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K.L.N. College of Engineering

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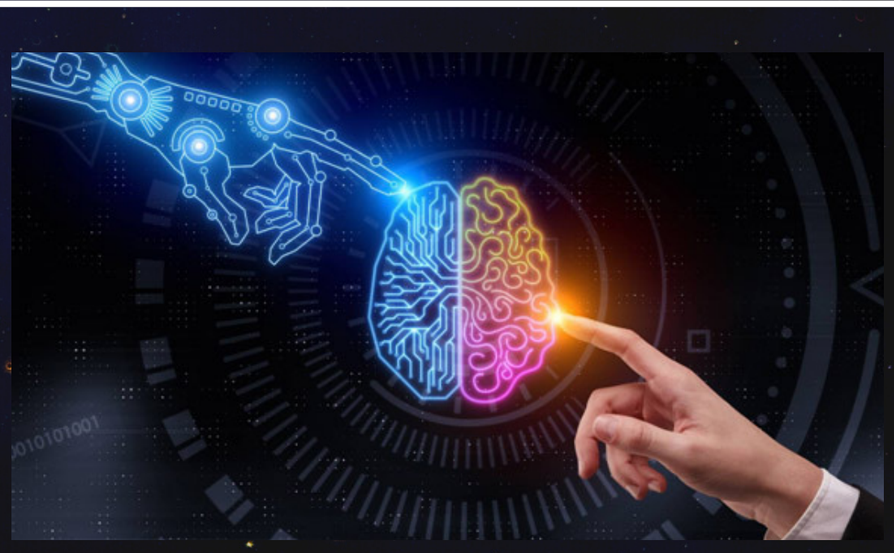
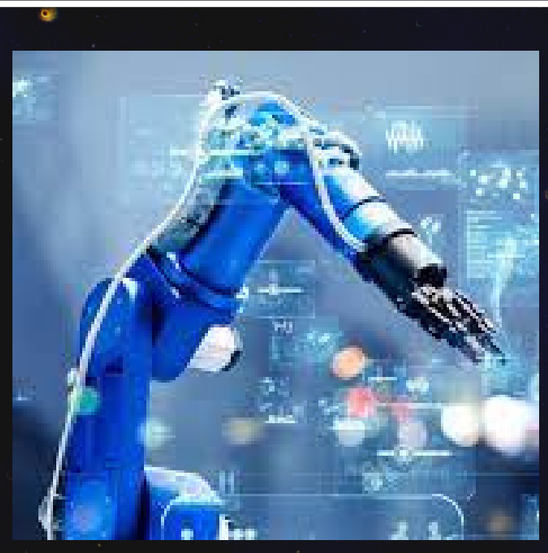
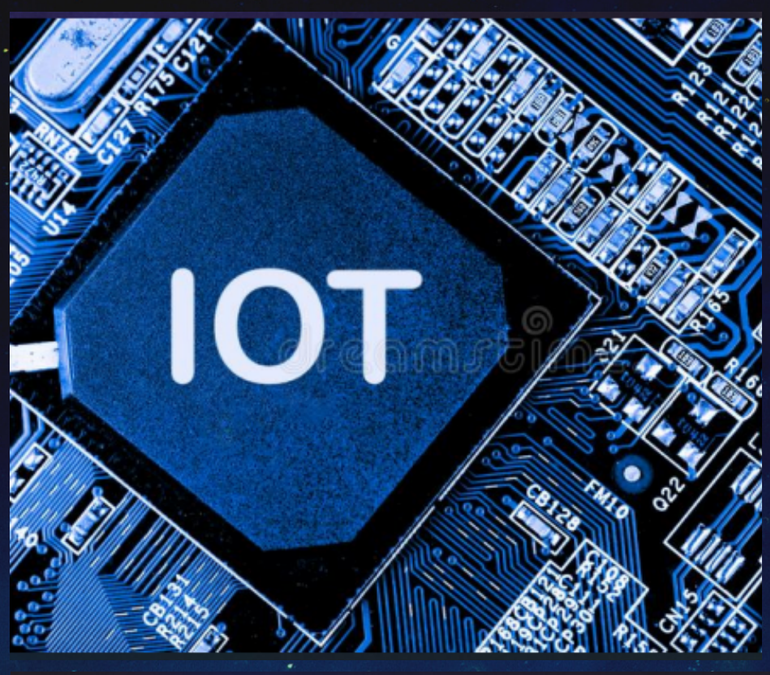
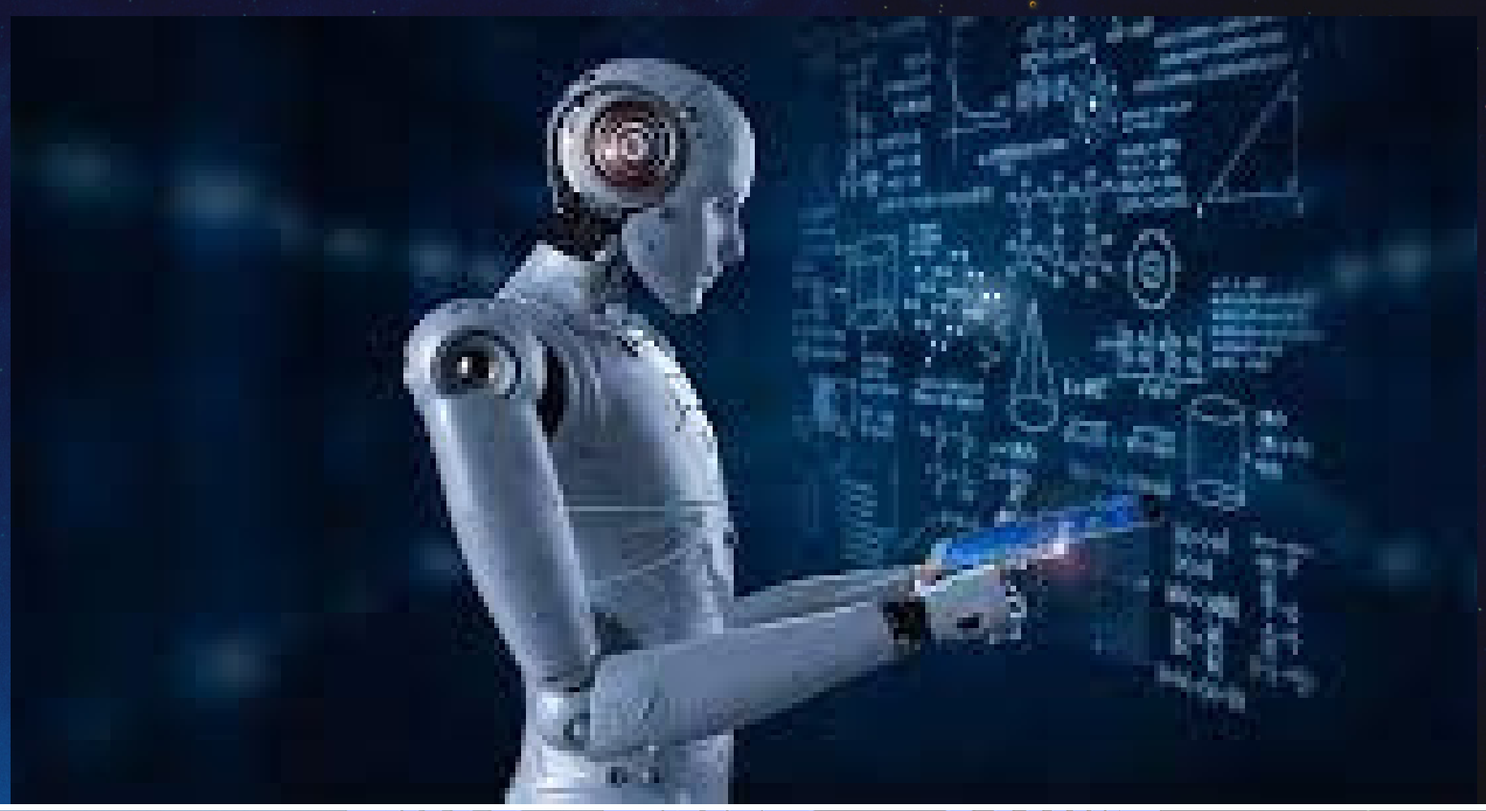
Founder President
(1918-2001)

InterFACE









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NewsLetter

"There's Nothing called giving up!"

VISION OF THE INSTITUTION

To become a Centre of Excellence in Technical Education and Research in producing Competent and Ethical professionals to the society

MISSION OF THE INSTITUTION

To impact value and need based curriculum to the students with enriched skill development in the field of Engineering, Technology, Management and Entrepreneurship and to nurture their character with social concern and to pursue their career in the area of Research and Industry

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DepartmentOf Computer Science and Engineering

VISION OF THE DEPARTMENT

To be a competent Professional in the field of Computer Science & Engineering through quality education, training and innovative research

MISSION OF THE DEPARTMENT

- Imparting proficient education through quality teaching – learning process in tune with the interdisciplinary needs of global work environment.
- Inculcating the attitude of continuous learning through industry institution interaction, consultancy and research activities.
- Cultivating professionalism, Ethics and integrity of character for positive contributions to society.

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Principal's Message

As students are the members of the progressive society, the teachers shall not fight today's battle with yesterday's weapon, but they must prepare them to face all the eventualities of life. Thus teachers are the architects of a country. Consequently, the true education should deepen our insight, widen our horizon and create a meaningful outlook. Fortunately, the students are born in a free nation, with all the facilities to shape their careers in such a way, that they should be a part of good and healthy society with progressive attitude towards divinity.

HOD's Message

My appeal to all my dear students is to attend all the classes, make use of the libraries extensively and read text books regularly and take part in technical paper presentations and seminars and undergo training in various, skill sets, so that, they will not face difficult times in their professional careers, since they will be mostly on standalone mode. In this respect, I humbly request the parents and guardians to show more interest in their wards day to day activities and overall performance. Parents are also requested to attend the parents association meeting held by the college

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Editor's Words

Dear Students,
A warm welcome to the latest issue of our Departments Newsletter INTERFACE for the year 2019-2020.The objectives of the Newsletter are: -To recognize the achievements of students and faculty of our department. -The showcase the works and talents of our students and faculty. I congratulate all my team for their constant efforts in bringing out this Newsletter, We are grateful to the Management, EO, and Our Principal for the constant support.

Editing Team

EDITOR IN-CHIEF

Dr. P.R. Vijayalakshmi (Professor and Head)

EDITORS

Dr. S. Miruna Joe Amali (Professor)
Dr. R. Lakshmi (ASP/CSE)
Dr. P. Prem Kumar(ASP/CSE)
Mrs.S.Venkatalakshmi(AP/CSE)

STUDENT INCHARGE

Mr. Jivithesh Harshaa .R.D , 1st yr, CSE

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AboutOurDepartment

Computer Science is taking over the world by storm. Computer Science and Engineering as a branch caters to all the needs of the fast paced world of technology. Computer Science and Engineering demands a blend of creative and technical skills. Computer Science and Engineering graduates are widely employed in the software industries throughout the world. Taking this in mind, the department is always committed in creating the engineers that the future demands

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Program EducationalObjectives(PEO's)

PEO I: Contribute effectively to the society by applying principles of computer science and engineering for analyzing the real world problems to produce Optimal and acceptable technical solutions.

PEO II: Sustain as good professionals by pursuing career / advanced studies and practice innovation in emerging technologies through lifelong learning.

PEO III: Build professionalism, team work, effective communication, ethical values and leadership qualities

Program Specific Outcomes (PSO's)

PSO 1: Ability to apply good analytical, design and implementation skills to formulate and solve scientific and business applications pertaining to Algorithms, Computer Systems, Networks, Security, Data Analytics and Artificial Intelligence.

PSO 2: Ability to update knowledge continuously in the tools like Rational Rose, MS VISIO, NS, VMware workstation, Mobile Application Development tools and technologies like storage, Computing, communication to meet the industry requirements.

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Salient Features of the Department

1. General

- Started offering B.E. in Computer Science and Engineering in the year 1997 with an intake of 40 (No - 730-52-227(E)/ET/97, dated 29th August, 1997, AICTE) with the latest intake of 120 in 2022 (F.No. Southern/1-10975962064 dated 07-July 2022).

- Accredited in May 2007 (First time - F.No.NBA/ACCR-242'2003, dated 22 nd May 2007) and Re-accredited (Second time - F.No.33-01/2010-NBA, dated 14 th Aug.2013) by National Board of Accreditation, New Delhi.

- Accredited under Outcome Based Education in February 2017 (F.No.33-01/2010-NBA, dated 04th Feb.2017) and Re-accredited (Compliance - F.No.33-01/2010-NBA, dated 22-03-2019) by National Board of Accreditation, New Delhi.

2. Infrastructure

- Programming and Data Structures Laboratory, Advanced Computing Laboratory, Software Development and Simulation Laboratory, Project Laboratory, Research Laboratory are equipped with systems, software, internet with Wi-Fi facilities.

- Latest software on Web Technology, Operating System, Computer Graphics, System Software, Internet Programming, Cloud Computing are available to study, solve, design, code, implement and test the software problems to experience the real time results.

- All the class rooms are equipped with computer systems and LCD to promote the Teaching – Learning Process more effectively.

- Separate library facility for CSE students with 2287 books and volumes for core subjects and hard copies of IEEE Journals and magazines is available for reference. Staff and student can access the softcopy of Journals, Proceedings published by IEEE, ASME, Mc Graw Hill.

- All the laboratories are provided with sufficient computing facilities, printing facility with internet connection to encourage laboratory experiments.

3. Staff

- Teams of well qualified, and experienced faculties with cadre ratio as per AICTE, are guiding the students to attain the best educational objectives.
- Excellent research environment promotes the staff and students to participate, present and publish their research works in the National/ International Journals and National International Conferences.
- Facility and experienced faculty available for guiding Ph.D. Scholars.
- Faculty Development Programme / Workshop / Seminar are organized regularly to share the knowledge of our experienced faculty with parent institution and other colleges' staff and students and Industry persons.

4. Staff with Ph.D

S.No	Name	Faculty	Specialization
1.	Dr. P.R. Vijayalakshmi	Information and Communication Engineering	Network Security
2.	Dr. S. Miruna Joe Amali		Optimization Techniques
3.	Dr.R.Lakshmi		Text Mining, Information Retrieval
4.	Dr. T. R. Vedhavathy		Manet

5. Research Activities

- The Research work, Industrial Projects and Patentable Projects related activities are carried out in the exclusive Research Laboratory in areas like wireless networks, Optimization algorithms, network security and big data analytics and data mining.

- In order to discuss about the latest trends and research issues, the department conducts at least one faculty development programme per semester. Senior faculty members are regularly sending their proposal to Government funding agencies for organizing workshop, Seminar, Conferences and research.

- In order to get practice in the latest tools and systems, department actively works in association with Infosys, Honeywell and ICT Academy.

- Staff members are regularly attending seminars, workshops, conferences and competitions in order to develop their skills according to the latest developments and requirements.

6. Students

- High caliber students are identified and encouraged to pursue higher studies. Alumni are now working in reputed institutions.

- Students secured several University Ranks including Gold Medal in 2013 (UG-CSE) among 8500 students studied in 540 Engineering colleges all over Tamil Nadu.

- CSI and ISTE student's chapter are continuously conducting number of student technical programmes. Guest lecture from industries have been arranged periodically to promote industry – institute interaction and to bridge the gap between curriculum and latest trend in industry.

- To promote innovation, latest trends in industry and employability skills, student's professional activities are conducted every year in the name of symposium and conferences.

- Workshop/Seminar is regularly conducted for students to meet out the curriculum objectives.

- Implant trainings are arranged for second and third year students to have hands on training in industry. Industrial visits are arranged every semester to know about the latest development process in Industry.

- Placement oriented training programme are conducted every semester right from the first year to develop soft skills, attitude, aptitude, self confidence, communication skills, interview skills, etc. so as to face the campus placement programme organized by the college. Professional Trainers from software companies, Bangalore, Chennai are being invited for such training programme.

- Various reputed certificate program like Infosys Foundation Program, IBM Certifications, HP academic program certifications, Oracle certifications, EMC storage certification, java certification, Dot net certifications are conducted.

- Students are encouraged to participate in various mini projects as well as project competitions to display their talents and develop project knowledge along with product development.

- Students are guided to involve in consultancy projects in order to get exposure about the industry requirements.

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Articles

3D PRINTING

What is 3D Printing?

3D printing is a process of creating three-dimensional objects from a digital file. The process is additive, meaning that the object is built up layer by layer from a material such as plastic, metal, or ceramic.

How Does 3D Printing Work?

There are many different types of 3D printers, but they all work on the same basic principle. The printer first reads a digital file of the object to be created. The file is then sliced into thin layers, and each layer is printed one at a time. The printer uses a heated nozzle to melt the material and deposit it onto a build platform. As the layers are printed, they are fused together to form the final object.

Types of 3D Printing

There are many different types of 3D printing, but the most common are:

- Fused deposition modeling (FDM): FDM is the most popular type of 3D printing. It uses a heated nozzle to melt plastic filament, which is then deposited onto a build platform.
- Stereolithography (SLA): SLA uses a laser to cure a liquid resin layer by layer. This process is more accurate than FDM, but it is also more expensive.
- Selective laser sintering (SLS): SLS uses a laser to fuse powdered material together layer by layer. This process is similar to SLA, but it is more suitable for printing objects with complex geometries.

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Applications of 3D Printing

3D printing is used in a wide variety of applications, including:

- Rapid prototyping: 3D printing is often used to create prototypes of new products. This allows designers to test out their designs and make changes before they commit to manufacturing the product.
- Customization: 3D printing can be used to create customized products, such as hearing aids or prosthetics. This allows people to get products that are specifically designed for their needs.

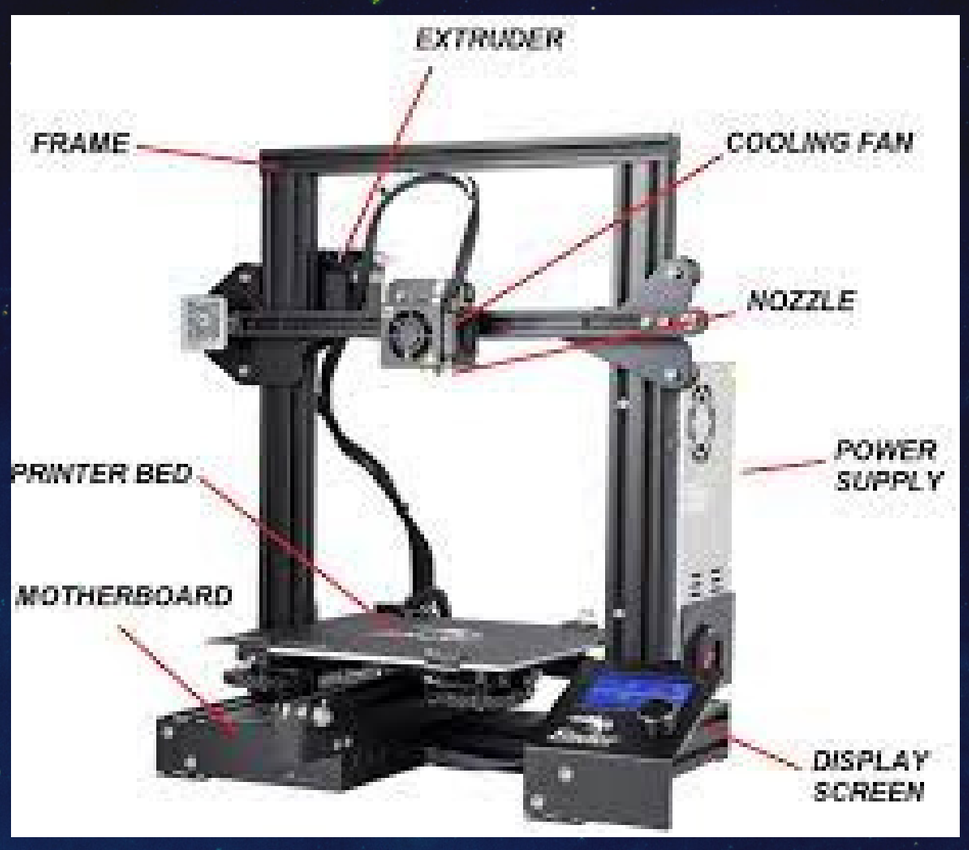
Advantages of 3D Printing

There are many advantages to 3D printing, including:

- Design flexibility: 3D printing allows designers to create objects with complex geometries that would be difficult or impossible to manufacture using traditional methods.

Disadvantages of 3D Printing

Cost: 3D printers can be expensive, and the cost of materials can also be high.



by
Vidya .B.P ,CSE-C,

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Artificial intelligence

ARTIFICIAL INTELLIGENCE

Artificial Intelligence is the intelligence possessed by the machines under which they can perform various functions with human help. With the help of A.I, machines will be able to learn, solve problems, plan things, think, etc. Artificial Intelligence, for example, is the simulation of human intelligence by machines. In the field of technology, Artificial Intelligence is evolving rapidly day by day and it is believed that in the near future, artificial intelligence is going to change human life very drastically and will most probably end all the crises of the world by sorting out the major problems.

Our life in this modern age depends largely on computers. It is almost impossible to think about life without computers. We need computers in everything that we use in our daily lives. So it becomes very important to make computers intelligent so that our lives become easy. Artificial Intelligence is the theory and development of computers, which imitates the human intelligence and senses, such as visual perception, speech recognition, decision-making, and translation between languages. Artificial Intelligence has brought a revolution in the world of technology.

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Artificial Intelligence Applications

AI is widely used in the field of healthcare. Companies are attempting to develop technologies that will allow for rapid diagnosis. Artificial Intelligence would be able to operate on patients without the need for human oversight. Surgical procedures based on technology are already being performed.

Artificial Intelligence would save a lot of our time. The use of robots would decrease human labour. For example, in industries robots are used which have saved a lot of human effort and time.

In the field of education, AI has the potential to be very effective. It can bring innovative ways of teaching students with the help of which students will be able to learn the concepts better.

Artificial intelligence is the future of innovative technology as we can use it in many fields.

by
Saakira J

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Blockchain Technology

What Is Blockchain Technology?

- Blockchain is a method of recording information that makes it impossible or difficult for the system to be changed, hacked, or manipulated. A blockchain is a distributed ledger that duplicates and distributes transactions across the network of computers participating in the blockchain.

- Blockchain technology is a structure that stores transactional records, also known as the block, of the public in several databases, known as the “chain,” in a network connected through peer-to-peer nodes. Typically, this storage is referred to as a ‘digital ledger.’

- Every transaction in this ledger is authorized by the digital signature of the owner, which authenticates the transaction and safeguards it from tampering. Hence, the information the digital ledger contains is highly secure.

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How Does Blockchain Technology Work?

In recent years, you may have noticed many businesses around the world integrating Blockchain technology. But how exactly does Blockchain technology work? Is this a significant change or a simple addition? The advancements of Blockchain are still young and have the potential to be revolutionary in the future; so, let's begin demystifying this technology.

Blockchain is a combination of three leading technologies:

- Cryptographic keys
- A peer-to-peer network containing a shared ledger
- A means of computing, to store the transactions and records of the network

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Advantages of Blockchain

- Decentralization. This is the main feature of *blockchain technology*, and the strong point is that to authenticate transactions or operations *no other instance is required to act as an intermediary*, reducing transaction validation times.
- Network distribution. This point provides, at the same time, several benefits since, by having this network distributed, in the first instance, *no one owns the network*, allowing different users to always have multiple copies of the same information.

Disadvantages of Blockchain

- High implementation costs. Just as this technology represents low costs for users, unfortunately, *it also implies high implementation costs for companies*, which delays its mass adoption and implementation.
- Inefficiency. It is inefficient to have several network users validating the same operations, since *only one will receive the reward derived from this mining process.*

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Cloud computing

Cloud computing is the on-demand availability of computer system resources, especially data storage (cloud storage) and computing power, without direct active management by the user. Large clouds often have functions distributed over multiple locations, each of which is a data center. Cloud computing relies on sharing of resources to achieve coherence and typically uses a pay-as-you-go model, which can help in reducing capital expenses but may also lead to unexpected operating expenses for users.

Platform as a service (PaaS)

The definition of cloud computing defines Platform as a Service as:

The capability provided to the consumer is to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming languages, libraries, services, and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly configuration settings for the application-hosting environment.

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Software as a service (SaaS)

In the software as a service (SaaS) model, users gain access to application software and databases. Cloud providers manage the infrastructure and platforms that run the applications. SaaS is sometimes referred to as "on-demand software" and is usually priced on a pay-per-use basis or using a subscription fee. In the SaaS model, cloud providers install and operate application software in the cloud and cloud users access the software from cloud clients. Cloud users do not manage the cloud infrastructure and platform where the application runs. This eliminates the need to install and run the application on the cloud user's own computers, which simplifies maintenance and support. Cloud applications differ from other applications in their scalability—which can be achieved by cloning tasks onto multiple virtual machines at run-time to meet changing work demand.[45] Load balancers distribute the work over the set of virtual machines. This process is transparent to the cloud user, who sees only a single access-point. To accommodate a large number of cloud users, cloud applications can be multitenant, meaning that any machine may serve more than one cloud-user organization.

by

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