

# PANIMALAR ENGINEERING COLLEGE

(A Christian Minority Institution)

Jaisakthi Educational Trust

ACCREDITED BY NATIONAL BOARD OF ACCREDITATION

Bangalore Trunk Road, Nasarathpet, Poonamallee,  
Chennai - 600 123



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

HALF YEARLY NEWSLETTER - (JULY '19 - DECEMBER '19)

TOP 10 TRENDING TECHNOLOGIES

## SOCIAL CREDIT ALGORITHMS

These algorithms use facial recognition and other advanced biometrics to identify a person and retrieve data about that person from social media and other digital profiles for the purpose of approval or denial of access to consumer products or social services. In our increasingly networked world, the combination of biometrics and blended social data streams can turn a brief observation into a judgment of whether a person is a good or bad risk or worthy of public social sanction. Some countries are reportedly already using social credit algorithms to assess loyalty to the state.

ANGEL F  
II CSE A

## INTERNET OF BODIES (IoB)

The Internet of Bodies (IoB). IoT and self-monitoring technologies are moving closer to and even inside the human body. Consumers are comfortable with self-tracking using external devices (such as fitness trackers and smart glasses) and with playing games using augmented reality devices. Digital pills are entering mainstream medicine, and body-attached, implantable, and embedded IoB devices are also beginning to interact with sensors in the environment. These devices yield richer data that enable more interesting and useful applications, but also raise concerns about security, privacy, physical harm, and abuse.

When the Internet of Things (IoT) connects with your body, the result is the Internet of Bodies (IoB). The Internet of Bodies (IoB) is an extension of the IoT and basically connects the human body to a network through devices that are ingested, implanted, or connected to the body in some way. Once connected, data can be exchanged, and the body and device can be remotely monitored and controlled.

There are three generations of Internet of Bodies that include:

**Body external:** These are wearable devices such as Apple Watches or Fitbits that can monitor our health.

**Body internal:** These include pacemakers, cochlear implants, and digital pills that go inside our bodies to monitor or control various aspects of our health.

**Body embedded:** The third generation of the Internet of Bodies is embedded technology where technology and the human body are melded together and have a real-time connection to a remote machine.

Progress in wireless connectivity, materials, and tech innovation is allowing implantable medical devices (IMD) to scale and be viable in many applications.

**Example :**

A "smart pill" is IoB device. These pills have edible electronic sensors and computer chips in them. Once swallowed, these digital pills can collect data from our organs and then send it to a remote device connected to the internet. The first digital chemotherapy pill is now in use that combines chemotherapy drugs with a sensor that captures, records, and shares information with healthcare providers (with the patient's consent) regarding the drug dosage and time, plus other data on rest and activity, heart rate and more.

HARINI S  
IV CSE A



## DOCKER

Docker is a tool designed to make it easier to create, deploy, and run applications by using containers. Containers allow a developer to package up an application with all of the parts it needs, such as libraries and other dependencies, and deploy it as one package. Docker is a bit like a virtual machine. Docker allows applications to use the same Linux kernel as the system that they're running on and only requires applications be shipped with things not already running on the host computer. This gives a significant performance boost and reduces the size of the application. Docker is open source. This means that anyone can contribute to Docker and extend it to meet their own needs if they need additional features that aren't available out of the box. Docker is a tool that is designed to benefit both developers and system administrators, making it a part of many DevOps (developers + operations) tool chains. For developers, it means that they can focus on writing code without worrying about the system that it will ultimately be running on. Docker gives flexibility and potentially reduces the number of systems needed because of its small footprint and lower overhead.

JOHN JOSEPH Z  
III CSE E

1) **Artificial Intelligence (AI)**  
AI existed even before the internet was born, but it is now that the data processing and compute power backbone became strong enough to sustain an entire technology by itself. AI is everywhere today, from your smartphones to your cars to your home to your banking establishment.

2) **Blockchain**  
This is the tech that powers bitcoins, the whole new parallel currency that has taken over the world. Interestingly, blockchain as a technology has far-reaching potential in everything from healthcare to elections to real estate to law enforcement.

3) **Augmented Reality and Virtual Reality**  
Virtual is real! VR and AR, the twin technologies that let you experience things in virtual, that are extremely close to real, are today being used by businesses of all sizes and shapes. Medical students use AR technology to practice surgery in a controlled environment.

4) **Cognitive Cloud Computing**  
Cognitive Cloud is an extended ecosystem of traditional Cloud and Cognitive Computing. It's due to this, you can create Cognitive Computing applications and bring to the masses through cloud deployments. Cognitive computing is considered as the next big evolution in the IT industry.

5) **Angular and React**  
Angular and React are JavaScript based Frameworks for creating modern web applications. Using React and Angular one can create a highly modular web app.

6) **DevOps**  
DevOps is a methodology that ensures that both the development and operations go hand in hand. DevOps cycle is pictured as an infinite loop representing the integration of developers and operation teams by: automating infrastructure, workflows and continuously measuring application performance.

7) **Internet of Things (IoT)**  
IoT essentially is connecting many devices and creating a virtual network where everything works seamlessly via a single monitoring center of sorts. IoT is a giant network of connected devices - all of which gather and share data about how they are used and the environments in which they are operated.

8) **Intelligent Apps (I - Apps)**  
Apps are pieces of software written for mobile devices based on artificial intelligence and machine learning technology, aimed at making everyday tasks easier. This involves tasks like organizing and prioritizing emails, scheduling meetings, logging interactions, content, etc. Some familiar examples of I-Apps are Chatbots and virtual assistants.

9) **Big Data**  
Big data refers to problems that are associated with processing and storing different types of data. Most of the companies today, rely on big data analytics to gain huge insight about their: customer, product research, marketing initiatives and many more.

10) **Robotic Process Automation**  
Generally, any desk job in any industry involves tasks that are repetitive in nature and can be automated. RPA or Robotic Process Automation allows you to automate such routine and repetitive tasks. You don't need to write any code to automate repetitive tasks.

ABISHEK SUNDAR R  
II CSE E

Google handles an estimated 1 billion search queries each and every day, releasing almost 200 tons of CO2 per day.

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## DEPARTMENT MISSION

To develop our department as a center of excellence, imparting quality education, generating competent and skilled manpower. We prepare our students with high degree of credibility, integrity, ethical standards and social concern. We train our students to develop to devise and implement novel systems, based on Education and Research.

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

1. To impart and disseminate sound knowledge to the students on the fundamentals of mathematics and advanced fields of computer science and inter related disciplines to solve simple and complex engineering problems and train them to achieve sustainable growth in their professional career.
2. To enhance the ability of students to evaluate the specific requirements of software industry and provide innovative engineering solutions and efficient product designs.
3. To facilitate the students to make use of their technical competency to identify and develop appropriate product design, development, testing, maintenance, analysis of problems and provide corrective measures.
4. To enable the students to develop strong leadership qualities with aggressive optimism, multidisciplinary skills, excellent communication skills and function as effective and reliable team members giving importance to professional and ethical principles.
5. To inculcate in the students to associate in social networking, pursue continued learning of the latest developments in computer science and involve in higher research and contribute to the development of software industry and related engineering fields.

## PROGRAM OUTCOMES (POs)

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, 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)

- PSO 1:** To inculcate technical skills to analyze, design and implement software's related to algorithms, networking, web services, multimedia, big data analytics and recent topics of varying complexity.
- PSO 2:** To develop the capability to comprehend and solve the interdisciplinary problems through appropriate technology with the understanding of contemporary business environment.
- PSO 3:** To develop an ability to utilize the latest technology and platforms to become a triumphant professional, successful entrepreneur and an urge for pursuing higher studies.

Latest Technology articles.....  
Technology questions & answers....  
Students Milestones.....  
Riddles .....  
Toppers.....

## DEPARTMENT VISION

To provide an academically conducive environment for individuals to develop as technologically superior, socially conscious and nationally responsible citizens.

Tech News

2019 - 20  
ISSUE 01



2019-20  
ODD SEMESTER TOPPERS

## III SEMESTER

FIRST RANK (GPA - 9.63)  
KOLLA PRIYASECOND RANK (GPA - 9.58)  
BAIRAVI BTHIRD RANK (GPA - 9.46)  
GAYATHRI S  
HARIHARAN B

## V SEMESTER

FIRST RANK (GPA - 9.4)  
RAMYA S (05.08.2000)SECOND RANK (GPA - 9.28)  
PAVITHRA DTHIRD RANK (GPA - 9.24)  
RAJESH KUMAR K

## VII SEMESTER

FIRST RANK (GPA - 9.45)  
PRIYADARSAN R VSECOND RANK (GPA - 9.32)  
AISHWARYA VTHIRD RANK (GPA - 9.18)  
DEVADARSHINI N  
SAMYUKKTHA S  
SWETHA D  
THEJA SHREE A

## TECH QUIZ ANSWERS

1. Sabir Bhatia
2. EKA(It is developed by TATA group of India)
3. Richard Stallman
4. It is a chess playing computer developed by IBM.
5. eXPerience
6. IBM - International Business Machines
7. David Fib & Jerry Yang
8. 1st song composed by AI
9. Pie
10. Myspace

## RIDDLES ANSWERS

1. Alexa
2. Alienware
3. Sony Walkman
4. Bionic
5. Microsoft Surface
6. Render
7. Active Users

## STUDENT MILESTONES

1. **T. M.SARAVANAN,IV CSE C** has participated in the workshop on "Management Practices in Ancient India - A Learning from Indian Literature" conducted by the Computer Society of India on August 2019.

2. **M.SARAVANAN,IV CSE C** has participated in the workshop on "Data Visualization using Tableau software and Power BI" conducted by the Computer Society of India on August 2019.

3. **R.L.RAM MANIKANDAN,IV CSE C** has participated in the workshop on "Data Visualization using Tableau software and Power BI" conducted by the Computer Society of India on August 2019.

3. **SHARATH,IV CSE C** has participated in the workshop on "Data Visualization using Tableau software and Power BI" conducted by the Computer Society of India on August 2019.

4. **S.SALMAN KHAN,III CSE D** has won second place in the event "Code Treasure" conducted by the Institution's innovation Council on September 2019.

5. **SHANMUĞAM MITHRA,III CSE B** has won Second place in the event "STRATAGEM" conducted by Sairam Engineering College, Chennai.

6. **S.NIVETHA,IV CSE A** has won First place in the event "Technovate - Kratos 2.0" conducted by Easwari Engineering College, Chennai. held on 30-September 2019.

7. **S.NIVETHA,IV CSE A** has won Second place in the event "Brake the crypt - Kratos 2.0" conducted by Easwari Engineering College, Chennai. held on 30-September 2019.

8. **S.NIVETHA,IV CSE A** has won Third place in the event "Privateye - Kratos 2.0" conducted by Easwari Engineering College, Chennai. held on 30-September 2019.

9. **SARAN ARUL YOĞAN A,IV CSE C** has participated in the workshop on "Smart Home using Google Assistant" conducted by Altsense Technology services, 28-September 2019.

10. **PRIYADHARSHINI VENKATESAN,III CSE B** has attended an Internship programme at IIEC educational consultancy from 27-November 2019 to 13-December 2019.

11. **V.SWETHA,YAZHINI,IV CSE B** has published a paper titled " A Hybrid model for Detecting Linguistic Cues in Alzheimer's disease Patients" in the Journal of Information and Computational Science vol 10,issue 1, pg 85-90 ISSN :1548-7741.

12. **R.BANUPRIYA,G.DILISHA,J.PRINCY,IV CSE A** has published a paper titled " Remote Sensing Image Category Classification Using Deep Learning" in the International Journal of Application or Innovation in Engineering & Management (IJAEM) vol 9,issue 3 pg: 66 - 73.

13. **R.ABHINAYA,III CSE C** has published a paper titled " An Intelligent System to prevent the spreading of sensitive content online" in the Journal of Mechanics of Continua and Mathematical sciences, vol 15, issue 5, pg:201 – 208 ,ISSN :2454 -7190.

14. **J.P.DEEPALAKSHMI,R.SHIVANI,R.SWETHA,IV CSE B** has published a paper titled " Forest Fire Smoke Recognition and Temperature Prediction using Data Science" in the International Journal of Research in Engineering, Science and Management vol 3 issue 3 pg: 165 – 170 ISSN :2581-5792.

## 1) Xplenty

Xplenty is a platform to integrate, process, and prepare data for analytics on the cloud. It will bring all your data sources together. Its intuitive graphic interface will help you with implementing ETL, ELT, or a replication solution. Xplenty is a complete toolkit for building data pipelines with low-code and no-code capabilities. It has solutions for marketing, sales, support, and developers. Xplenty will help you make the most out of your data without investing in hardware, software, or related personnel. Xplenty provides support through email, chats, phone, and an online meeting.

## 2) Apache Hadoop

Apache Hadoop is a software framework employed for clustered file system and handling of big data. It processes datasets of big data by means of the MapReduce programming model. Hadoop is an open-source framework that is written in Java and it provides cross-platform support.

## 3) CDH (Cloudera Distribution for Hadoop)

CDH aims at enterprise-class deployments of that technology. It is totally open source and has a free platform distribution that encompasses Apache Hadoop, Apache Spark, Apache Impala, and many more. It allows you to collect, process, administer, manage, discover, model, and distribute unlimited data.

## 4) Cassandra

Apache Cassandra is free of cost and open-source distributed NoSQL DBMS constructed to manage huge volumes of data spread across numerous commodity servers, delivering high availability. It employs CQL (Cassandra Structure Language) to interact with the database. Some of the high-profile companies using Cassandra include Accenture, American Express, Facebook, General Electric, Honeywell, Yahoo, etc.

## 5) MongoDB

MongoDB is a NoSQL, document-oriented database written in C, C++, and JavaScript. It is free to use and is an open source tool that supports multiple operating systems including Windows Vista ( and later versions), OS X (10.7 and later versions), Linux, Solaris, and FreeBSD. Its main features include Aggregation, Adhoc-queries, Uses BSON format, Sharding, Indexing, Replication, Server-side execution of javascript, Schemaless, Capped collection, MongoDB management service (MMS), load balancing and file storage.

GOBINATH R  
IV CSE E

## Tech Quiz

1. The Indian who designed Hotmail?
2. Which is Asia's fastest computer?
3. Who is the founder of GNU Project?
4. What is 'DEEP BLUE'??
5. What is XP short for in Windows XI?
6. Which Global IT company re-entered India after having been banned from conducting business in India in the 1970s?
7. Who developed Yahoo?
8. What feat was done by song Daddy's Car?
9. What is the codename of Android 9.0?
10. This social networking website was launched with Justin Timberlake's new single " Suit and Tie" . Name the website?

## Computer Facts

- "MyDoom is the Most Expensive Computer Virus
- Computers Sort 95% of Mail
- The First Gigabyte Drive Cost \$40,000
- The First Known Computer Programmer was a Woman

1. Inspired by the computer voice and conversational onboard The Starship Enterprise of the Star Trek series, the name was chosen because it had a hard consonant and thus could be recognized with higher precision?

2. Established in 1996, as Sakai of Miami Inc. by Nelson and Alex, its current name was chosen because of the founders' fondness for the hit TV series "The X Files. This also inspired out of the box product names such as Hangar 18, Aurora, etc

3. The device originated because Mr.Ibuka loved listening to opera on his frequent trans-pacific flights, but felt that the notebook-sized-5-pounds TC-D5 was too unwieldy for daily use. Thus his company began work on this portable device that could combine lightweight and stereo sound at a price ordinary people could afford. What historic device originated thus?

4. The word was coined by Jack E Steele in 1958, possibly meaning 'unit of life' and the suffix meaning 'like' or "in the manner of', hence 'like life'. Some dictionaries, however, explain the word as being formed as a portmanteau from biology and electronics. It is the application of biological methods and systems found in nature to the study and design of engineering systems and modern technology.

5. Identify this logo.



6. A startup by Anurag Goel which is the winner of the TechCrunchDisrupt startup battle 2014.It San Francisco based company which provides the cloud for developers and startups to host all their apps and sites.

7. MAU,WAU,DAU and HAU are regular terms used as modern measurement. If M,W,D and H are monthly, Weekly and Daily and Hourly. What is AU in all of these?

## IBM BLOCK CHAIN PLATFORM

Decision makers in business are increasingly looking to blockchain technologies to improve efficiency, reduce costs and reduce risks. Blockchain creates synergies among multiple, permissioned organizations, which enables you to create entirely new, higher value business models. Building on the software and interface of the IBM Blockchain Platform gives you the flexibility, speed, and power you need to deliver on the promise of blockchain.

## Benefits of the IBM Blockchain Platform

## Dependability you can count on

Our platform is recognized as an industry leader by IDC, Everest Group, Juniper Research, HFS Research, and BRG among others. And our 24x7x365 support stands tested and ready.

## Fast path to productivity and ROI

you could join existing client networks that are already up and running. But if you have unique needs, we can help you co-create a new network to meet those needs. Once you're on a network, our tutorials, and advanced developer and operator productivity tools can help reduce your time to value.

## Enabled for growth and flexibility

As your network grows, you can easily add other organizations with different on-premises IT infrastructures, using advanced governance tools that makes inviting and adding them easy. And our multi-cloud capability means you can add users running on any third-party cloud environment.

## Open by design to prevent vendor lock-in

IBM Blockchain Platform is built on the open source, community-based Hyperledger Fabric platform from the Linux Foundation. With an open source code base, support for on-premises infrastructures, and the option to use third-party clouds, you avoid the restriction of vendor lock-in.

MOHAMMED AFSAL M  
II CSE D

"All Birds find shelter during a rain. But Eagle avoids rain by flying above the Clouds. Problems are common, but attitude makes the difference." -- Dr. A.P.J.Abdul Kalam