Department of Computer Science and Engineering

Editorial Board
Faculty
Dr. P. Vijaya Pal Reddy
Mrs.B.J.Praveena
Mrs. C. Hari Priiyanka

Students
K. Nikshith
R. Meghna
K. Kathyayini
M. Sai Spoorthy
K Rajendra Sreeratna
Rohith Innamuri

Matrusri Engineering College
(sponsored by: MATRUSRI EDUCATION SOCIETY. Estd: 1980)
(Approved by AICTE, Affiliated to Osmania University)

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Newsletter
July to December 2017
Volume 1, Issue 1

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Vision

- The Computer Science and Engineering Department aims to produce competent professionals with strong analytical skills, technical skills, research aptitude and ethical values.

Mission

- To provide hands-on-experience and problem-solving skills by imparting quality education.
- To conduct skill-development programs in emerging technologies to serve the needs of industry, society and scientific community.
- To promote comprehensive education and professional development for effective teaching-learning processes.
- To impart project management skills with an attitude for life-long learning with ethical values.
I congratulate the team of the first newsletter for their efforts to bring in this issue. The department of CSE was started in the year 2011 with an intake of 60 students. The response was very good and the intake was enhanced to 120 in the next year itself. Year after the department is attracting better students. First batch has completed their B. E in 2015 and most of the students settled either in a job or higher studies and doing well.

The second batch also settled well. The department has well qualified expenses, dedicated staff. The department has state of the art laboratories, it has contributed well for the syllabi framing and introduction of mini projects. The department encourages the students for internships, workshops, projects etc. The staff are also actively pursuing the research activities. Several seminars, workshops, Techfest’s were conducted by the department.

We believe that our students have been well accepted in their job profiles and have consistently exceeded expectations of the corporate world. With all these inputs one finds our students hardworking, practical-oriented and effective in any work environment. We have a designed syllabus to strike a balance between professional knowledge and personal skills. We are confident that our current curriculum has enabled overall development of budding engineers to come up to the expectations of the corporate world.

MESSAGE FROM THE HEAD
G. VEERESHALINGAM
Professor,
M Tech (IIT Delhi), (Ph.D.)

"Combine Computing power with passion."

The Department of Computer Science and Engineering has recorded consistent improvement in its academic, research and placement performance. It offers a range of innovatively designed programs whose curricula are constantly updated to meet the changing requirements of the industry and also to meet the needs of major stakeholders. We have the finger on the pulse when it comes to scientific papers, studies, news, policies and events relating to general practice and deliver it to the society for the best of benefit. We are encouraged to see many industries coming back to our department, which reinforces our belief in the effectiveness of our curriculum and its suitability to the dynamic corporate world.

Humans lack efficiency, computer lack intelligence, we need to combine both to create a perfect system. Currently we have two worlds one is physical world in which we live in and other is digital world where we try to replicate every event occurred in the physical world in digital world

- “Explore the Potential Impact of Big Data Challenges, Open Research Issues and various Tools Associated” in International Journal of Innovative Research in Science, Engineering and Technology, ISSN: 2319-8753, June 2017

- “Extended Radial Network for Spectral Neuro Approach In Pattern Recognition” International Journal of Engineering Trends and Technology (IJETT), ISSN: 2231-5381, April 2017


- “Privacy-Aware Public Auditing System for Shared Cloud Data with Dynamic Groups”, in INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH IN TECHNOLOGY, Volume 4 Issue 7 | ISSN: 2349-6002, Dec 2017

Well, writing novels is incredibly simple: an author sits down…and writes. Granted, most writers I know are a bit strange. Some, downright weird. But then again, you’d have to be. To spend hundreds and hundreds of hours sitting in front of a computer screen staring at lines of information is pretty tedious. More like a computer programmer. And no matter how cool the Matrix made looking at code seem computer programmers are even weirder than authors.


Generating a system architecture is not a deterministic process. It requires careful consideration of business requirements, technology choices, existing infrastructure and systems, and actual physical resources, such as budget and manpower is not true always when I use cloud computing.


Code is not like other how-computers-work books. It doesn't have big color illustrations of disk drives with arrows showing how the data sweeps into the computer. Code has no drawings of trains carrying a cargo of zeros and ones. Metaphors and similes are wonderful literary devices but they do nothing but obscure the beauty of technology.


"Cloud is about how you do computing, not where you do computing"

Generating a system architecture is not a deterministic process. It requires careful consideration of business requirements, technology choices, existing infrastructure and systems, and actual physical resources, such as budget and manpower is not true always when I use cloud computing.


"Everything that can be automated will be automated"

If you think that the internet has changed your life, think again. The IoT is about to change it all over again!

- “Smart Bin for Smart Homes (An IoT Based Application)” in 7th International conference on Recent Engineering & Technology 2017, on April 2017.


The neural network is this kind of technology that is not an algorithm, it is a network that has weights on it, and you can adjust the weights so that it learns. You teach it through trials


Java Fundamentals and Java Programming, Sree Data Engineering College, Hyderabad from 30-01-2017 to 03-02-2017

Dr. G. Shyama Chandra Prasad
Associate Professor


Mr. L. Raghavendar Raju
Assistant Professor

A Survey on Social Media Analytics tools for business Intelligence, at IJSRD, February 2017.

Java Fundamentals and Java Programming, Sree Datha Engineering College, Hyderabad from 30/01/17 to 3/02/17.

Mrs. K. Bhagya Laxmi
Assistant Professor

Software Engineering and Testing Methodologies at SVIT, Secunderabad from 28/1/17 to 2/2/17.


Dr. K. Sunil Manohar Reddy
Assistant professor

List of Workshops/ Seminars/ Conferences attended by faculty
The Library is computerized and computerized services are provided to its readers. It is fully equipped with necessary infrastructure, manpower to provide improved Library services to the users.

It is maintained by well-versed and fully qualified staff. They are fully conversant with the holdings of the section and also, they are fully acquainted with the reference materials available in the reference section. They guide the readers to find out the requisite materials and they also provide requisite information efficiently.

The Library is a consortium of technical journals.

- American Society of Civil Engineers (ASCE)
- American Society of Mechanical Engineers (ASME)
- Association of Computing Machinery (ACM)
- Institute of Educational Leadership (IEL)
- Institute of Electrical and Electronics Engineers (IEEE)

and other foreign journals articles to Member Libraries as and when required.
Alumni

Alumni are an integral and a prestigious part of our educational heritage. Hence to strengthen that heritage Alumni meet was organized in January so as to celebrate their accomplishments by giving them the due recognition they deserve and to have them share their enlightening experience with others.

To say the day was a success is an understatement, we were warmly surprised by the turnout. Speeches, interviews, discussions were conducted and students milled around to chat with the professors. It had been a great delight to see MECS students marking their way to success in various companies. Our institute has always pushed against the norms to set new and better standards. Our journey to learn, grow and contribute continues as students’ progress towards perfection. It is therefore important to protect that legacy and we value their contributions and we owe to their results which are but a catalyst for the growth of this institution and We hope to see that such meets remain a regular feature in the future to generate inspiration encouragement and to. Maintain a thriving community. We also hope that they keep in contact with their alumnus and their inputs and visits will always be appreciated.

Training and Placement cell

The Training and Placement Cell was established in the year 2013 with Mr Ch Rajani Prashanth as Training and Placement Coordinator. It organizes programs like Group Discussion (GDs), Mock Interviews and guest lectures on Employability skills and Aptitude tests on regular basis. It plays a pivotal role in counselling and guiding the students for their successful career placement. The goal of the cell is to provide continuous training and employment opportunities to the students.

The recently graduated batch of under-graduates from the Engineering disciplines have been placed in some of the leading national and international companies & institutions including: Amazon, Amazon development Centre, Nvidia Graphic LTD, Tech Mahindra, Wipro technologies, GJK Technologies, Kony India, Enter Pi, Fission Labs, Spoons technologies, IMI Mobile, Dilsettings Technologies Pvt. Ltd., Rain Cloud, TCS, Cognizant, Cocubes, Cadvision, Capgemini; to name a few.

A number of our students have been accepted into leading international institutions such as Florida State University, University of Utah, University of Texas, University of Cincinnati, Fairleigh Dickinson University are among others for pursuing post-graduate studies.

Many other students are pursuing higher studies in Universities like University of Texas, University of Utah, University of Cincinnati, Florida State University, Fairleigh Dickinson University, California State University.

Training programs organized:

We have been partnering with the following organizations and have taken initiatives to improve the employability of students.

1. IEEE-Forum Hyderabad Section-Skill Connect Programme is being run for all BE students.
2. Vivekananda Institute of Human Excellence, Ramakrishna Math, Hyderabad- For personality development and soft skill classes for all BE students.
3. Partnering with Telangana Academy for Skills and Knowledge (TASK).
4. For training including certification courses for BE III/IV-year students- Oracle Academy and CISCO Networking Academy.
5. Campus Recruitment Training (CRT) on Aptitude and Attitude for BE II, III, IV students.
6. Aspiringminds.in (AMCAT), CoCubes.com & Monster- For assessments on Quantitative Aptitude, Logical Reasoning, Verbal Ability, Coding, Computer Fundamentals for all BE IV year students.
Artificial Intelligence

Learning and reasoning by machines without the intervention of humans is basic definition of artificial intelligence. The market for artificial intelligence (AI) technologies is flourishing. Beyond the hype and the heightened media attention, the numerous startups and the internet giants racing to acquire them, there is a significant increase in investment and adoption by enterprises.

Artificial intelligence would be the ultimate version of Google. The ultimate search engine that would understand everything on the web. It would understand exactly what you wanted, and it would give you the right thing. We're nowhere near doing that now. However, we can get incrementally closer to that, and that is basically what we work on.

As of now, we are using artificial intelligence in various fields such as voice recognition, plagiarism detectors, hand script recognition etc. Introduction to AI lessens the workload as well as provides more efficient solutions in less period of time.

Sophia is a highly sought-after speaker in business and showed her prowess and great potential across many industries. She has met face-to-face with key decision makers in banking, insurance, auto manufacturing, property development, media, and entertainment. In addition, she has appeared onstage as a panel member and presenter in high-level conferences, covering how robotics and artificial intelligence will become a prevalent part of people’s lives.

I would like to mention about artificially intelligent, first robot citizen of the world “Sophia”. Sophia is a social humanoid robot developed by Hong Kong-based company Hanson Robotics.

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Name: Ms. R. Meghna
Roll No: 1608-15-733-019
Year: BE(III/IV)

The Flying Future

Technology has developed by leaps and bounds since the past 50 years. Smartphones, wearable tech, smart home system, self-driving electric cars made our life more easy and comfortable. Now, tech has updated to next level with drones.

A Drone is basically a flying machine, used for purposes like surveillance, cinematography and long-range vision. There are many drones available in the market. Of them, DJI is a company that really pushed the drone game to next level.

DJI Mavic Pro, a drone that can fit in a regular sized pocket but is one of the best drones available. So much of tech packed inside, Mavic can do much more than a normal drone. It is always tracked by 20 satellites so that it never forgets its home, or rather its location. It can go up to 10 miles/hour. Four sensors guide Mavic and save it from an obstacle. Mavic has one of the best camera setup. Mounted on a 3 axes gimbal, the camera can shoot 4k 30 fps. Also, Mavic has some useful tweaks in its software like cinema mode, trace mode. It can recognize people and trace them, follow them and can do many other cinematic shots. On full charge, Mavic can be in air for around 30 minutes.

Mavic can be controlled by given controller or any smartphone. Mavic can also be controlled by gestures. Also, Mavic can be paired with DJI VR headset to get a simulator like experience. Thus, we can say that drones, are future of tech. Drones, if kept in good use, can serve mankind in the best way possible.

Name: Mr. P. Durga Shashidhar
Roll No: 1608-15-733-051
Year: BE(II/IV)
Cloud Computing

The trend in computing is like a pendulum. In the 1960s, it was about developing computing power in a single device. In the 1980s, it was about multiple dumb terminals connecting to a mainframe. Now, we’re back to network-based computing — only the broad access to Wi-Fi and mobile data has dramatically expanded access to networks.

“Computation may someday be organized as a public utility” – John McCarthy

The cloud is the latest iteration, but with a key difference — we’re no longer tied to just one server. Cloud is about how you do computing, not where you do computing. It is one of the efficient way of computing, instead of storing entire data in local drives data is outsourced into remote servers which can be accessed only by the user from anywhere in the world. Hence user doesn't need to carry hardware he just need a good internet connection which is sufficient for his computing.

Data duplication is one the drawback of cloud computing. Data duplication will lead to the overload memory of the cloud. Data partitioning method can be employed to avoid the data duplication to some extent. In this method the data is partitioned and each part of the data is secured in different locations on same network which are known only to user. Recreation of data is only possible when you have access to server and have knowledge of which part of data is stored in which part of server this makes cloud even more efficient by reducing the problems of data theft, external fragmentation can be reduced.

Message Digest

Message Digests, also called Hash functions and one-way encryption, are algorithms that, in essence, use no key. Instead, a fixed-length hash value is computed based upon the plaintext that makes it impossible for either the contents or length of the plaintext to be recovered. Hash algorithms are typically used to provide a digital fingerprint of a file's contents, often used to ensure that the file has not been altered by an intruder or virus. Hash functions are also commonly employed by many operating systems to encrypt passwords. Hash functions, then, provide a measure of the integrity of a file.

Let me reiterate that hashes are one-way encryption. You cannot take a hash and "decrypt" it to find the original string that created it, despite the many web sites that claim search databases and/or use rainbow tables to find a suitable string that produces the hash in question.

Hash algorithms that are in common use today include:

- **Message Digest (MD) algorithms**: A series of byte-oriented algorithms that produce a 128-bit hash value from an arbitrary-length message.
  - **MD5**: Developed by Rivest after potential weaknesses were reported in MD4. Although MD5 was initially designed to be used as a cryptographic hash function, it has been found to suffer from extensive vulnerabilities. It can still be used as a checksum to verify data integrity, but only against unintentional corruption.
- **Secure Hash Algorithm (SHA)**: Algorithm for NIST's Secure Hash Standard (SHS)
  - **SHA-1**: Produces a 160-bit hash value and was originally published as FIPS PUB 180-1. SHA-1 was deprecated by NIST as of the end of 2013 although it is still widely used.

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**Technical Write ups by Students**

**Cloud Computing**

Name: Mr. K. Rajendra  
Roll no. 1608-16-733-013  
Year: BE (II/IV)

**Message Digest**

Name: Mr. K. Nikshith Reddy  
Roll No: 160815733014  
Year: BE (III/IV)
Formed in 1965, the CSI has been instrumental in guiding the Indian IT industry down the right path since its formative years. Today, the CSI has 70 chapters all over India, 418 student branches, and more than 90,000 members including India's most famous IT industry leaders, brilliant scientists and dedicated academicians.

The mission of the CSI is to facilitate research, knowledge sharing, learning and career enhancement for all categories of IT professionals, while simultaneously inspiring and nurturing new entrants into the industry and helping them to integrate into the IT community. The CSI is also working closely with other industry associations, government bodies and academia to ensure that the benefits of IT advancement ultimately percolate down to every single citizen of India.

The National Level Techfest DhruvaMedha has been conducted in coordination with the Computer Society of India.

Events Conducted as a part of DhruvaMedha:

Reflexes - A quiz to test your spontaneity. A description is given, based on which questions are to be answered.

Googled - A set of questions are given and a system with internet access is provided to you in order to answer the given questions. You should be quick to answer these questions correctly.

Techno Ladder - This is similar to our childhood game Snake and Ladder. In this, simple questions are given to solve and the correct solution allows you to move forward. In the given time limit the one on the top score will be the winner.

Paper Presentation - This event to express your ideas with others. You have to present a ppt based on any technical topic. The abstract is to be sent previously and ppt should not be too long.

Code Hunt - Coding and decoding in C programming language.

The 5'O Clock Code – The 5'O Clock Code is an online coding challenge to be held on www.hackerrank.com. Set of 5 questions are to be solved in a span of 24 hours.
Home Automation Using MQTT Server

This project offers a new approach to control home appliances from an android application with the help of Wi-Fi module, which can provide controlling over longer range. Recently, ZigBee and Bluetooth have become one of the most promising technologies for home automation, but it is complicated to form a network for ZigBee and Bluetooth provides short range. So we are using Wi-Fi technology which is simple to implement and which is more advanced. The communication between the smart phone application and the processor will be using the Wi-Fi technology, which is the wireless technology based on the 802.11(b/g/n) which is the wireless LAN (WLAN) protocol. The basic vision of the system is to provide a convenient access to the user, which would aid the high degree of mobility and also this paper presents a design and prototype implementation of a new home automation system that uses WiFi technology as a network infrastructure connecting its parts. The proposed system consists of two main components; the first part is the server (MQTT server), which presents system core that manages, controls, and monitors users’ home. Users and system administrator can locally (LAN) or remotely (internet) manage and control system code.

Second part is hardware interface module, which provides appropriate interface to sensors and actuator of home automation system. Unlike most of available home automation systems in the market, the proposed system is scalable that one server can manage many hardware interface modules as long as it exists on WiFi network coverage. System supports a wide range of home automation devices like power management components, and security components. The proposed system is better from scalability and flexibility point of view than the commercially available home automation systems.

Smart Farming

The main aim of this project is to know the moisture in the soil and pest detection. Agriculture depends on the monsoons which has insufficient source of water. So the irrigation is used in agriculture field. In irrigation system, depending upon the soil type, water is provided to plant. In agriculture, two things are very important, first to get information of about the fertility of soil and second to measure moisture content in soil. Nowadays for irrigation, different techniques are available which are used to reduce the dependency of rain. And mostly this technique is driven by electric power and on/off scheduling. In this technique, water level indicator placed in water reservoir and soil moisture sensors are placed at root zone of plant and near the module and gateway unit handles the sensor information and transmit data to the controller which in turns the control the flow of water through the valves.

Mr. D. Sai Teja Reddy - 1608-15-733-057
Mr. Sabavath Somla - 1608-15-733-049
Mr. B. Vamshi Krishna - 1608-15-733-052
Mr. A. Rahul Yadav - 1608-15-733-042
Carpooling System

With increase in the fuel rates, pollution, traffic on the road and to reduce the travelling charges of the individuals who use car for their commute, one of the ways to reduce this misery of public is to make them pool a car. We intent to make a web application on car pooling which drivers(alone riders) who are travelling to work or any places alone can ask fellow travelers through our site.

For those who use public transport system to go to work or places in general can use this web portal to find drivers who are travelling to the same destination and willing to share their ride. This will not only get rid of the extra time taken on the journey for the travelers who use public commute, it also save some money for the travelers who go alone in their vehicle to their destination. This system also helps in reducing the pollution, traffic(since the number of vehicles may reduce), expenses of an individual.

SELL OR RENT YOUR PROPERTY

The main objective of this project is to bring the real estate industry online and enabling real estate industry participants to benefit from the Internet. Site acts as an interface between Individuals, brokers and realtors. Here the user can advertise his property for buying or for selling or even for renting. It also acts as interface for search of hostels.

Our aim is to be an aggregator of great value accommodation hostels around prominent educational institutions and work place for students, working men and women.

Site provides online real-estate service committed to helping you make wise and profitable decisions related to buying, selling, renting of properties, in India. We will provide a fresh new approach to our esteemed users to search for properties to buy or rent, and list their properties for selling.

Property promises to be the most preferred way of finding your dream property and we are committed to help you make a wiser property decision, as a buyer or a seller. We understand the needs and concerns of Individuals, Brokers and Builders and provide them a common platform for realizing maximum benefits and security from real-estates.

Mr. D. Gautham Sai Reddy: 1608-15-733-071
Mr. D. Sai Sasank: 1608-15-733-068
Mr. P. Durga Sreeram: 1608-15-733-093

Mr. B. Sai Pavan Kalyan: 1608-15-733-090
Mr. G. Ananta Sai: 1608-15-733-063
Ms. N. V. A. Rushitha Rao: 1608-15-733-085
Extra-curricular Activities

Paintings By Students

“Photography is the story that we fail to put into words” – Destin Sparks

Art is the journey of free soul

Every picture has a story to tell.

Sai Spoorthy cse(3/4)
1608-15-733-012