DEPARTMENT OF COMPUTER SCIENCE

Volume 5 | Issue 1

TECH BYTES

2017-2018

INSTITUTE VISION

"To mould true citizens who are millennium leaders and catalysts of change through excellence of education"

INSTITUTE MISSION

NCERC is committed to transform itself into a center of excellence in Learning and Research in Engineering and Frontier Technology and to impart quality education to mould technically competent citizens with moral integrity, social commitment and ethical values. We intend to facilitate our students to assimilate the latest technological know-how and to imbibe discipline, culture and spiritually, and to mould them in to technological giants, dedicated research scientists and intellectual leaders of the country who can spread the beams of light and happiness among the poor and the underprivileged

NEHRU GROUP OF INSTITUTIONS

Nehru Group of Institutions (NGI), among the top private engineering colleges in Thrissur and Palakkad-Kerala, intends to be an overall the world prominent academic association empowering splendid engineers! Nehru College of Engineering and Research Centre (NCERC), Thrissur, and Jawaharlal College of Engineering and Technology (JCET) – Palakkad and Nehru Institute of Engineering and Technology Coimbatore hold the title of best engineering colleges in Kerala and Tamil Nadu because of our perpetual vow to passing on pervasive training. Our instructive plans, imaginative demonstrating techniques, introduction to industry best practices, and experiential learning bases on making our engineering students work arranged! Being one of the top private Engineering colleges in Kerala, NGI has been cutting energetic and red hot characters into talented engineers prepared for working in various parts. Nehru Colleges have set its instructive plans at better principles than ensure that it passes on quality preparing.

NEHRU COLLEGE

OF ENGINEERING & RESEARCH CENTRE

NAAC ACCREDITED|ISO 9001:2015 CERTIFIED INSTITUTION

Nehru College of Engineering and Research Center (NCERC), Thrissur is the Principal Engineering school in Kerala to offer a Computer Science and Engineering course, authorize by NAAC, and it holds the title of the best Engineering school in Kerala due to the association& perpetual guarantee to passing on common guidance. The Department of Computer Science and Engineering has a strong Undergraduate Program in Computer science and Engineering (B.Tech). The primary focus of our curriculum is to impart technical know-how to students, promote their problem-solving skills, innovation of new technologies and etc. Our department has distinguished record in teaching. The department have a group of experienced and enthusiastic teaching faculties and lab facilities with experienced lab staff, which in turn boosts the teaching-learning process. The department has structured an ambience of togetherness and cohesiveness.

ABOUT DEPARTMENT

The Department of Computer Science & Engineering (CSE) was established in the year 2001 . Over the years, the department has developed to become a center of excellence, providing in-depth technical knowledge and opportunities for innovation and research. The department has tie-ups with various industries and offers courses in collaboration with them. High-Performance Computing Systems, Computer Networks & Security, Knowledge Engineering, and Software Engineering.

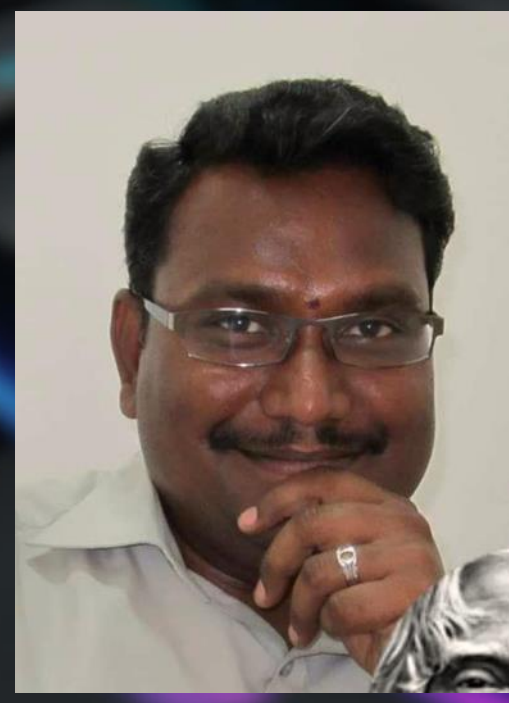
MESSAGES

PRINCIPAL MESSAGE

Prof.Dr.Ambikadevi Amma .T
Principal,NCERC

It gives me great pleasure to know that 'TECHBYTES 2018', NCERC's college magazine 2017-18 is ready for publication. True to its name, this magazine gives an insight into the range and scope of the imagination and creativity of our students and faculty members. I applaud the editorial team for the hard work and dedication they have invested in realizing this goal, and wish my dear students success in all future endeavors.

HOD MESSAGE



Dr. S Dhanabal

Professor & Head

Department of Computer Science and Engineering

Tech Bytes is an technical magazine giving free access to the students to express their innovative ideas and present technical articles. Current trending technical know how are narrated as essays by our students to share the knowledge. It also gives them opportunity to convey their imaginations by their writings , paintings and photography. Continuous efforts will lead them to implement their ideas as projects and make it into reality.

Computer Science
& ENGINEERING

DEPARTMENT VISION

Producing Highly competent, innovative and Ethical computer science and engineering professionals to facilitate continuous technological advancement

Computer Science
& ENGINEERING

DEPARTMENT MISSION

MD1: To impart Quality education by creative Teaching Learning process

MD2: To promote cutting edge Research and development Process to solve real world problems with engineering technologies

MD3: To inculcate entrepreneurship skills among students

MD4:To cultivate moral and Ethical values in their profession

Computer Science
& ENGINEERING

PROGRAM EDUCATIONAL OBJECTIVES

PEO 1: Graduates will be able to Work and Contribute in the domains of Computer Science and Engineering through lifelong learning.

PEO 2: Graduates will be able to Analyze, design and development of novel Software Packages, Web Services, System Tools and Components as per needs and specifications.

PEO 3: Graduates will be able to demonstrate their ability to adapt to a rapidly changing environment by learning and applying new technologies.

PEO 4: Graduates will be able to adopt ethical attitudes, exhibit effective communication skills, Team work and leadership qualities.

DARK WEB

The term dark web refers to encrypted online content that is not indexed by conventional search engines. Accessing the dark web can only be done using specific browsers, such as TOR Browser. There is a great deal of privacy and anonymity that comes with using the dark web compared to traditional websites. As such, most of the attention is placed on online marketplaces for drugs, exchanges for stolen data, and other illegal activities when people think of the dark web. Despite this, there are often very legitimate reasons why people choose to use the dark web, including political dissidents and people who want to keep certain information private. The dark web first officially appeared in the early 2000s along with the creation of Freenet, which was developed by Ian Clarke to secure users against government intervention and cyber attacks. The system, which is still available today, allows users to express themselves freely without being tracked online.The U.S. Naval Research Laboratory funded a project called The Onion Router (TOR).

TOR offered intelligence sources a way to communicate easily and safely, especially in hostile areas where personal safety is key. It is now one of the most common browsers used to access the dark web, using databases to help people make their way around and find the information they need. The rise of cryptocurrencies increased the popularity of the dark web, especially for cybercriminals. That's because digital currencies often provide a great deal of anonymity for people who buy and sell on the dark web.

The dark web helps people to maintain privacy and freely express their views. Privacy is essential for many innocent people terrorized by stalkers and other criminals. The increasing tendency of potential employers to track posts on social media can also make it difficult to engage in honest discussions publicly. Finally, the popularity of the dark web with criminals makes it a perfect way for undercover police officers to communicate.

EDGE COMPUTING

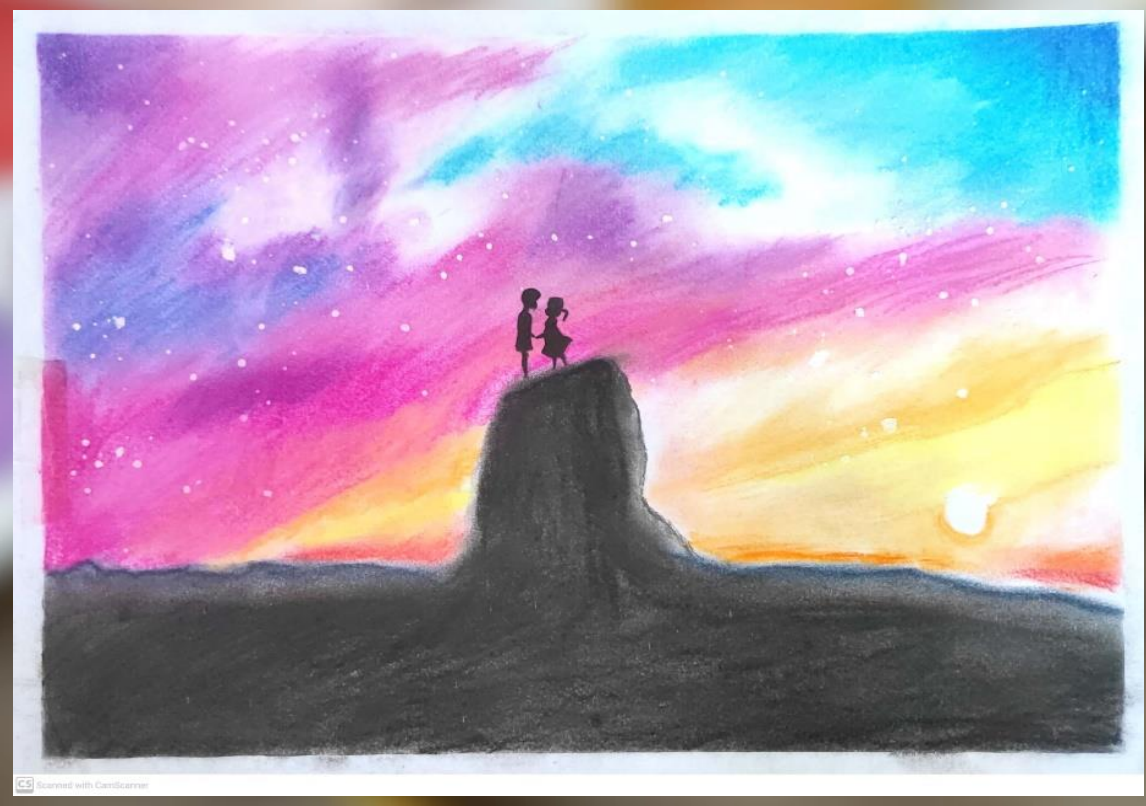
Edge computing is a networking philosophy focused on bringing computing as close to the source of data as possible in order to reduce latency and bandwidth use. In simpler terms, edge computing means running fewer processes in the cloud and moving those processes to local places, such as on a user's computer, an IoT device, or an edge server. Bringing computation to the network's edge minimizes the amount of long-distance communication that has to happen between a client and server. For Internet devices, the network edge is where the device, or the local network containing the device, communicates with the Internet. The edge is a bit of a fuzzy term; for example a user's computer or the processor inside of an IoT camera can be considered the network edge, but the user's router, ISP, or local edge server are also considered the edge. The important takeaway is that the edge of the network is geographically close to the device, unlike origin servers and cloud servers, which can be very far from the devices they communicate with. The first computers were large, bulky machines that could only be accessed directly or via terminals that were basically an extension of the computer.

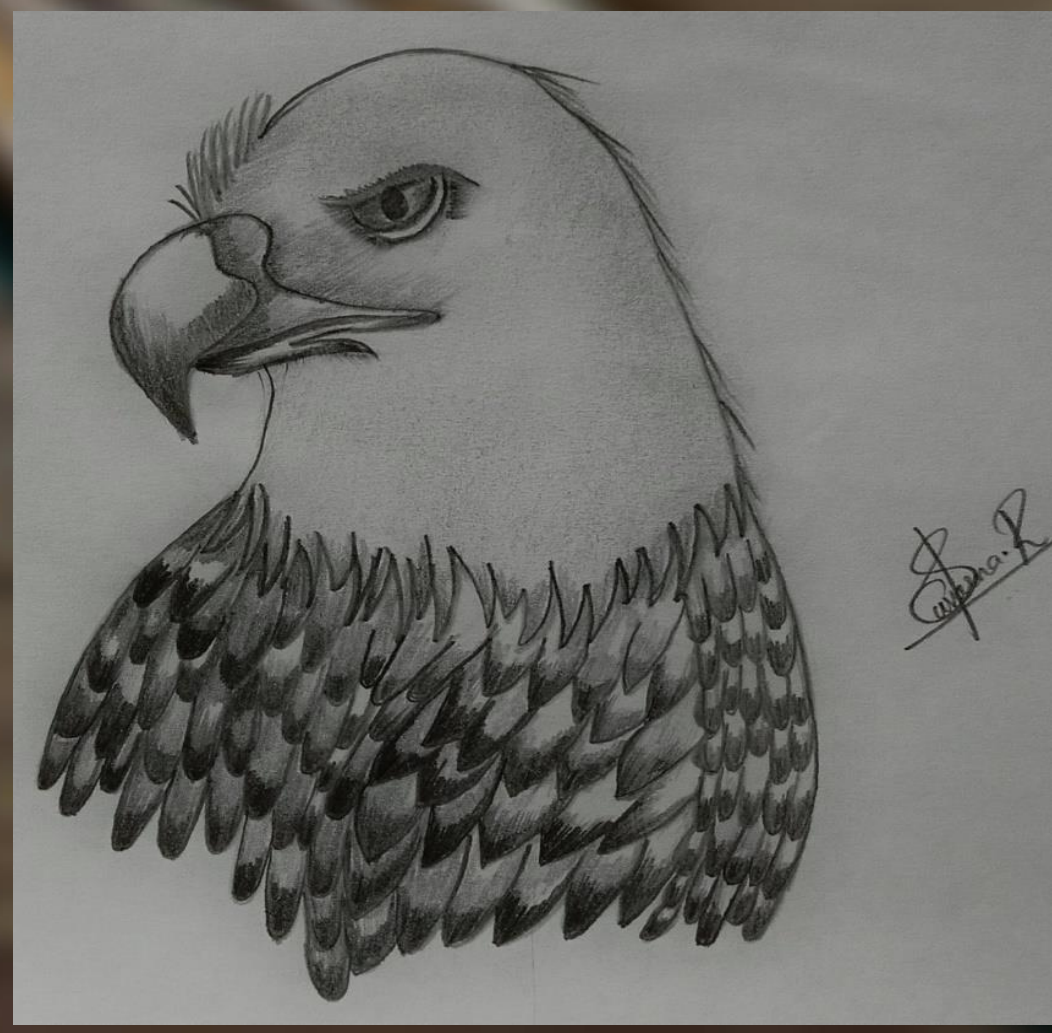
With the invention of personal computers, computing could take place in a much more distributed fashion. For a time, personal computing was the dominant computing model. Applications ran and data was stored locally on a user's device, or sometimes within an on-premise data center. Cloud computing, a more recent development, offered a number of advantages over this locally based, on-premise computing. Cloud services are centralized in a vendor-managed "cloud" (or collection of data centers) and can be accessed from any device over the Internet. However, cloud computing can introduce latency because of the distance between users and the data centers where cloud services are hosted. Edge computing moves computing closer to end users to minimize the distance that data has to travel, while still retaining the centralized nature of cloud computing.

Another significant benefit of moving processes to the edge is to reduce latency. Every time a device needs to communicate with a distant server somewhere, that creates a delay. For example, two coworkers in the same office chatting over an IM platform might experience a sizable delay because each message has to be routed out of the building, communicate with a server somewhere across the globe, and be brought back before it appears on the recipient’s screen If that process is brought to the edge, and the company’s internal router is in charge of transferring intra-office chats, that noticeable delay would not exist.

STUDENTS CORNER

DRAWINGS





PHOTOGRAPHY

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