COMPYOUTH

E-MAGAZINE

FOR THE ACADEMIC YEAR 2023-24

Department of Computer Applications (MCA)

DR.MAHALINGAM COLLEGE OF ENGINEERING AND TECHNOLOGY, POLLACHI

https://drmcet.ac.in/computer-applications/

MCET – NPT Campus, Udumalai Road,. Pollachi – 642 003

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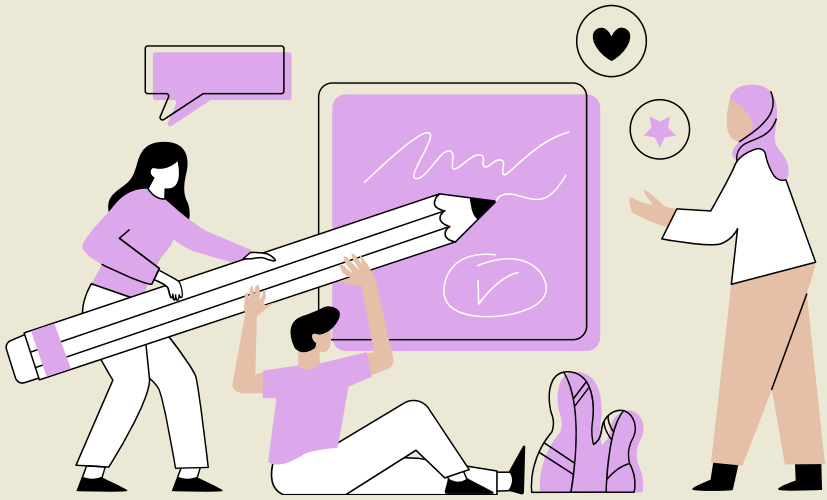

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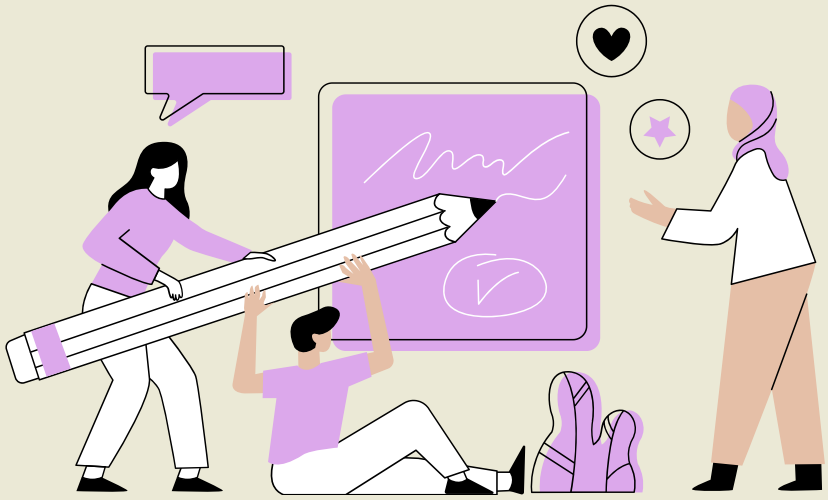


Department

VISION ,MISSION, PO,PEO PSO

VISSION

The Department of Computer Applications seeks to transform students from diverse backgrounds into proficient and competitive software experts who can deliberately solve the needs of the community while coming up with innovative solutions to shifting contemporary issues.

MISSION

To become proficient with computer applications, employ state-of-the-art teaching and learning techniques.

Teach students to be successful, moral, and effective problem solvers who will also become lifelong learners and contribute to the strengthening of our nation.

Provide a foundation for value-based learning and integrate new research findings and discoveries into a range of scientific fields.

To promote morality and excellence among students.

Encourage students to develop their entrepreneurial abilities so they can lead nations globally

PEO'S

After 2 years of completion of the programme the graduates will be able to:

PEO1: Domain Expertise: Employ computational and mathematical knowledge to identify, characterize, create, implement, and improve software solutions for a range of problems across various application areas.

PEO2: Computing Skills and Ethics: Employ technical skills to solve societal and environmental issues in an ethical manner.

PEO3: Lifelong Learning and Research: Committed to continuous learning and research in computing.

Department

VISION ,MISSION, PO,PEO PSO

PO'S

On successful completion of the programme the graduates will be able to:

PO1. An ability to independently carry out research/investigation and development work to solve practical problems

PO2. An ability to write and present a substantial technical report/document

PO3. Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program

PO4. Skilled to identify an appropriate design, framework, and data models to create a system that performs well.

PO5. Proficient in creating real-time applications leveraging emerging and contemporary technologies.

PSO'S

On successful completion of the programme the graduates will be able to:

PSO1. Application Development: Apply software engineering principles in the design and development of web and mobile applications.

PSO2. Data management: Manage and analyze huge volume of data in real world problems.

The Rise of AI

Artificial intelligence, or AI, is a concept that appears to be on everyone's lips in today's fast-paced world. AI is completely changing the way we live, work, and interact with the world around us. Examples of this include self-driving cars and smartphones. This piece will examine the amazing history of artificial intelligence, from its modest origins to its current position as a revolutionary force influencing our future.

AI is comparable to a computer's brain. It ultimately comes down to educating robots to think and learn for themselves, just like people do. Imagine being able to unlock your phone with your face recognition or have it guess what you will say next in a text message. That is AI in action; it is constantly learning and improving at what it does.AI has countless applications.

AI in healthcare aids in the early detection of ailments, the creation of individualized treatment regimens, and even the quicker discovery of new medications. In the financial sector, it deters financial crime and facilitates improved bank decision-making. AI is also improving farming efficiency, allowing for the production of more food with less herbicides and water.AI is about improving everyone's quality of life, not just a few people with expensive devices. AI frees us our time to accomplish the things we love by handling tedious duties. AI in education improves student learning by providing individualized instruction. Using resources more sensibly in agriculture means better food and a cleaner planet.

AI has a brighter future than it has in the past. AI is getting closer to resolving some of humanity's most pressing problems, such as reducing pollution and improving city safety, with every new development. AI will become an even more integral part of our lives as it develops, enabling us to improve the planet for next generations.Finally, AI is a game-changer, not simply a trendy term. We can open the door to a future full of limitless possibilities and growth prospects by comprehending and embracing AI's ability. Together, we can seize this thrilling journey and utilize AI's promise to build a more promising future for everybody.

JANAVI
727623MCA013

AR and VR Innovations

The rapid evolution of Augmented Reality (AR) and Virtual Reality (VR) technologies is reshaping various industries, from entertainment to healthcare and beyond. Here are some key points summarizing the latest innovations and their transformative potential:

Spatial Computing: Companies like Magic Leap and Microsoft with their HoloLens are leading the way in spatial computing. This technology blends virtual objects seamlessly into real-world environments, allowing users to interact with digital content naturally.

Haptic Feedback: Haptic gloves, vests, and exoskeletons simulate touch, texture, and force feedback, enhancing immersion in virtual environments. Applications include training simulations, gaming, and remote surgery.

Eye-Tracking Technology: AR and VR devices integrated with eye-tracking technology offer improved user interfaces, enhanced graphics rendering, and gaze-based interaction. Accurately tracking users' eye movements leads to more intuitive and responsive experiences in various applications.

AI-Powered Content Creation: AI algorithms analyze user behavior and preferences to dynamically generate personalized content in real-time. This technology enhances immersion and enables adaptive learning experiences, personalized marketing campaigns, and hyper-realistic simulations.

Healthcare Applications: AR and VR technologies are increasingly used in healthcare for training, diagnosis, and treatment. Medical simulations offer realistic scenarios for practicing surgical procedures, patient care, and medical interventions in a risk-free environment, improving learning outcomes and patient safety.

These innovations are revolutionizing industries and opening new avenues for creativity, communication, and collaboration. As AR and VR technologies continue to advance, their transformative impact on human interaction and experience will only grow.

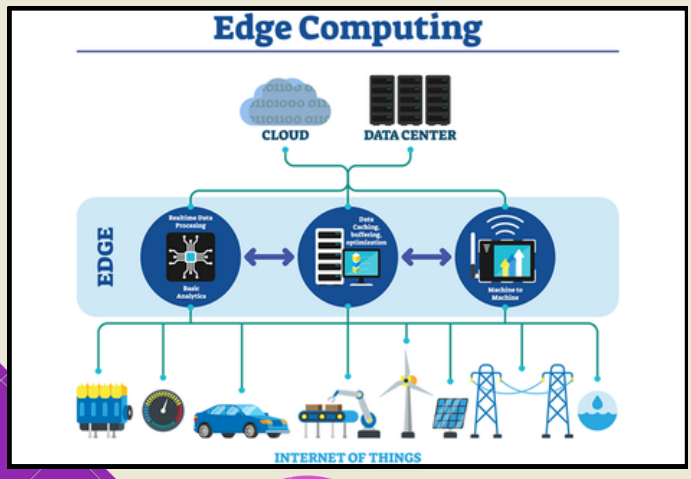
MUKESH M S
727623MCA064

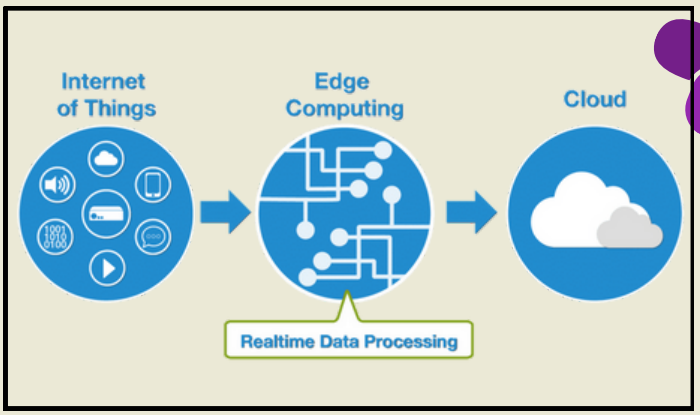
EDGE COMPUTING AND IOT

- Edge computing is a computerparadigm that allowscomputation to takeplace close to or at the data source.
- This is in contrastto the usual approach of using the cloud at the data centre as the sole place for computing.
- This does not imply that the cloud will vanish. It just indicatesthat the cloudis approaching you.
- Edge computing improves the performance of online applications by bringing processing closer to the datasource.
- The definition of the word “edge” in thiscontext is literal geographical dispersion.
- This eliminatesthe need for long-distance connections between clients and servers, lowering latency and bandwidth consumption.
- Edge computingimproves Internet devicesand online applications by bringing processing closer to the data source.

Edge computing, IoT and 5G possibilities

- The emergence of IoT devicesbrought edge computing to everyone’s notice.
- The evolutionof IoT devices is expectedto have a significant impacton future developments in edge computing.
- Estimates show that by 2028, Edge services will be available globally.
- Today, the use of edgeis situation specific but this is likely to change.
- Edge is going to change the way we use the internet, bringingmore possible use cases of the technology into the picture.





DEENADHAYALAN R
727623MCA002

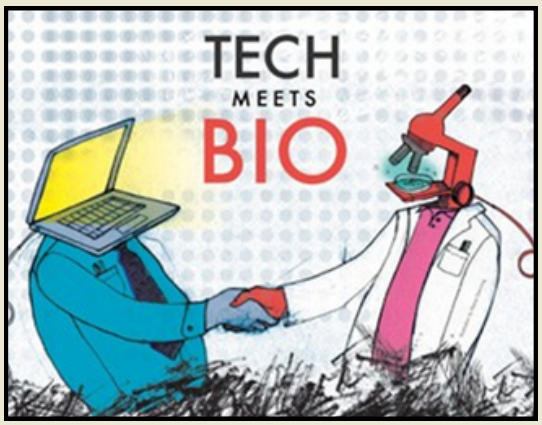
Bio-Technology Meets Computing

Biocomputing has become an essential tool in the life sciences, enabling researchers to unravel the complex molecular mechanisms underlying diseases, predict drug efficacy and toxicity, and design novel therapeutics. IBM computers and Microsoft software have been mainstays of biomedical studies for years.

Biocomputing has a wide range of application, from drug discovery to personalized medicine. By using computational models and algorithms, researchers can identify potential drug targets, design new drugs, and predict their efficacy and toxicity.

Synthetic biology techniques enable the creation of biological computers and sensors, promising efficient and eco-friendly computing solutions. Bioinformatics algorithms decode biological data, revolutionizing fields like medicine and agriculture.

A ground-breaking innovation in biotechnology with computing is the development of biohybrid systems. These systems integrate living cells or biological components with electronic devices to create hybrid technologies with unique functionalities. For example, researchers have created biohybrid robots by combining biological muscle tissues with microelectronic components, enabling them to mimic natural movements and respond to environmental cues.



THRISHA R
727623MCA036

5G and Next Generation Networking

Overview: Unleashing the Power of 5G, Transforming Connectivity in Future advancements

· In today's fast-paced digital age, the evolution of communication technology continues to push boundaries, with 5G emerging as a game-changer.

· 5G technology brings a host of remarkable features that revolutionize the capabilities with its incredible speed, allowing users to download movies and large files in just a matter of seconds

· In healthcare, 5G lets doctors do remote surgeries and monitor patients from far away, making healthcare more accessible and improving patient care, helps doctors check patients through virtual meetings with them, and even do surgeries from remote places.

· 5G is also great for entertainment, letting us stream high-quality videos without interruptions and play games online without any lag.

· In transportation, 5G helps in making self-driving cars, smarter traffic systems, and real-time tracking of vehicles. This makes transportation safer and more efficient for everyone.

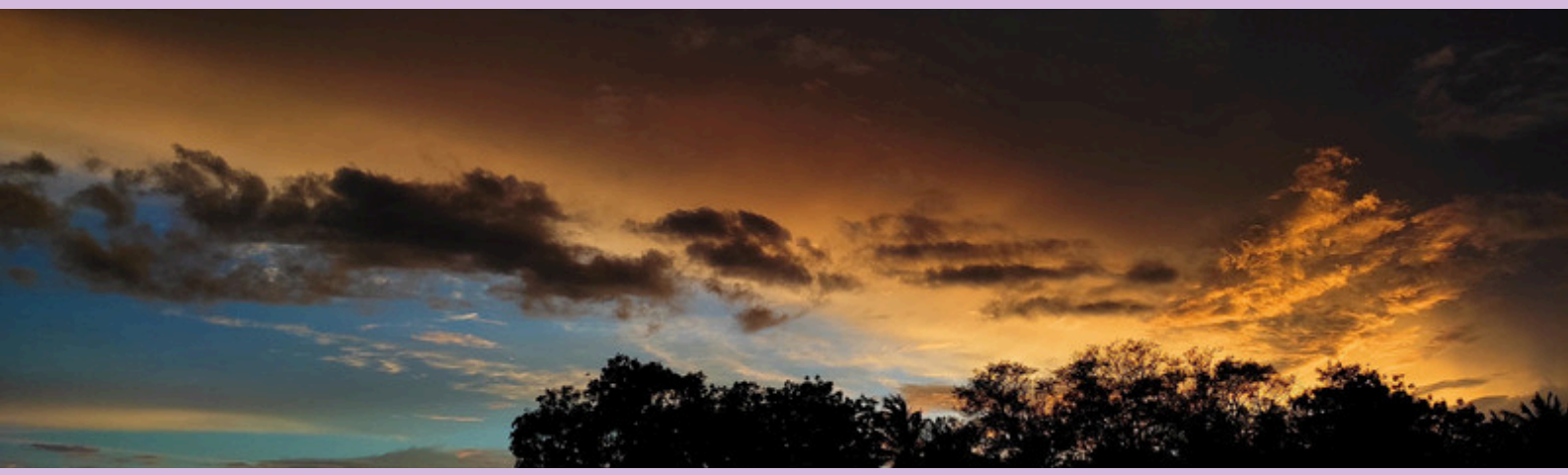
· In manufacturing, 5G makes machines and equipment work together better, predict when maintenance is needed, and manage supplies smartly

Upcoming Advancements

The next big thing after 5G is 6G technology, and it's going to be even better. It will have super-fast speeds, like downloading entire movies in a blink of an eye. Overall, 6G is going to be a huge leap forward in how fast and connected our digital world is going to be.

"As we ride the wave of 5G, innovation becomes boundless and connectivity fuels progress.

BOOMIKA.P
727623MCA005



SHARMELA S
727623MCA058

TECH - BYTES

QUANTUM COMPUTING ALGORITHMS ARE BEING INTEGRATED INTO FINANCIAL SOFTWARE TO OPTIMIZE PORTFOLIO MANAGEMENT AND RISK ANALYSIS.

AUGMENTED REALITY (AR) SOFTWARE IS ENHANCING REMOTE COLLABORATION BY OVERLAYING VIRTUAL MODELS ONTO PHYSICAL ENVIRONMENTS, ALLOWING TEAMS TO WORK TOGETHER IN REAL-TIME FROM ANYWHERE.

VOICE RECOGNITION SOFTWARE IS EVOLVING WITH NATURAL LANGUAGE UNDERSTANDING (NLU) CAPABILITIES, ENABLING MORE ACCURATE AND NUANCED INTERACTIONS WITH VIRTUAL ASSISTANTS.

AUGMENTED REALITY (AR) SOFTWARE IS ENHANCING REMOTE COLLABORATION BY OVERLAYING VIRTUAL MODELS ONTO PHYSICAL ENVIRONMENTS, ALLOWING TEAMS TO WORK TOGETHER IN REAL-TIME FROM ANYWHERE.

TECH - BYTES

EMOTION RECOGNITION SOFTWARE IS BEING INTEGRATED INTO CUSTOMER SERVICE PLATFORMS TO GAUGE USER SENTIMENT AND TAILOR RESPONSES ACCORDINGLY.

REAL-TIME TRANSLATION SOFTWARE IS BREAKING LANGUAGE BARRIERS BY PROVIDING INSTANT TRANSLATION OF SPOKEN AND WRITTEN COMMUNICATION ACROSS MULTIPLE LANGUAGES.

VIRTUAL REALITY (VR) TRAINING SOFTWARE IS REVOLUTIONIZING EMPLOYEE TRAINING BY PROVIDING IMMERSIVE SIMULATIONS OF REAL-WORLD SCENARIOS.

FACIAL RECOGNITION SOFTWARE IS ENHANCING SECURITY SYSTEMS BY PROVIDING ACCURATE AND RELIABLE IDENTIFICATION OF INDIVIDUALS IN REAL-TIME.

GESTURE RECOGNITION SOFTWARE IS ENABLING HANDS-FREE CONTROL OF DEVICES AND APPLICATIONS, ENHANCING ACCESSIBILITY FOR USERS WITH MOBILITY IMPAIRMENTS.

RASHWINTH.V
727623MCA063

TECH - BYTES

SENTIMENT ANALYSIS SOFTWARE IS ANALYZING SOCIAL MEDIA FEEDS TO GAUGE PUBLIC OPINION AND INFORM MARKETING STRATEGIES.

SELF-HEALING SOFTWARE IS UTILIZING ARTIFICIAL INTELLIGENCE TO AUTOMATICALLY DETECT AND FIX BUGS AND VULNERABILITIES, REDUCING THE NEED FOR MANUAL INTERVENTION.

NATURAL LANGUAGE GENERATION (NLG) SOFTWARE IS AUTOMATING THE GENERATION OF REPORTS AND ARTICLES FROM STRUCTURED DATA, SAVING TIME AND RESOURCES FOR CONTENT CREATORS.

ROBOTIC PROCESS AUTOMATION (RPA) SOFTWARE IS AUTOMATING REPETITIVE TASKS AND WORKFLOWS, INCREASING EFFICIENCY AND REDUCING HUMAN ERROR.

IMMERSIVE STORYTELLING SOFTWARE IS COMBINING ELEMENTS OF VR, AR, AND INTERACTIVE NARRATIVES TO CREATE ENGAGING AND INTERACTIVE EXPERIENCES FOR USERS.

TECHTROVE
INFO ABOUT LANGUAGES

R:
DEVELOPED BY : ROSS IHAKA AND ROBERT GENTLEMAN
PLACE: UNIVERSITY OF AUCKLAND IN NEW ZEALAND
YEAR: 1993.

KOTLIN:
DEVELOPED BY : JETBRAINS
PLACE: RUSSIA
YEAR: 2011

TYPESCRIPT:
DEVELOPED BY : MICROSOFT
PLACE : UNITED STATES
YEAR : 2012

SWIFT:
DEVELOPED BY : APPLE INC.
PLACE : UNITED STATES
YEAR : 2014

DART:
DEVELOPED BY : GOOGLE
PLACE : UNITED STATES
YEAR : 2011

TECHTROVE
INFO ABOUT LANGUAGES

GO:

DEVELOPED BY : GOOGLE

PLACE : UNITED STATES

YEAR : 2007

RUST:

DEVELOPED BY : MOZILLA RESEARCH

PLACE: UNITED STATES

YEAR : 2010

JULIA:

DEVELOPED BY : JEFF BEZANSON, STEFAN KARPINSKI, VIRAL B. SHAH, AND ALAN EDELMAN

YEAR: 2012

HASKELL:

DEVELOPED BY : A COMMITTEE LED BY PHILIP WADLER

PLACE: UNITED STATES

YEAR: 1990

CRYSTAL:

DEVELOPED BY : ARY BORENSZWEIG AND CONTRIBUTORS

PLACE: MANAS TECHNOLOGY SOLUTIONS

YEAR: 2014.

ELM:

DEVELOPED BY: EVAN CZAPLICKI

PLACE: UNITED STATES

YEAR: 2012

KIRITHIK SARAN.S
727623MCA026

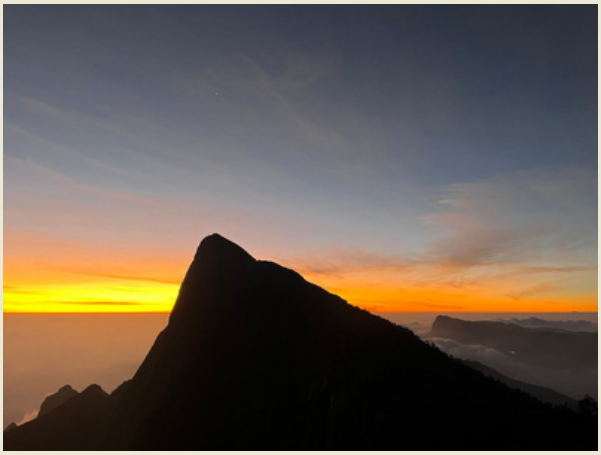
VISUALVERVE

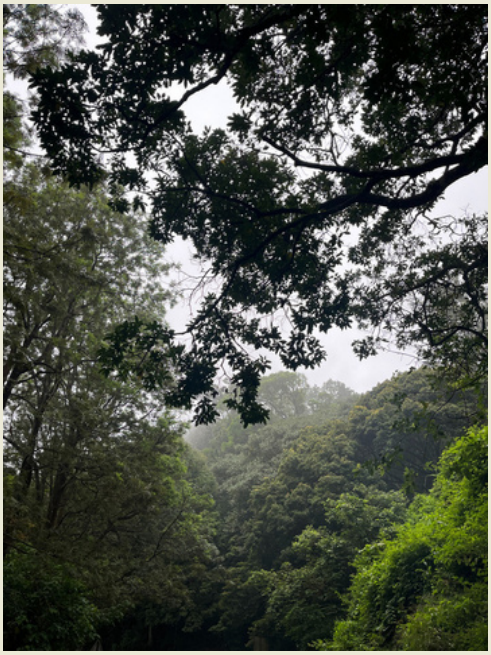
TAMILKANNAN C
727623MCA028

VISUALVERVE

MUTHU KARUPPAIYA.P
727623MCA016

VISUALVERVE





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