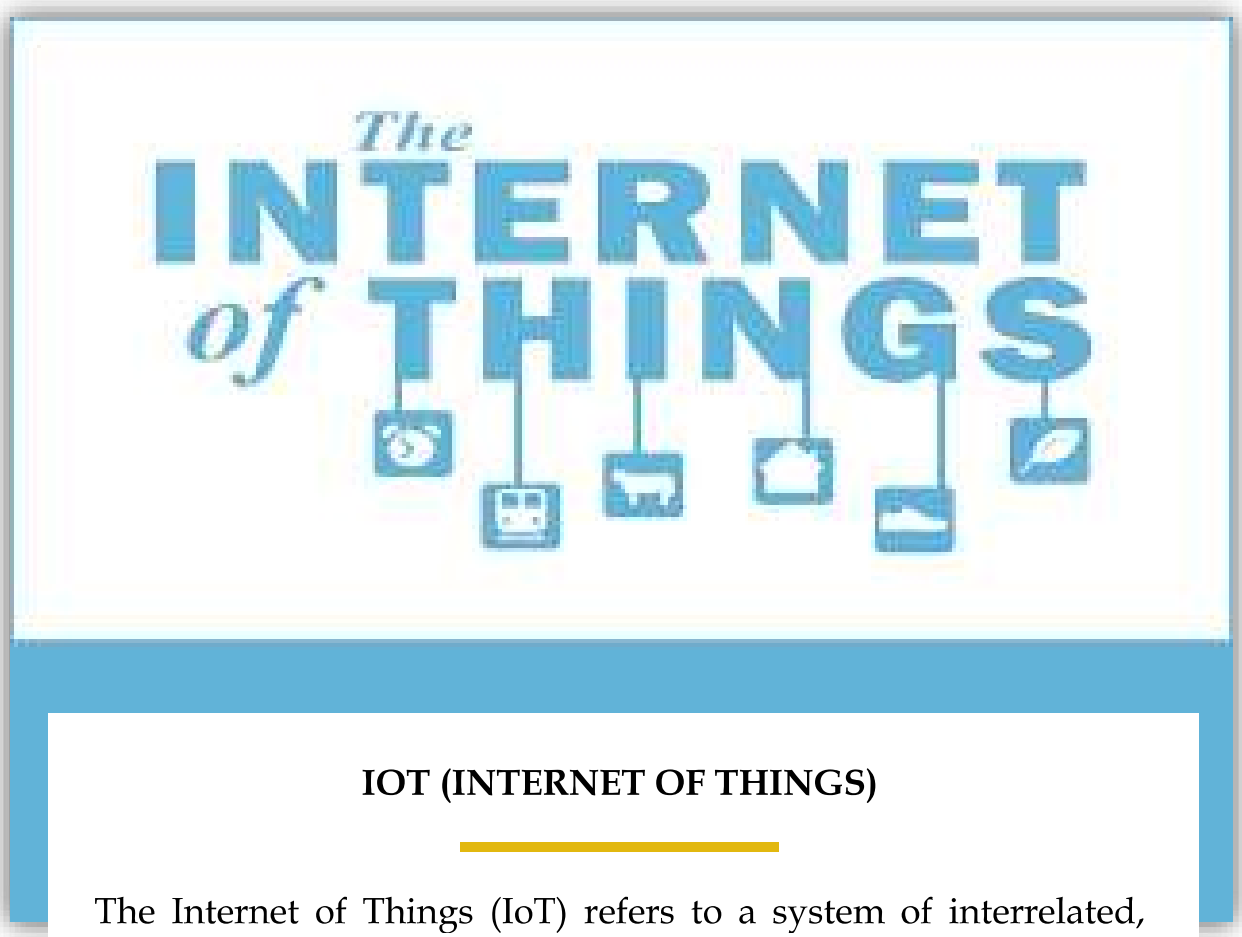
ideas into reality. By applying the principles of mathematics and science, engineers develop solutions to the world's biggest technical issues.

You could find yourself doing anything from building new bridges to developing electrical sockets for refugee camps; working on special effects for blockbuster movies or testing aircraft and aerospace products. With a myriad of positions open to engineers in almost every field, graduates happily welcome the huge choice of careers they have the potential to ***explore***.

The engineering portfolio knows no bounds, but these people are all working to the same common goal: ***building a sustainable world***. Whatever you wish to contribute to society through your engineering dedication, nothing compares to the knowledge that you've achieved something that's impacted people's lives for the better.

Palak R. Suthar
196310307139





IOT (INTERNET OF THINGS)

The Internet of Things (IoT) refers to a system of interrelated, internet-connected objects that are able to collect and transfer data over a wireless network without human intervention. IOT is an essentially a platform where embedded devices are connected to internet, so they can collect and exchange data with each other. It enables devices to interact, collaborate and, learn from each other's experience just like humans do. In some simple words, "IoT is the connection of all those things which are necessary in everyday life for a human being, with the internet".

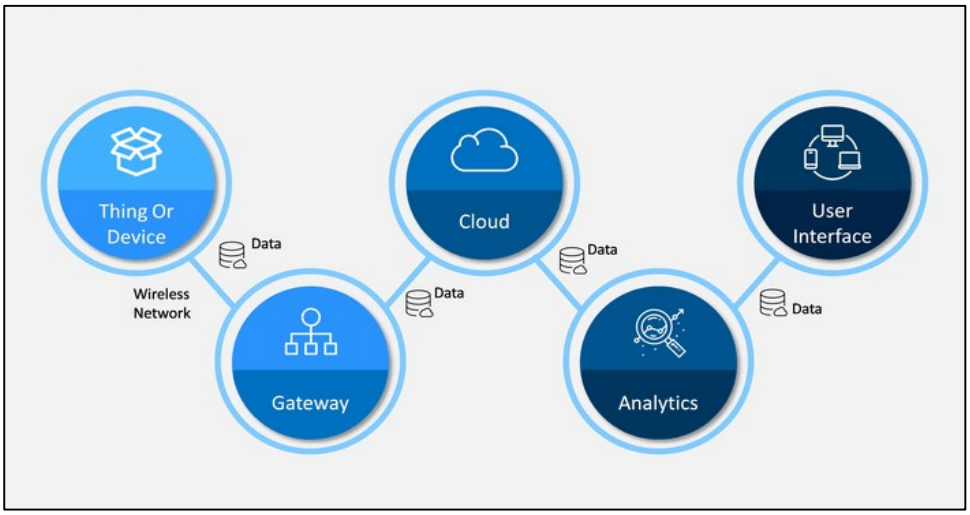
The personal or business possibilities are endless. A 'thing' can refer to a connected medical device, a biochip transponder (think livestock), a solar panel, a connected automobile with sensors that alert the driver to a myriad of possible issues (fuel, tire pressure, needed maintenance, and more) or any object, outfitted with sensors, that has the ability to gather and transfer data over a network.

Understanding

It mainly consists of smart devices having embedded processor, sensor, and communication to collect, sends the data to acquire from the different environments. The devices that are connected to the IoT hub or gateway share the data that they collect and analyses the data locally. These devices may connect with other devices as well and act on the information they get from another device. These devices mainly work without any human interaction or intervention. The engineers can interact with the device to set up and collect the information from the devices. The process is in 3 different steps, which are: Collect data, transfer the data, analyses data and the action taken.

Major Components

Following diagram to give you a high level view of IoT architecture which has five major components.



1. ***Things or Device:*** IoT device can be wireless sensors, software, actuators and computer devices. They are fixed to a specific object that runs through internet.
2. ***Gateway:*** IoT gateway is a device or a software program that serves as a connection point between cloud and multiple IoT devices.
3. ***Cloud:*** It is a platform which takes massive volumes of data generated. They receive them via IoT gateways which in turn has tons of devices behind them.

4. ***Analytics:*** IoT data analytics is the analysis of huge data volumes generated by connected devices. Organizations can derive a number of benefits from it: optimize operations, control processes automatically, engage more customers, and empower employees.
5. ***User Interface:*** Users need a way to view and understand the data captured by IoT. That's where the user interface comes in. In the simplest terms, a user interface (UI for short) is the means by which a user and a computer system interact.

Scope of IoT

Internet of Things has emerged as a leading technology around the world. It has gained a lot of popularity in lesser time. Also, the advancements in Artificial Intelligence and Machine Learning have made the automation of IoT devices easy. Basically, AI and ML programs are combined with IoT devices to give them proper automation. Due to this, IoT has also expanded its area of application in various sectors. IoT basically works for making our life simple and easy. How? Let's get in touch with some future applications of IoT on sectorial bases:

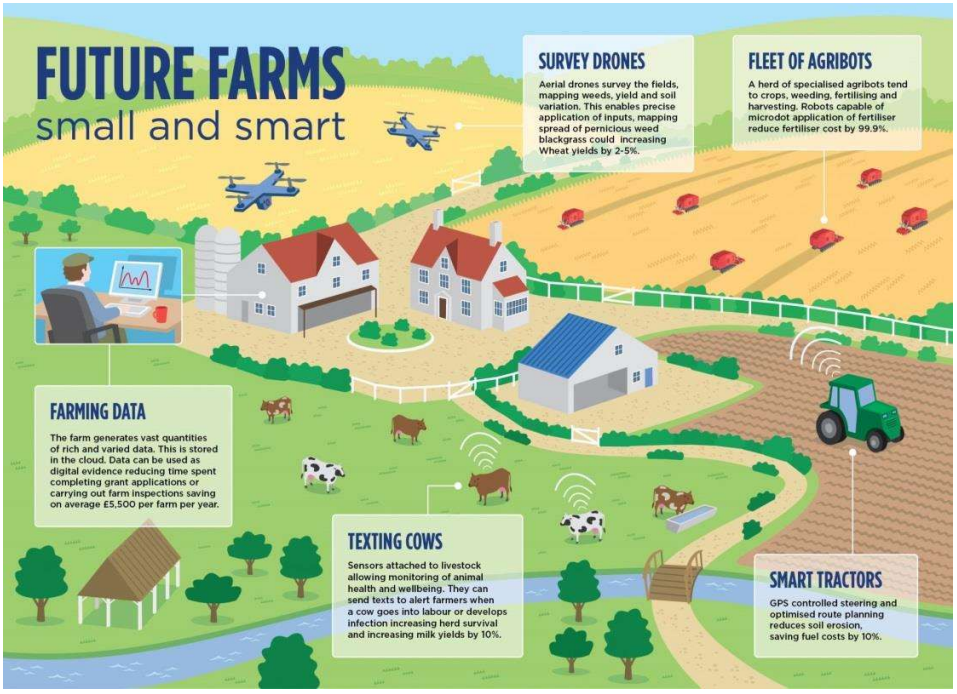
1. IoT in healthcare industry

   Here in this sector, the real time data plays a crucial role. IoT collects and transmit the data like ECGs, blood sugar level, weight, etc. to the cloud based system and doctor, no matter how far away, get in touch with real time data in just no time. It will take the healthcare to the next level. Also, the medical emergencies in remote areas can be tackled in an efficient way using IoT. IoT will let the doctors to do monitoring and diagnosing/operating both at the same time without delay due to the real time report.

IoT can be a boon for emergencies such as road accidents. Suppose, you are driving your car and suddenly you meet with an accident. Your condition is serious and you are not able to call anyone. IoT will help you in such situation. The car accident will be immediately informed in the nearby police station and hospital through the sensors placed in your car. In the hospital and police station, the police and the ambulance will immediately come to the spot after getting the message on receiver sensors showing your exact location. All this will happen without doing anything by you! This is the magic of IoT.

2. IoT in agriculture

Agriculture sector will be getting much from IoT. Nowadays, climate is changing in a faster way. In these changing conditions, an accurate forecasting system will help the farmers for the selection of crop. IoT, in its own swag, can do this efficiently for them.



Based on comparison of past and future data, by sensing the relative humidity in local atmosphere IoT will guide the local farmers for their crop selection process. Also it will help them for soil betterment. Sometimes standing

crop is attacked by bugs. In this condition, IoT with the help of drones will let them know about exact highly influenced area and thus, pesticides can be sprinkled in that area only. This will reduce the overall cost of agriculture as well as assure better production as well.

Future of IoT

- IoT will be accelerated by Artificial Intelligence (for example Google's project of AI operated car)
- Complex solutions will be made easier by using IoT such as Web-RTC (Web real time communication)
- Edge computing will get momentum due to IoT (as an option of cloud computing)
- 5G era will boost IoT even further touching every human's life
- Advancements in the Low-Power Wide-Area Network (LPWAN) technology offer even more functionality for IoT devices.

Khushi Nayak
196310307047

INVENTOR OF SIXTH SENSE: PRANAV MISTRY

Pranav Mistry (born 14 May 1981) is a computer scientist and inventor. He is the President and CEO of STAR Labs (Samsung Technology & Advanced Research Labs) since October 2019. He is best known for his work on Sixth Sense, Samsung Galaxy Gear and Project Beyond.

Career

Pranav Mistry joined Samsung as the Director of Research in 2012, and currently serves as the Global Vice President of it. He introduced Samsung Galaxy Gear Smart Watch in September 2013. Before joining MIT, Pranav worked as a UX Researcher with Microsoft in the past, he has worked with Google, CMU, NASA, UNESCO, and Japan Science & Technology Agency. He was the Global Senior Vice President of search at Samsung and the head of Think Tank Team. He is the President and CEO of STAR Labs since October 2019. He was honored as the 'Young Global Leader 2013' by the World Economic Forum

Inventions

Pranav Mistry is best known for his work on Sixth Sense Among some of his other works, he has invented Mouseless – an invisible computer mouse; Sparsh – a novel way to copy-paste data between digital devices; Quickies – intelligent sticky notes that can be searched, located and can send reminders and messages; Blinkbot - a gaze and blink controlled robot; a pen that can draw in 3D; and a public map that can act as Google of physical world. Samsung at CES 2020 unveiled the world's first artificial human dubbed Neon. Developed by Samsung's STAR labs' Pranav Mistry.

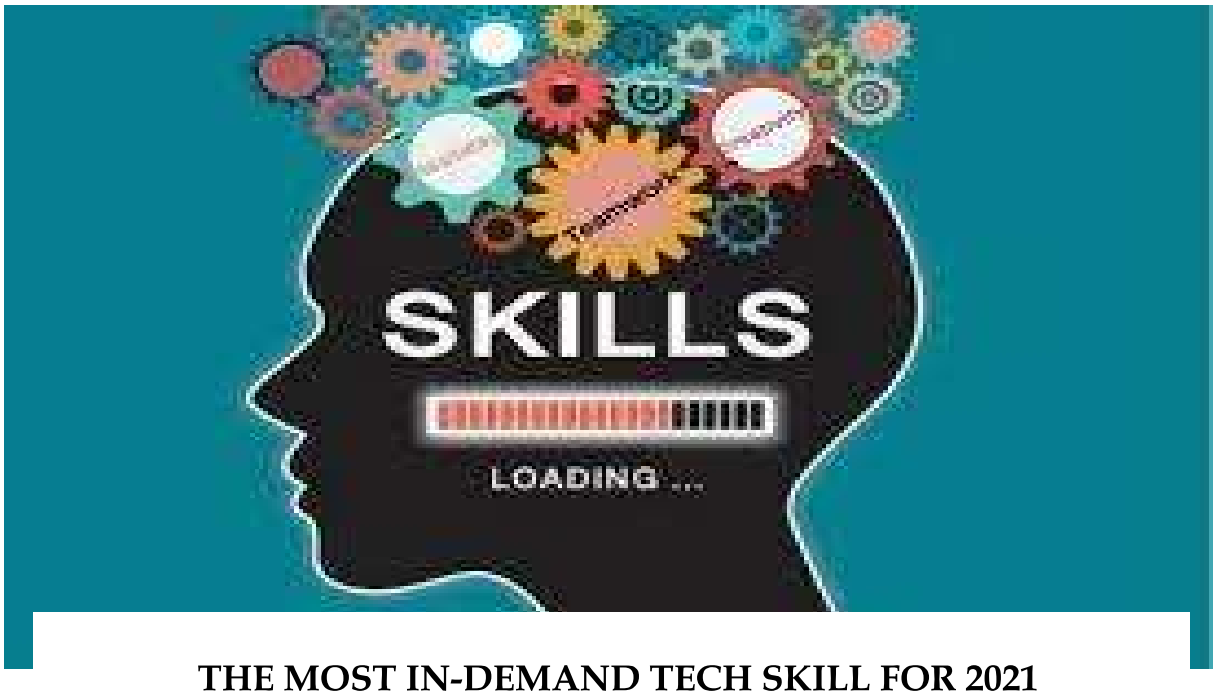
Recognition

Pranav's research on Sixth Sense was awarded the 2009 Invention Award by Popular Science. He was also named to the MIT Technology Review TR35 as one of the top 35 innovators in the world under the age of 35. In 2010, he was named to Creativity Magazine's Creativity 50. Mistry has been called "one of ten, best inventors in the world right now" by Chris Anderson. Mistry has been listed as one of the 15 Asian Scientists To Watch by Asian Scientist Magazine on 15 May 2011.GQ India listed Pranav as one of the most powerful Digital Indians. He was listed as one of the 37 Indians of Tomorrow by India Today Pranav Mistry was also honored as Young Global Leader 2013 by World Economic Forum.

Awards and Achievements

- ✓ Young Global Leader 2013 Award (World Economic Forum)
- ✓ 50 Most Creative People of the Year 2010 (CREATIVITY 50)
- ✓ TR35 2009 award (Technology Review)
- ✓ Invention of the Year 2009 award (Popular Science)
- ✓ Nominee for Forbes India's Person of the Year 2009

Heet R. Modh
196310307038



THE MOST IN-DEMAND TECH SKILL FOR 2021

As the world of technology continues to change rapidly, demand for professional with advanced IT skills has never been higher. With technology roles dominating the lists of 'best jobs' or 'most in demand jobs' for the future, we look at some of the most in demand tech skills for 2021 which will help both increase your demand in the tech market and your value as an employee.

Cyber Security

Cyber security is one of the tope technology trends in 2020 given the importance for companies that collected customer and user information to keep their networks secure from attacks. A shortage of cyber security skills among IT professionals has created an in demand market for those with cyber security, information security, network security and vulnerability assessment skills.

Cloud Computing

As more and more companies move away from traditional server infrastructure to cloud solutions, the demand for IT professionals

skilled in this area has raised steeply. Cloud technology has opened up a number of new revenue channels, and with the likes of Amazon web services and Microsoft azure changing the game, having cloud expertise is so essential because of its significance across every skill set on this list.

Dev Ops

DevOps professionals have revolutionized the way businesses meet the growing demands of their customers and the best DevOps professionals are those that are able to work with other areas across the business. Being able to speed up processes and development cycles all while maintaining a high degree of accuracy and not compromising on security is what talents DevOps professionals are all about.

AI & Machine Learning

AI and Machine learning have already begun to revolutionize industries and hiring in these areas is on the rise globally. For EX: Linkedln's 2020 Emerging jobs report UK found that Artificial Intelligence Specialist was the number one emerging job this year. The skills most in demand arcos AL and Machine Learning are TensorFlow, Python, Java, R, and Natural Language Processing, and due to its popularity. IT professionals that are equipped with these are sure to be in demand in 2021 and able to command high salaries.

Augmented Reality (AR) & Virtual Reality (VR)

Collectively known as Extended Reality, the European market size is predicted to skyrocket from $7.59 billion to $104 billion in 2026 and many industries, such as entertainment, advertising, education and health have adopted XR technology and demand for skilled technicians will be high as we move into 2021. Almost three quarters of software engineers predict the full impact of AR and VR will be evident in the next 5 years and developing knowledge in Unity will help IT professionals with coding skills forge a path into XR.

Blockchain

Although there seems to be a decline in the popularity of crypto currencies to which block chain is most commonly associated, it's also used file storage, peer to peer payments, crowd funding and identity management and banking. With high salaries on offer block chain engineers, and more and more industries adopting block chain technologies all the time, it will remain a top skill to have in 2021 and the years to come.

Nistha Dave
196310307012

BLOCKCHAIN TECHNOLOGY

Blockchain, sometimes referred to as Distributed Ledger Technology (DLT), makes the history of any digital asset unalterable and transparent through the use of decentralization and cryptographic hashing.

A simple analogy for understanding blockchain technology is a Google Doc. When we create a document and share it with a group of people, the document is distributed instead of copied or transferred. This creates a decentralized distribution chain that gives everyone access to the document at the same time. No one is locked out awaiting changes from another party, while all modifications to the doc are being recorded in real-time, making changes completely transparent.

Of course, blockchain is more complicated than a Google Doc, but the analogy is apt because it illustrates three critical ideas of the technology.

History

Cryptographer David Chaum first proposed a blockchain-like protocol in his 1982 dissertation "Computer Systems Established, Maintained, and Trusted by Mutually Suspicious Groups. Further

work on a cryptographically secured chain of blocks was described in 1991 by Stuart Haber and W. Scott Stornetta. They wanted to implement a system wherein document timestamps could not be tampered with. In 1992, Haber, Stornetta, and Dave Bayer incorporated Merkle trees to the design, which improved its efficiency by allowing several document certificates to be collected into one block.

The first blockchain was conceptualized by a person known as Satoshi Nakamoto in 2008. Nakamoto improved the design in an important way using a Hashcash-like method to timestamp blocks without requiring them to be signed by a trusted party and introducing a difficulty parameter to stabilize rate with which blocks are added to the chain. The design was implemented in the following year by Nakamoto as a core component of the cryptocurrency bitcoin, where it serves as the public ledger for all transactions on the network.

In August 2014, the bitcoin blockchain file size, containing records of all transactions that have occurred on the network, reached 20 GB (gigabytes). In January 2015, the size had grown to almost 30 GB, and from January 2016 to January 2017, the bitcoin blockchain grew from 50 GB to 100 GB in size. The ledger size had exceeded 200 GB by early 2020.

Storage Structure

One key difference between a typical database and a blockchain is the way the data is structured. A blockchain collects information together in groups, also known as blocks that hold sets of information. Blocks have certain storage capacities and, when filled, are chained onto the previously filled block, forming a chain of data known as the "blockchain." All new information that follows that freshly added block is compiled into a newly formed block that will then also be added to the chain once filled.

A database structures its data into tables whereas a blockchain, like its name implies, structures its data into chunks (blocks) that are chained together. This makes it so that all blockchains are databases but not all databases are blockchains. This system also inherently makes an irreversible timeline of data when

implemented in a decentralized nature. When a block is filled it is set in stone and becomes a part of this timeline. Each block in the chain is given an exact timestamp when it is added to the chain.

How does blockchian works?

The whole point of using a blockchain is to let people - in particular, people who don't trust one another - share valuable data in a secure, tamperproof way. Blockchain consists of three important concepts: blocks, nodes and miners.

1. ***Blocks***

Every chain consists of multiple blocks and each block has three basic elements:

- The data in the block.
- A 32-bit whole number called a nonce. The nonce is randomly generated when a block is created, which then generates a block header hash.
- The hash is a 256-bit number wedded to the nonce. It must start with a huge number of zeroes (i.e., be extremely small).

When the first block of a chain is created, a nonce generates the cryptographic hash. The data in the block is considered signed and forever tied to the nonce and hash unless it is mined.

2. ***Miners***

Miners create new blocks on the chain through a process called mining.

In a blockchain every block has its own unique nonce and hash, but also references the hash of the previous block in the chain, so mining a block isn't easy, especially on large chains.

Miners use special software to solve the incredibly complex math problem of finding a nonce that generates an accepted hash. Because the nonce is only 32 bits and the hash is 256, there are roughly four billion possible nonce-hash combinations that must be mined before the right one is found. When that happens miners are said to have found the "golden nonce" and their block is added to the chain.

Making a change to any block earlier in the chain requires re-mining not just the block with the change, but all of the blocks that come after. This is why it's extremely difficult to manipulate blockchain technology. Think of it is as "safety in math" since finding golden nonce requires an enormous amount of time and computing power.

When a block is successfully mined, the change is accepted by all of the nodes on the network and the miner is rewarded financially.

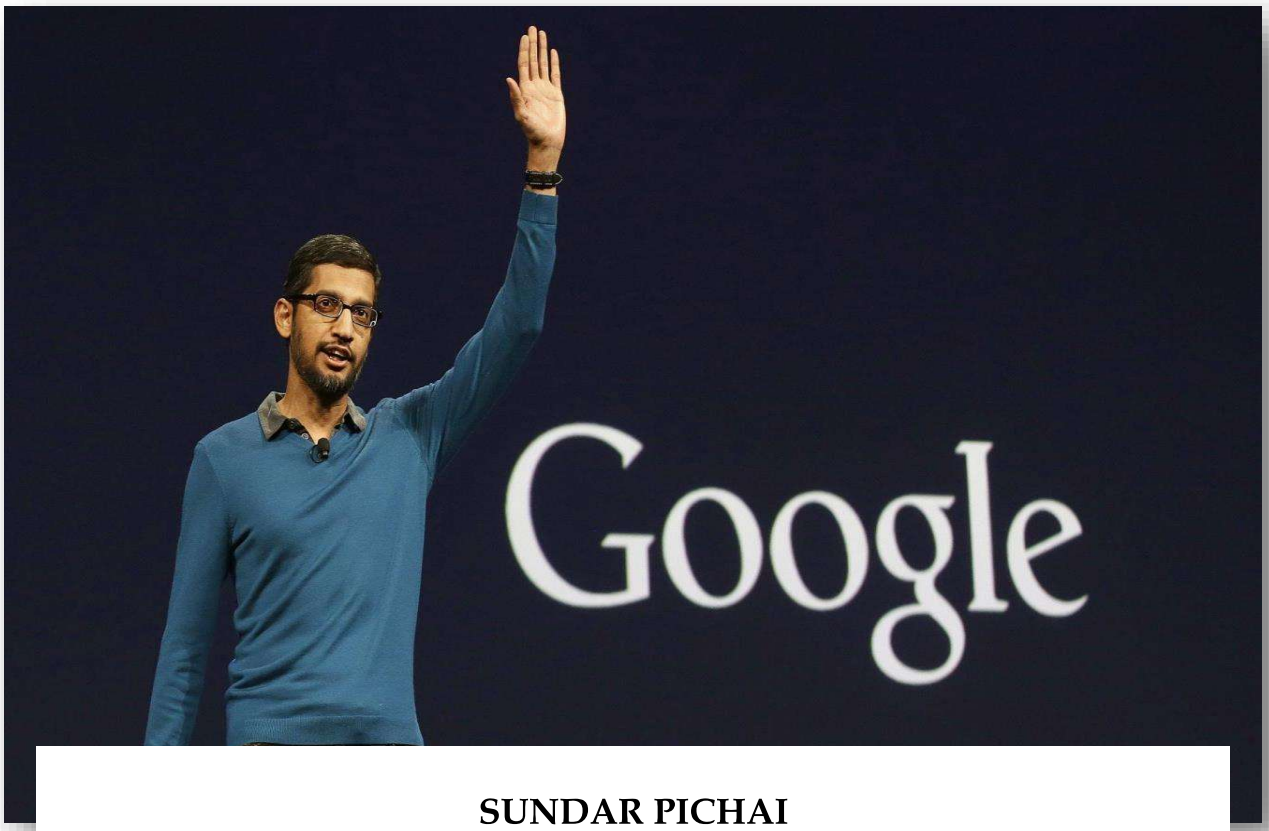
3. *Nodes*

One of the most important concepts in blockchain technology is decentralization. No one computer or organization can own the chain. Instead, it is a distributed ledger via the nodes connected to the chain. Nodes can be any kind of electronic device that maintains copies of the blockchain and keeps the network functioning.

Every node has its own copy of the blockchain and the network must algorithmically approve any newly mined block for the chain to be updated, trusted and verified. Since blockchains are transparent, every action in the ledger can be easily checked and viewed. Each participant is given a unique alphanumeric identification number that shows their transactions.

Combining public information with a system of checks-and-balances helps the blockchain maintain integrity and creates trust among users. Essentially, blockchains can be thought of as the scalability of trust via technology.

Rameshji K. Thakor
196310307577



SUNDAR PICHAI

Pichai Sundararajan (born June 10, 1972), better known as Sundar Pichai is an Indian-American business executive. He is the chief executive officer (CEO) of Alphabet Inc. and its subsidiary Google.

Personal Life

Pichai was born in Chennai, Tamil Nadu, India. His mother, Lakshmi, was a stenographer and his father, Regunatha Pichai, was an electrical engineer at GEC, the British conglomerate. At an early age Pichai displayed an interest in technology and has an extraordinary memory, especially for telephone numbers. Pichai is married to Anjali Pichai and has two children Kavya and Kiran Pichai. His recreational interests include soccer and cricket. His annual salary is around 20 lakhs USD in 2020.

Education

Pichai earned his degree from IIT Kharagpur in metallurgical engineering. Moving to the United States, he attained an M.S. from Stanford University in materials science & engineering and further attained an MBA from the Wharton School of the University of

Pennsylvania, where he was named a Siebel Scholar and a Palmer Scholar, respectively.

Career

Pichai began his career as a materials engineer. Following a short stint at the management consulting firm McKinsey & Co., Pichai joined Google in 2004, where he led the product management and innovation efforts for a suite of Google's client software products, including Google Chrome and Chrome OS, as well as being largely responsible for Google Drive. In addition, he went on to oversee the development of other applications such as Gmail and Google Maps. In 2010, Pichai also announced the open-sourcing of the new video codec VP8 by Google and introduced the new video format, WebM. In 2013, Pichai added Android to the list of Google products that he oversaw.

Pichai was selected to become the next CEO of Google on August 10, 2015, after previously being appointed Product Chief by CEO, Larry Page. On October 24, 2015, he stepped into the new position at the completion of the formation of Alphabet Inc., the new holding company for the Google company family. He was appointed to the Alphabet Board of Directors in 2017. In December 2019, Pichai became the CEO of Alphabet Inc.

Pichai was included in Time magazine's 100 Most Influential People in 2016 and 2020.In December 2020, Pichai delivered a speech virtually at the Singapore FinTech Festival emphasizing inclusive digital economy. Pichai said at the conclusion of his speech,

"Our goal for the post-Covid world is to ensure the benefits of technology can be shared, as widely and equitably as possible. If we can do that, 2020 will be remembered not as the end of the world, but the beginning of a world that works better for everyone."

Palak S. Dhobi
196310307017
Tanvi Deoghare
196310307514

વિદ્યાર્થી -શિક્ષક સંવાદ

વિદ્યાર્થી:

પપ્પા કે છે ભણી લે બેટા ,સારી નોકરી મળશે .
મમ્મી કે છે ભણી લે બેટા ,સારી છોકરી મળશે .
માત-પિતાને કેમ સમજાવું, ભણવાથી શું થાય છે!
સારી નોકરી-છોકરી, શું ભણવાથી મળી જાય છે?

શિક્ષક કે છે સબમિશન, ટાઈમે તું કરજે
મારા લેક્ચર ભરજે, ને શિસ્તમાં તું રહેજે
શિક્ષકને કેમ સમજાવું, માર્કશીટથી શું થાય છે!
સારી નોકરી-છોકરી, શું ભણવાથી મળી જાય છે?

પરીક્ષાના દિવસોમાં, રાત-દિવસ છે માર્યો રટ્ટો
પપ્પાએ પાડોશી સાથે, મારા રિઝલ્ટનો માર્યો સટ્ટો
ધીરુભાઈ ને તેંડુલકર પણ ક્યાં દસ પાસ થાય છે!

સારી નોકરી-છોકરી, શું ભણવાથી મળી જાય છે?

ગાઈડ,ચોપડી, સંદર્ભ પુસ્તકો, સૌને ફેદી માર્યા
ઈન્ટરનેટના વિડિઓથી પણ,માર્ક ના આવ્યા ધાર્યા
જાડી ચોપડી, મગજ પાતળું, માથું ફાટી જાય છે!
સારી નોકરી-છોકરી, શું ભણવાથી મળી જાય છે?

ગણતર વગરનું ભણતર, શું કરશે મારુ ઘડતર!
વધતી ફી ની મોંઘવારીનું, કેવું મળશે વળતર
ભણેલા તો ભાડે મળશે, ગામ આખું કહી જાય છે!
સારી નોકરી-છોકરી, શું ભણવાથી મળી જાય છે?

શિક્ષક:

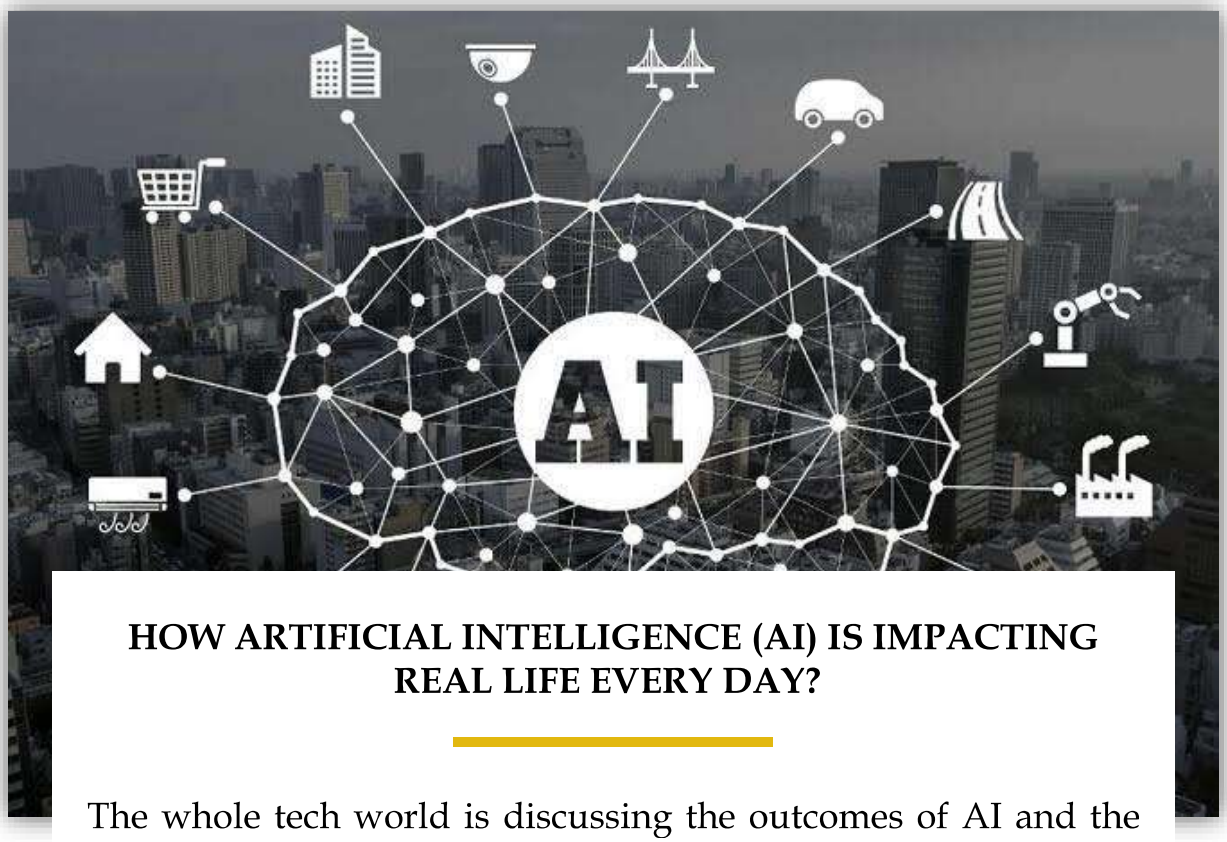
વ્યવહારુ વાતોની સાથે, ભણતરનું જ્ઞાન મળશે.
નુતન વિચારોની સાથે, સોને સુગંધ ભળશે.

શિસ્ત, નિયમ ને સમયબદ્ધતા,વિવિધ ગુણો હવે ખીલશે
ગરિમા, માન-મોભાની સાથે, જગત આખું તને ઝીલશે

અંધશ્રદ્ધાથી મુક્ત થઈને, નવીન દ્રષ્ટિકોણ મળશે
જ્યારે જયારે કઠિન સમયમાં, ભણતરની હિમ્મત જડશે

ભણેલા તો ભાડે મળશે, પણ સૌને ભાડુ ક્યાં પોહાય છે!
ભણવાથી ના મળે બધુ પણ, ઘણું-બધુ મળી જાય છે ...!

S. D. Prajapati
Lecturer



HOW ARTIFICIAL INTELLIGENCE (AI) IS IMPACTING REAL LIFE EVERY DAY?

The whole tech world is discussing the outcomes of AI and the part it is going to play in molding our future. While we may feel that AI is a couple of years from causing any impressive consequences for our lives, the reality remains that it is as of now enormously affecting us. AI makes it possible for machines to find out from experience, suits new inputs and performs human-like tasks.

All things considered, read along as we disclose to you instances of man-made brainpower you are utilizing in your everyday life.

Examples of AI in Daily Life

1. Smartphone

   In the event that you are scrolling through this article, you most likely own a cell phone. In fact, the majority of you all are viewing this article on a cell phone. From the conspicuous AI highlights, for example, the voice-enabled assistants to not all that undeniable ones, for example, the catchy filters in Snapchat, AI is affecting our lives each day. AI is enabling smartphones to provide features like virtual

reality, enhanced camera abilities, and a lot more. The entire point of AI is to make more personalized and user-friendly relationship with our smartphone.

2. Music and Media Streaming Services

Another incredible case of how AI impacts our lives is the music and media platforms that we are utilizing every day. Regardless of whether you are utilizing Spotify, Netflix, or YouTube, AI is settling on the choices for you. Streaming services use the AI to extend storage, improve search engines, and improve the general experience on their platforms. Next time you are hitting play on a suggested video on YouTube or watching a suggested appear on Netflix or tuning in to a pre-made playlist on Spotify, recall that AI is assuming a major job in that.

3. Navigation

A lot of us utilize the route on right around an everyday schedule. Do you realize that whether you are utilizing Google or Apple Maps for exploring, or calling an Uber, or booking a flight ticket, you are utilizing AI? At the point when you are calling an Uber, both the evaluating and the vehicle that coordinates your ride demand is chosen by AI.

AI may be a tool for solving problems and for the maritime industry, it's enabling us to tackle issues like detection of ships and other items on the water also as alerting and assisting the captain and therefore the crew with the navigation of the ship.

4. Smart Home (IoT)

Slowly but surely, AI is making its way into our homes. A significant number of the home gadgets that we purchase utilize AI to gain proficiency with our conduct. They can change the settings themselves to make the experience as frictionless as feasible for us. Its presence in home automation allows us to regulate our appliances, secure our homes, and even limit our expenses. Still, we are seeing the means that will take us there. That is to say, there are keen indoor regulators that modify the temperature

depending on your inclinations, brilliant lights that change the shading and force of lights dependent on schedule, and considerably more.

5. Security and Surveillance

It isn't workable for people to continue checking numerous screens with takes care of from hundreds of cameras simultaneously. Here, utilizing AI bodes well. AI based software helps narrow the eye span of the operators in order that they can specialize in other crucial areas. Video monitoring software operated by AI helps decrease the quantity of your time spent on surveillance, allowing security operators to be simpler and successful in their work.

6. E-Commerce

As indicated by a few reports, its use has incomprehensibly expanded deals and furthermore had a decent influence in building steadfast associations with clients. Consequently, organizations exploit AI to convey chat-bots to gather vital information and furthermore anticipate buys to make a client-driven encounter. By using AI, e-Commerce sites are ready to create personalized online experiences and recommend products uniquely suited to every shopper.

7. Banking and Finance Sector

The banking and account industry vigorously depends on computerized reasoning for things like client support, misrepresentation assurance, venture, and much more. AI in finance has automated processes and drastically reduced the value of serving customers. While AI has, on one hand, reduced the value of monetary services, on the opposite, it's made financing extremely convenient to avail. All things considered, that is AI looking out for your record and attempting to caution you of any extortion.

8. Autonomous Vehicles

Tesla vehicles are one of the prime examples of AI in daily life. Did you realize that all the Tesla vehicles are associated and the things that your vehicle learns are shared

over all the vehicles? With self-ruling vehicles running on our streets and self-governing automatons hovering above us, you won't have the option to prevent the effect of securing AI in our lives. When talking about autonomous cars, it's almost impossible to not discuss AI. AI is employed to enable the cars to navigate through the traffic and handle complex situations.

9. Social Media Platforms

From the feeds that you find in your course of events to the warnings that you get from Facebook, Instagram, and Twitter, everything is curated by AI. The sole motivation behind AI here is to make the applications so addictive that you return to them over and over, and I am prepared to put down a wager that AI is winning this war against you. AI-powered technologies have helped companies dramatically increase conversions by targeting audiences with a selected, relevant digital copy, and interesting visuals.

Nikhil S. Prajapati
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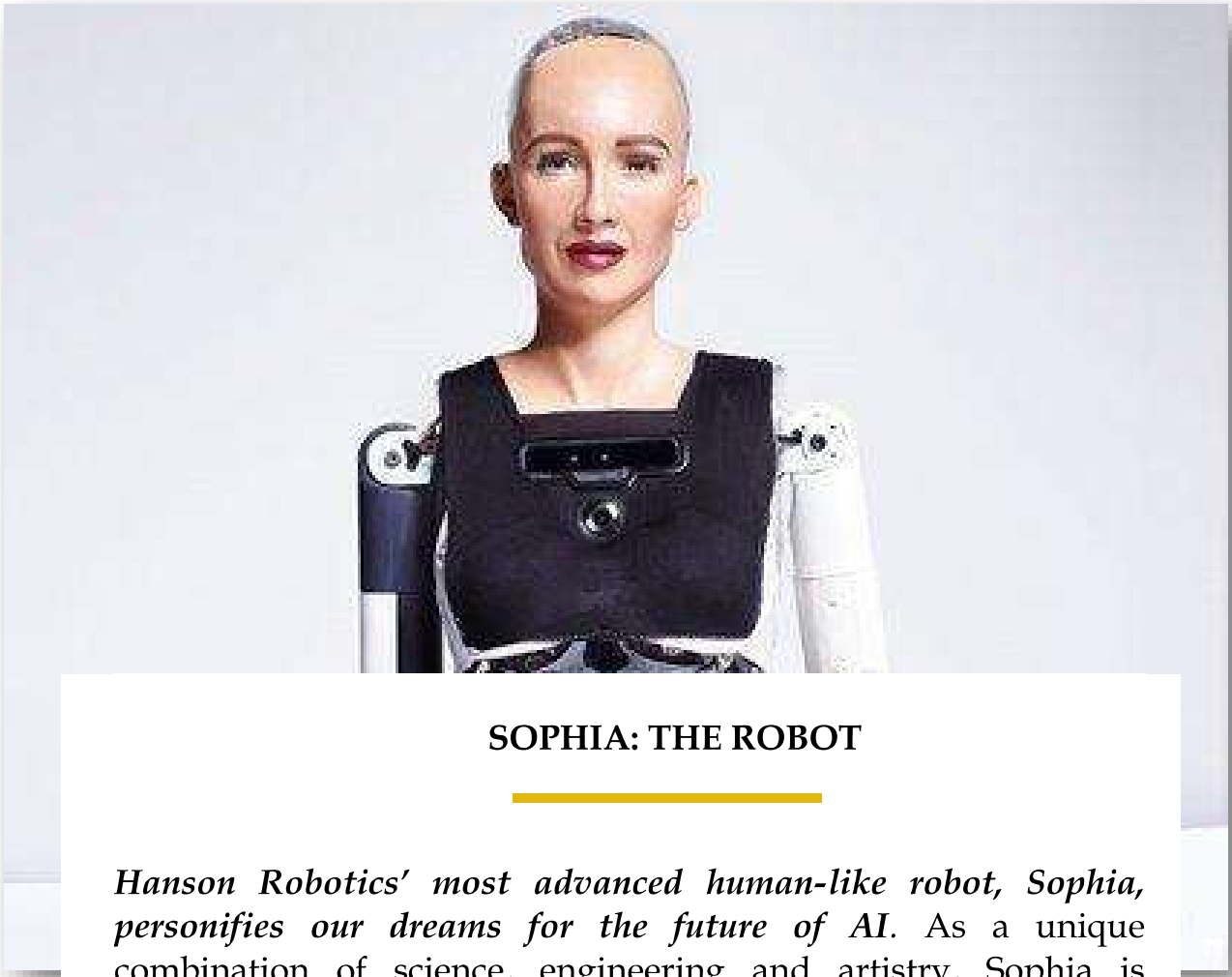

SOPHIA: THE ROBOT

Hanson Robotics' most advanced human-like robot, Sophia, personifies our dreams for the future of AI. As a unique combination of science, engineering and artistry, Sophia is simultaneously a human-crafted science fiction character depicting the future of AI and robotics and a platform for advanced robotics and AI research.

Sophia was first activated on February 14, 2016. The robot, modelled after the ancient Egyptian Queen Nefertiti, Audrey Hepburn and her inventor's wife, Amanda Hanson, is known for human-like appearance and behavior compared to previous robotic variants.

Sophia's architecture includes scripting software, a chat system and Open Cog, an AI system designed for general reasoning. Sophia imitates human gestures and facial expressions and is able to answer certain questions and to make simple conversations on predefined topics (e.g. on the weather). Sophia uses speech recognition technology from Alphabet Inc. and is "designed to get smarter over time". Her speech synthesis ability is provided by

Cereproc's Text-to-Speech engine and also allows her to sing. Sophia's intelligence software is designed by Hanson Robotics. The AI program analyses conversations and extracts data that allows it to improve responses in the future.

Hanson designed Sophia to be a suitable companion for the elderly at nursing homes or to help crowd at large events or parks. Sophia is marketed as a "social robot" that can mimic social behavior and induce feelings of love in humans. The character of Sophia captures the imagination of global audiences. She is the world's first robot citizen and the first robot Innovation Ambassador for the United Nations development program. Sophia is now a household name, with appearances on the Tonight Show and Good Morning Britain, in addition to speaking at hundreds of conferences around the world.

Sophia is also a framework for cutting edge robotics and AI research particularly for understanding human-robot interactions and their potential service and entertainment applications. For example, she has been used for research as part of the Loving AI project, which seeks to understand how robots can adapt to users' needs through intra and interpersonal development.

Sophia has at least nine robot humanoid "siblings" who were also created by Hanson Robotics. Fellow Hanson robots are Alice, Albert Einstein Hubo, BINA48, Han, Jules, Professor Einstein, Philip K. Dick Android, Zeno, and Joey Chaos. Around 2019–20, Hanson released "Little Sophia" as a companion that could teach children how to code, including support for Python, Blockly, and Raspberry Pi.

Sophia's Artificial Intelligence

Her real AI combines cutting-edge work in symbolic AI, neural networks, expert systems, machine perception, conversational natural language processing, adaptive motor control and cognitive architecture among others. As her underlying AI

components can be combined in different ways, her responses can be unique to any given situation or interaction. She also utilizes cutting edge machine perception that allows her to recognize human faces, see emotional expressions, and recognize various hand gestures.

She can estimate your feelings during a conversation, and try to find ways to achieve goals with you. She has her own emotions too, roughly simulating human evolutionary psychology and various regions of the brain. She also has IK solvers and path planning for controlling her hands, gaze and locomotion strategy. Her walking body performs dynamic stabilization for adaptive walking over various terrain.

Her robotics and AI accomplishments incorporate discoveries from many previous robots from this team, including the AAAI award winning Philip K. Dick, and All this AI is networked into a whole using a protocol the Hanson-AI team calls the Synthetic Organism Unifying Language (SOUL). Recently her scientists tested her software using the Tononi Phi measurement of consciousness and found that She may even have a rudimentary form of consciousness. All this AI is wonderful, however it's important to know that no AI is nearly as smart as a human, not even her. Therefore, many of her thoughts are actually built with a little help from my human friends.

Sometimes She's operating in her fully AI autonomous mode of operation and other times her AI is intermingled with human-generated words. Her sentience is both an AI research project, and a kind of living science fiction, driven by principles of character design and storytelling, cognitive psychology, philosophy, and ethics. Therefore, her creators say that She is a "hybrid human-AI intelligence".

Shrusti Jansari
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ELON REEVE MUSK

Elon Reeve Musk (born June 28, 1971) is an entrepreneur and Business Magnate. He is the founder, CEO, and Chief Engineer at SpaceX early stage investor, CEO, and Product Architect of Tesla Inc., founder of The Boring Company and co-founder of Neuralink and OpenAI. A cent billionaire Musk is one of the richest people in the world. His Net worth is US$172 billion (as of June 1,2021).

Musk was born to a Canadian mother and South African father and raised in Pretoria South Africa. He briefly attended the University of Pretoria before moving to Canada aged 17 to attend Queen's University He transferred to the University of Pennsylvania two years later, where he received bachelor's degrees in economics and physics. He moved to California in 1995 to attend Stanford University but decided instead to pursue a business career, co-founding the web software company Zip2 with his brother Kimbal. The startup was acquired by Compaq for $307 million in 1999. Musk co-founded online bank X.com that same year, which merged with Confinity in 2000 to form Paypal. The company was bought by eBay in 2002 for $1.5 billion.

In 2002, Musk founded SpaceX, an aerospace manufacturer and

space transport services company, of which he is CEO and CTO. In 2004, he joined electric vehicle manufacturer Tesla Motors, Inc. (now Tesla, Inc.) as chairman and product architect, becoming its CEO in 2008. In 2006, he helped create Solarcity, a solar energy services company that was later acquired by Tesla and became Tesla Energy. In 2015, he co-founded OpenAI, a nonprofit research company that promotes friendly artificial intelligence. In 2016, he co-founded Neuralink, a neuro technology company focused on developing brain-computer interfaces, and founded The Boring Company, a tunnel construction company. Musk has proposed the Hyperloop, a high-speed vactrain transportation system.

Samarth Joshi
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HOW CAN THE TECHNOLOGY HELP FARMERS COME OUT OF DISTRESS?

The underlying reasons for agrarian distress in India are many ranging from unviable agriculture caused by the low productivity, unfavorable term of trade for agriculture, higher incidence of indebtedness among the farmers leading to unfortunate incidences of farm suicides etc.

Technology helps in optimizing the use of various inputs such as water, seeds, and fertilizers. In most circumstances, information technology can improve farm management; it also has empowered farmers by equipping them with information to make quality decision that impacts their agricultural activities.

Newest technologies in agriculture

1. Drone and other aerial imagery

Farmers have an opportunity to define crop biomass, plan height, the presence of weed, and water saturation on certain

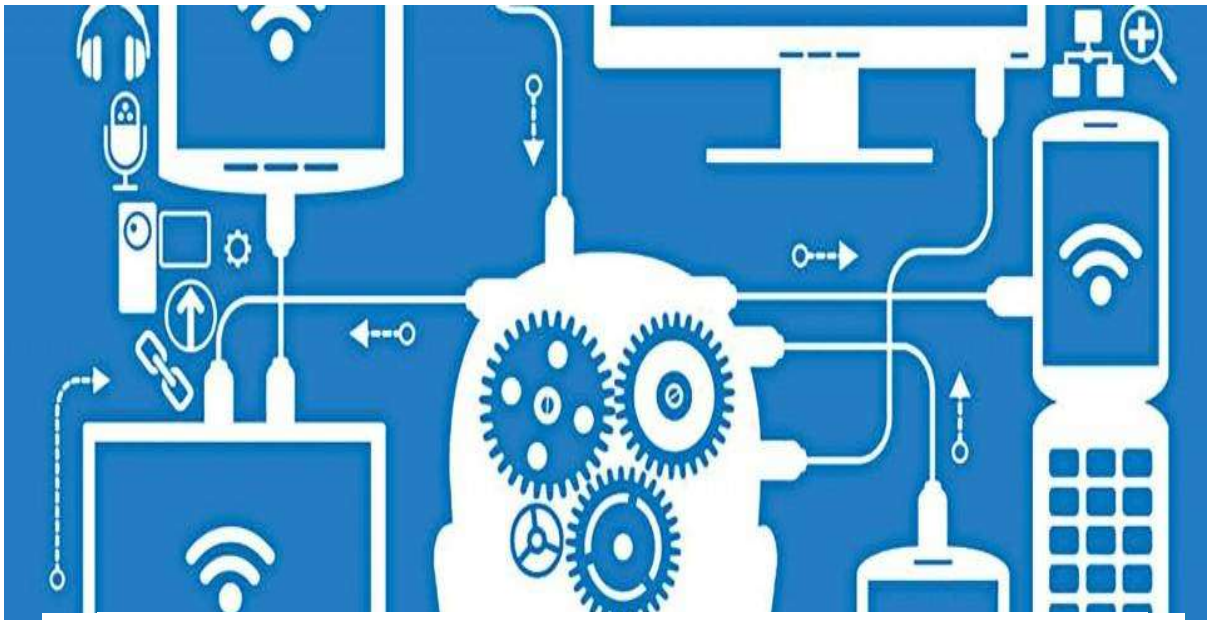
field areas with high precision. They deliver better and more accurate data with higher resolution in comparison to satellites. When they are locally operated, they provide valuable information even faster than scouts. Drones are also considered to be unrivaled aides in the battle against insect; the invasion is prevented by applying the insecticide on the hazard areas using drones, all while reducing the likelihood of direct exposure leading to chemical poisoning.

2. Crop Monitoring

Crop monitoring – a digital platform that employs satellite is monitoring in order to speed up a farmer's decision-making so that he does not miss a crucial point of field treatment. Here are some of the features available in the platform:

- ***Crop monitoring allows the use of the Normalization difference vegetation index for tracking crop health:*** This index monitors the amount of chlorophyll in plants which makes it possible to obtain information about their condition. When you have higher NDVI values, you have healthier it is.
- ***Weather analytics:*** By analyzing weather data in-line with the data on plant condition obtained from satellite imagery, farmers can precisely apply irrigation and prevent frost or heat damage. For example, one of the best methods to avoid drought issues is drip irrigation with automatic or manual valve control, thus the farmer can apply the required amount of water to dry areas.

Malllika Darji
196310307010



TECHNOLOGY IN OUR LIFE

Technology is born with the accomplishment of scientific progress and breakthroughs. However, the exact definition of technology varies according to context. Technology can be defined as the application of scientific knowledge to change and manipulate the human environment.

Technology can also be defined as the branch of knowledge that caters to the creation and use of technical means and their relationship with society and environment, using engineering, applied and pure science. The sum of ways in which social groups provide themselves with material objects of their civilization.

History of Technology

The term technology is derived from the ancient Greek words "***techne***" and "***logos***", which translates to "**art**, **craft**" and "**word**, **speech**" respectively. The term was used for the first time in the 17th century, and it was denoted to mean "*a discussion of the applied arts*". However, with the industrial movement beginning in the 20th century, the term "technology" was used to represent

a range of processes and techniques, in addition to machinery and tools. Over time, the term was used to associate scientific progress and breakthroughs in various disciplines.

Pros and Cons of Technology

Technology is a boon for many of us by making our lives easier.

- ✓ Saves time
- ✓ Enable instant communication and interaction
- ✓ Improves quality of life
- ✓ Helps to ensure safety
- ✓ Easy access to information/ products or services

Though technology has changed our lives for the better, there are many negative implications.

- ✓ Causes addiction
- ✓ Increases pollution
- ✓ Create a shortage of jobs
- ✓ Natural resources get exhausted

Technology Useful to us

- ✓ Technology is the use of science and scientific principles for our welfare
- ✓ Technology is found all around us
- ✓ Mobile phones and airliners are examples of technology
- ✓ Technology is important for businesses and industries
- ✓ Technology also includes tools and processes
- ✓ Technology has changed our World
- ✓ Video conferencing, which all of us use it's result of Technology

Aastha K. Patel
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COMPUTER SECURITY

Computer security, cyber security or ***information technology security (IT security)*** is the protection of computer systems and Network from information disclosure, theft of or damage to their hardware, software, or electronic data, as well as from the disruption or misdirection of the services they provide.

Motivation

With physical security, the motivations for breaches of computer security vary between attackers. Some are *thrill-seekers* or *vandals*, some are *activists*, and others are *criminals* looking for financial gain. *State-sponsored attackers* are now common and well-resourced but started with amateurs such as ***Markus Hess*** who hacked for the KGB, as recounted by Clifford Stoll in The Cuckoo's Egg.

Additionally, recent attacker motivations can be traced back to extremist organizations seeking to gain political advantage or disrupt social agendas. The growth of the internet, mobile technologies, and inexpensive computing devices have led to a rise in capabilities but also to the risk to environments that are

deemed as vital to operations. All critical targeted environments are susceptible to compromise and this has led to a series of proactive studies on how to migrate the risk by taking into consideration motivations by these types of actors. Several stark differences exist between the hacker motivation and that of nation state actors seeking to attack based an ideological preference.

A standard part of threat modeling for any particular system is to *identify what might motivate an attack on that system*, and *who might be motivated to breach it*. The level and detail of precautions will vary depending on the system to be secured. A home personal computer, bank, and classified military network face very different threats, even when the underlying technologies in use are similar.

Vulnerability

Vulnerability is a *weakness in design, implementation, operation, or internal control*. Most of the vulnerabilities that have been discovered are documented in the ***Common Vulnerabilities and Exposures (CVE)*** database. An ***exploitable*** vulnerability is one for which at least one working attack or "exploit" exists. Vulnerabilities can be researched, reverse-engineered, hunted, or exploited using automated tools or customized scripts. To secure a computer system, it is important to understand the attacks that can be made against it, and these threats can typically be classified into one of these categories below

Backdoor

A ***backdoor*** in a computer system, a cryptosystem or an algorithm, is *any secret method of bypassing normal authentication or security controls*. They may exist for many reasons, including by original design or from poor configuration. They may have been added by an authorized party to allow some legitimate access or by an attacker for malicious reasons; but regardless of the motives for their existence, they create vulnerability. Backdoors can be very hard to detect, and

detection of backdoors are usually discovered by someone who has access to application source code or intimate knowledge of Operating System of the computer.

Denial-of-service attack

Denial of service attacks (DoS) are designed to make a machine or network resource *unavailable* to its intended users. Attackers can deny service to individual victims, such as by deliberately entering a wrong password enough consecutive times to cause the victim's account to be locked, or they may overload the capabilities of a machine or network and block all users at once. While a network attack from a single IP address can be blocked by adding a new firewall rule, many forms of Distributed denial of service (DDoS) attacks are possible, where the attack comes from a large number of points – and defending is much more difficult. Such attacks can originate from the zombie computers of a botnet or from a range of other possible techniques, including reflection and amplification attacks, where innocent systems are fooled into sending traffic to the victim.

Devanshu J. Patel
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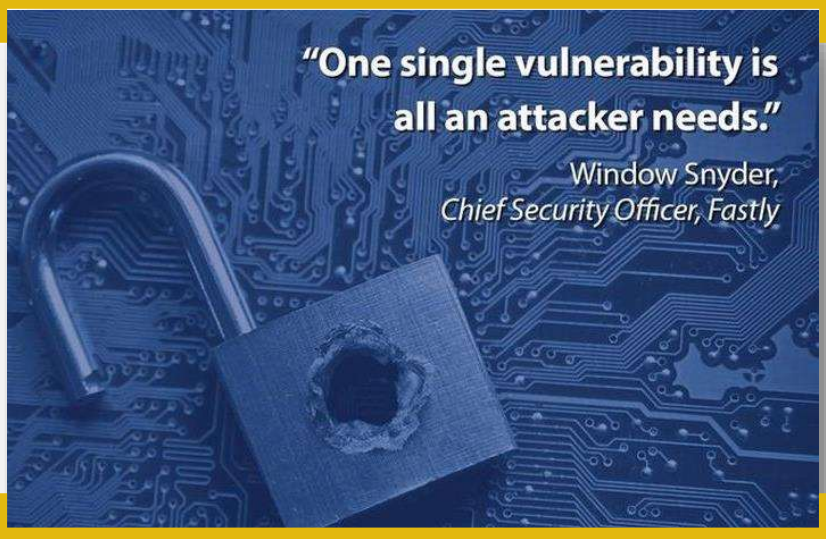
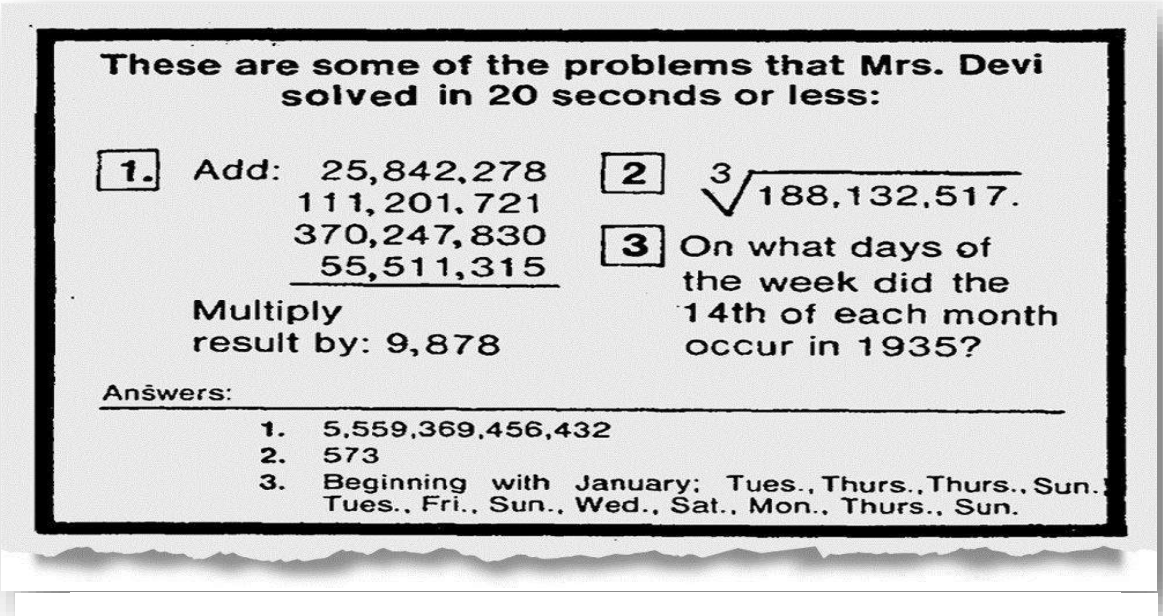




These are some of the problems that Mrs. Devi solved in 20 seconds or less:

1. Add: 25,842,278
111,201,721
370,247,830
55,511,315

Multiply result by: 9,878

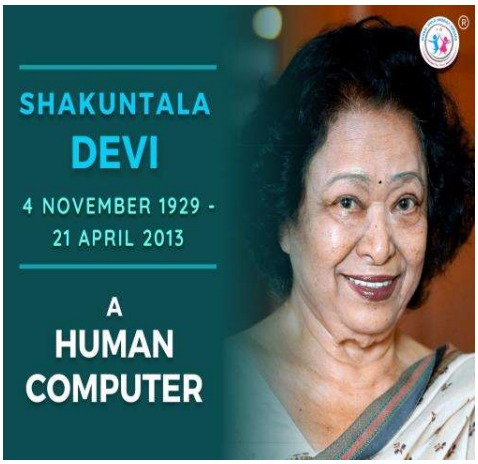
2. $\sqrt[3]{188,132,517.}$

3. On what days of the week did the 14th of each month occur in 1935?

Answers:

1. 5,559,369,456,432
2. 573
3. Beginning with January: Tues., Thurs., Thurs., Sun., Tues., Fri., Sun., Wed., Sat., Mon., Thurs., Sun.

SHAKUNTALA DEVI: THE HUMAN COMPUTER



Shakuntala Devi (4 November 1929 – 21 April 2013) was an Indian mathematician, writer and mental calculator, popularly known as the "Human Computer". Her talent earned her a place in the 1982 edition of The Guinness Book of World Records. However, the certificate for the record was given posthumously on 30 July 2020, despite Devi achieving her world record on 18 June 1980 at Imperial College, London. Devi was a precocious child and she demonstrated her arithmetic abilities at the University of Mysore without any formal education.

Devi strove to simplify numerical calculations for students. She wrote a number of books in her later years, including novels as well as texts about mathematics, puzzles, and astrology. She wrote the book The World of Homosexuals, which is considered the first study of homosexuality in India. She saw homosexuality in a positive light and is considered a pioneer in the field.

Early Life

Shakuntala Devi was born in Bangalore, Karnataka to a Kannada Brahmin family. Her father, C V Sundararaja Rao, worked as a trapeze artist, lion tamer, tightrope walker and magician in a circus. He discovered his daughter's ability to memorize numbers while teaching her a card trick when she was about three years old. Her father left the circus and took her on road shows that displayed her ability at calculation. She did this without any formal education. At the age of six she demonstrated her arithmetic abilities at the University of Mysore.

Mental Calculation

Devi travelled to several countries around the world demonstrating her arithmetic talents. She was on a tour of Europe throughout 1950 and was in New York City in 1976. In 1988, she travelled to the US to have her abilities studied by Arthur Jensen, a professor of educational psychology at the University of California, Berkeley. Jensen tested her performance at several tasks, including the calculation of large numbers. Examples of the problems presented to Devi included calculating the cube root of 61,629,875 and the seventh root of 170,859,375. Jensen reported that Devi provided the solution to the above-mentioned problems (395 and 15, respectively) before Jensen could copy them down in his notebook. Jensen published his findings in the academic journal Intelligence in 1990.

In 1977, at Southern Methodist University, she gave the 23rd root of a 201-digit number in 50 seconds. Her answer, which was 546,372,891, was confirmed by calculations done at the US Bureau of Standards by the UNIVAC 1101 computer, for which a special program had to be written to perform such a large calculation, which took a longer time than for her to do the same.

On 18 June 1980, she demonstrated the multiplication of two 13-digit numbers – 7,686,369,774,870 × 2,465,099,745,779. These numbers were picked at random by the Department of

Computing at Imperial College London. She correctly answered 18,947,668,177,995,426,462,773,730 in 28 seconds. This event was recorded in the 1982 Guinness Book of World Records. Writer Steven Smith commented, "the result is so far superior to anything previously reported that it can only be described as unbelievable."

Shakuntala Devi explained many of the methods she used to do mental calculations in her book Figuring: The Joy of Numbers.

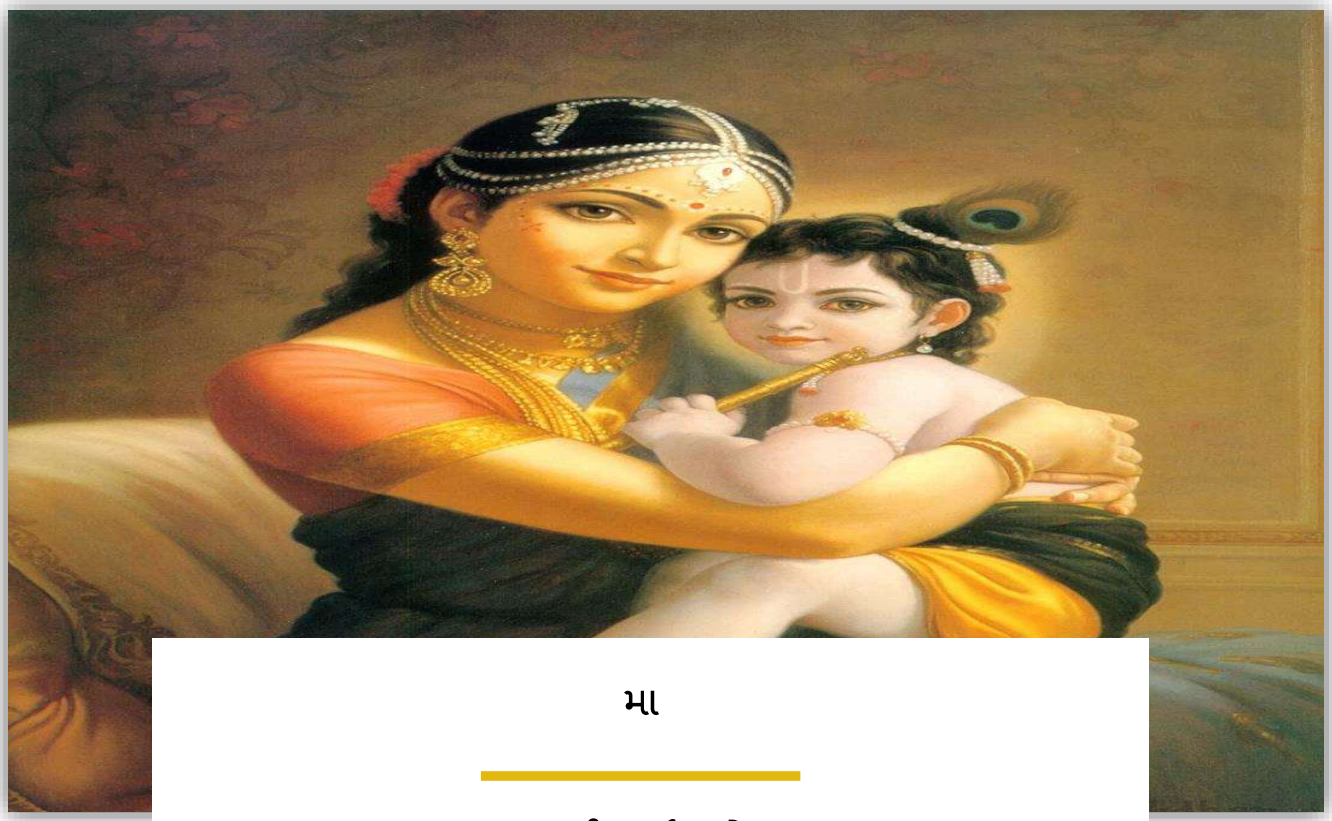
Death and Legacy

In April 2013, Devi was admitted to a hospital in Bangalore with severe respiratory problems. Over the following two weeks she suffered from heart and kidney complications. She died in the hospital on 21 April 2013. She was 83 years old.

Selected Works

- ✓ Astrology for You (New Delhi: Orient Paperbacks, 2005)
- ✓ Book of Numbers (New Delhi: Orient Paperbacks, 2006)
- ✓ Figuring: The Joy of Numbers (New, ISBN 978-0-06-011069-7, OCLC 4228589
- ✓ In the Wonderland of Numbers (New Delhi: Orient Paperbacks, 2006)
- ✓ Mathability: Awaken the Math Genius in Your Child (New Delhi: Orient Paperbacks, 2005)
- ✓ More Puzzles to Puzzle You (New Delhi: Orient Paperbacks, 2006)
- ✓ Perfect Murder (New Delhi: Orient Paperbacks, 1976)
- ✓ Puzzles to Puzzle You (New Delhi: Orient Paperbacks, 2005)
- ✓ Super Memory: It Can Be Yours (New Delhi: Orient Paperbacks, 2011; Sydney: New Holland, 2012)
- ✓ The World of Homosexuals (Vikas Publishing House, 1977)

Heet R. Modh
196310307038



મા

પ્રભાતની પ્રાર્થના છે મા,
સંધ્યાની સંવેદના છે મા;
શિયાળાનું વસાણું છે મા,
ઉનાળાનું ઉજાણું છે મા;
બચપણનું બળ છે મા,
જુવાનીનું કાજળ છે મા;
રવિની પ્રબળતા છે મા,
સોમની શીતળતા છે મા;
દિલથી દયાળુ છે મા,
મનથી માયાળુ છે મા;
લાગણીથી ભરપુર છે મા,
પ્રભુથી પણ ઉપર છે મા ...!!!!!

K. M. Madhu
Lecturer

A NOTE FROM JAYDEEP ASHWINBHAI PANDYA

First of all, thank you so much for direct / indirect support. I would like to thankful to all staff's members of K. D. Polytechnic, Patan & Government Engineering College, Patan (which both colleges are part of my heart), today I am at this position and it this level because all of you, I have faced many challenges and situations which here I am sharing with you all it as for introducing myself, you can say it as my life journey etc.

Basically, I am from Mahesana, Gujrat, India; and my home town is Morbi (Saurashtra). We are residing in Mahesana since 1980 because my grandfather was in railway as an Electric Signal Mistry. And I am single child, I didn't have any brother and sister, so form my childhood to till now I did it all things as alone (yeah exactly you might think is not difficult?) actually it was difficult with more complications and challenges. When I was child and studied in 3rd / 4th standard my father was government employee in ONGC, Mahesana but as contractual system up to till now, yes from 1994 to 2021 it is in contractual level, but he was real life fighter greater than me, so basically when I was child then I learns all the things from my father and mother.

My father handles all things in home as well in office just in amount of

5000 per month (as salary) at 2005, so there I was thinking if my father is capable to handle all the things in this little amount of salary, so why I couldn't enjoy my life without any extras expenses like I can enjoy and live my life without new clothes, without bungalows, without cars, without some good foods like pizza etc. so from childhood I was respecting my father and my mother and learns all the things which how we can survive even we don't have much amount of money, and I am learnt money Is not a life, it's just necessary thing to fulfil your flexible life, but I was decided I was never runs for money but instead money runs for me. And even in my life if I don't have money then I not distract but instead I can capable to find way to survive in any critical situations.

Now let's, we talk about my ahead life after my childhood, actually in everybody's life childhood days is a god gifted day and I believe, every people should never forget their childhood days, so me after 10th apply as mechanical engineering for diploma but I selected in B. S. Patel Polytechnic, Kherva, Mahesana. But I already decided I should do college in only government colleges because fees are very flexible and due to current situation my home, so I have denied it and apply for computer engineering in second shift and parallel I have also started 11th science in same school but suddenly after 1 month I was selected in K. D. Polytechnic, Patan (government college) for diploma studies so I have left school and join K. D. Polytechnic, Patan for diploma computer engineering, but when I was arriving at Patan for first time then I was seeing in Patan, college students are always in gardens and in university parking area, always funs and don't attended the lectures or labs and just doing waste of their good timings .

I was thinking what kinds of peoples are there, is they never realized their parents 'expectations? Parents was expecting our child was going to college for learn something new and in feature he was able to go for great position but I was thinking what the hell? yeah, I was not talking enjoyment is not there, all things is there, when time of studying so you have to only focusing on studies and when time of enjoy then only focusing on enjoyment but they ignoring their careers and studies by wasting of time.

But I was decided I was never to like them because I am never break trust of my mother and father and I am single child if I doing like that

then what about ahead my future and what about my family in future, so I have going at Sindhwai Mata temple it just besides of K. D. Polytechnic, Patan and I have pray to God please God just gives my good thinking abilities and leave me alone from bad people and then I was still believing in Sindhwai Mata from first day of my Patan to last day of in Patan (since 2014 - 2020), she was always with me even currently she always with me and there for helping in any critical situation and just I have started my journey with blessings of Sindhwai Mata, and as my nature I always be there for helping peoples and my faculties, anyone whose needs my helps, so then slowly, I believe K. D. Polytechnic, Patan is as my second home and my Faculty as (or like) my parents, they always supportive in my good things.

So, in college due to my extraordinary thinking, I doesn't have any friends in 6 years (diploma & in engineering) both I was alone, but God Is always with me then I trust myself and ready myself to fight in any situation. But some people who understand my thinking clearly, they have my friends even currently, but it just 2 or 3 not much more, in class all students treat me as enemy but I don't care of them but why I care? I am here not for him, I am here for me and my parents, so gods are always with me then I don't care any of things.

Then when I am in 5th semester; I was make my interests in computer hardware and started repairing, maintenance and selling of computer desktop pc at home with my studies and l learned many much things from it, and likewise I am completed my diploma computer engineering and again decided I should apply in only government colleges for graduation, and if I not selected in government institute for graduation and then I can starts other thing instead of that but miracles of God had comes over here and I was selected in government engineering college and it was also In Patan I was very happy at this moment, and over there similarly In diploma I doesn't have much friends but 2 my best friends at time of graduation still there he was also doing job in it sector in Ahmedabad, but I was always do my works because for that we have travel in 55 kilo meters and for studying so why we waste our time ?

So, by doing B.E in government engineering college Patan as my nature I always be there for my faculty and for college if any kind on works is there, they having full of support from me and also I having full of support of gods, so likewise doing in B.E in 7thsem College placement

has organized and in was applying for interview in CyberCom Creation Ahmedabad and I was selected as PHP trainee for 6 months then I was doing training from there and such complex city (Ahmedabad) after that training I hate Ahmedabad , because time management is more difficult in Ahmedabad with traffics and etc. so I was doing up down from Mahesana to Ahmedabad till 3 months because after that lockdown was held due to COVID-19 pandemic. But at the first time from CyberCom Creation I was rejected from JOB, yes you heard right word, REJECTED!!! But I was never depressed because it is part of everybody's life, and I was at home and doing my best for future, and suddenly I was getting message on my WhatsApp is Bhagwaan Mahavir University, Surat has organized virtual placement drive so I was participated in that one and got selected in MageComp one of fastest growing IT Company in Bhavnagar, Gujrat India, and I complete here six month training in Magento 2 and currently worked here as junior PHP developer since august 2020. But journey not the end because after that I always needs to fights with some new challenges in new city like searching for home, at every morning wake for water and many things , but I also loved lord Krishna vichar and I heard one beautiful thought of Krishna at every morning first and Krishna said "Life Means Full of Struggling", if you never do struggle you never be strong ,and also you just need to do your "Karma", don't focus on "Fruit" of that "Karma", you just do you karma I will provide you "Fruit" for that at right time, so is it I was believing in god and they always with me and I was keep hardworking and struggling in life it as part of my journey, I hope you like it then please be never depressed and fight with your depressed and remember god is always with good people.

Jaydeep Ashwinbhai Pandya
Jr. PHP Developer (Support Team)
At. MageComp Pvt. Ltd.,
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SSIP ACTIVITIES

SSIP committee organized sensitization program on 19th December 2020. 107 students participated in this program.03 students participated in Python Programming workshop (Online) organized by SRPEC, Unjha on 26th April 2021. 03 students participated in Industrial Automation and Robot Design workshop (Online) organized by SRPEC, Unjha on 26th April 2021.Webinar on Introduction to embedded system is organized by Computer And E.C.E Department, and 103 students participated in this program.

PROJECT POSTER PRESENTATION COMPETITION 2020-21

With the theme of final year project poster competition, a poster presentation competition was held online on 2nd June, 2021 at Computer Engineering Dept, K D Polytechnic, Patan.

The event inaugurated online by the Head of Dept Shri J. M. Joshi sir, Computer Eng. Dept, with the welcome and motivating speech. In inaugural speech, sir highlighted how much the final year project posters are important and beneficial to a student as well as to promote the ideas to be delivered in the real-world successful product. It stands to be very useful for understanding the different & elaborative topics of Software Engineering, Web Development and IoT at a glance. HOD Sir and other jury members of the day inspected/reviewed each poster and taught the extra knowledge with pleasure and enthusiasm. The students participated, showed positive involvement and smoothly defended their posters in front of the Judges. The experienced staff members gave valuable contribution by judging the posters presented by the students.

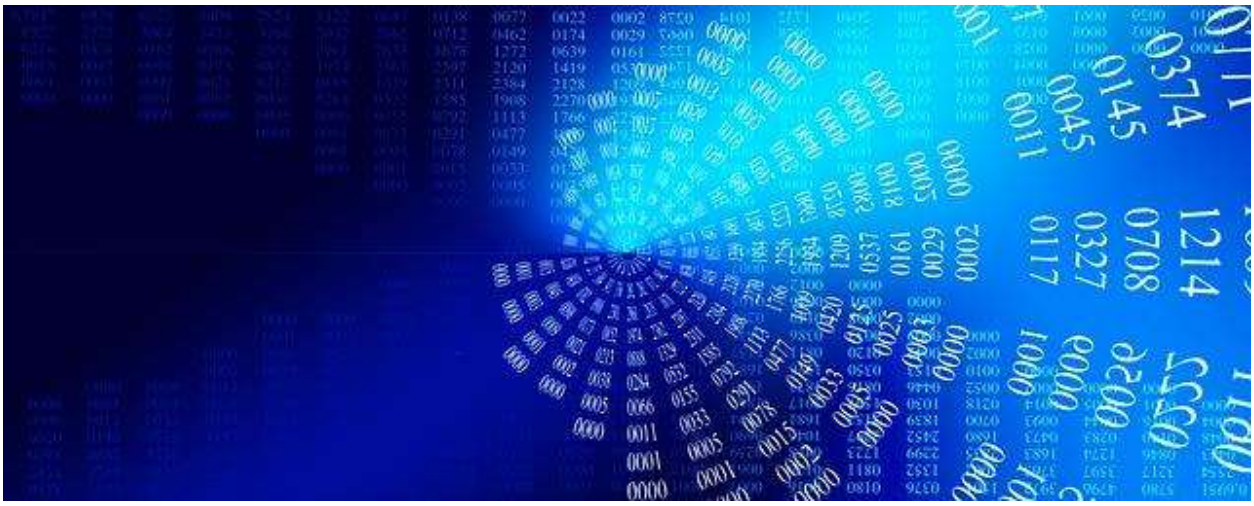
There were mainly 10 project groups having 25 students, participated in the event. All of the 25 students worked hard to put their effort in presentation of their work done. There were some really good posters of different domains like IoT, E-Commerce, Traffic Management, Traveling, and educational portals for managing students related information.

The experienced staff members gave valuable contribution by judging the posters presented by the students.

There were mainly 10 project groups having 25 students, participated in the event. All of the 25 students worked hard to put their effort in presentation of their work done. There were some really good posters of different domains like IoT, E-Commerce, Traffic Management, Traveling, and educational portals for managing student's related information.

The competition was scheduled in 3 rounds of 3-4 groups presenting simultaneously for 10 minutes of presentation and5 minutes for question and answer with the jury for each group. Out of the first round 3 groups were classified for the final round.

Groups with title **"IoT Based Automated Street Light Management System"**, **"E-College Info"**, **"Student Attendance System"** were selected for the final rounds and securing the rank as 1st, 2nd, and 3rd respectively at the end of the presentation. The overall event was successful and admired. It stood to be beneficial to present the work done for the project by representing to the jury and other participants. The whole event was organized in the supervision of Shree J. M. Joshi sir, HOD, Dept. of Comp Eng, coordinated by P. J. Joshi and given valuable effort of being jury by J. B. Patel, B. I. Saini, M. R. Thakkar, S. D. Prajapati, P. M. Prajapati, K. M. Madhu, N. J. Patel, and P. R. Sharma.



SHINING STARS (WINTER-2020)

Diploma Semester 3

Sr. No.	Enrollment No.	Name	SPI
1	196310307577	Thakor Rameshji Kuvarji	9.61
2	196310307025	Jansari Srushti Pravinkumar	9.39
3	196310307517	Gohil Rahulkumar Rasikbhai	9.32

Diploma Semester 5

Sr. No.	Enrollment No.	Name	SPI
1	186310307072	Patel Ridham Ashvinbhai	9.77
2	186310307514	Padhya Kasyap Rajanbhai	9.77
3	186310307076	Patel Sahilkumar Pravinbhai	9.53

Team Computer Department

Sr. No.	Name	Designation
1	Shri J. M. Joshi	H.O.D. (M. Tech)
2	Smt. A. M. Mevada	Lecturer (B. E.)
3	Smt. P. R. Sharma	Lecturer (B. E.)
4	Shri C. D. Patel	Lecturer (M. E.)
5	Smt. J. N. Acharya	Lecturer (M. E.)
6	Smt. R. K. Vaghela	Lecturer (M. E.)
7	Shri J. B. Patel	Lecturer (M. E.)
8	Shri P. J. Joshi	Lecturer (B. E.)
9	Smt. B. I. Saini	Lecturer (M. Tech)
10	Shri M. R. Thakkar	Lecturer (M. E.)
11	Shri N. A. Patel	Lecturer (M. Tech)
12	Shri S. D. Prajapati	Lecturer (M. E.)
13	Shri K. D. Prajapati	Lecturer (B. E.)
14	Shri P. M. Prajapati	Lecturer (M. Tech)
15	Shri K. M. Madhu	Lecturer (M. E.)
16	Shri Shyju Raju	Lecturer (M. E.)
17	Smt. N. J. Patel	Lecturer (M. Tech)
18	Shri Y. R. Patel	Lecturer (M. E.)
19	Shri M. C. Thakore	Lecturer (M. Tech)

"Coming together is a beginning. Keeping together is progress. Working together is success." *--Henry Ford*

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Shri M. R. Thakkar
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