Academic Newsletter

Department of CSE

MOONLIT

ACADEMIC NEWSLETTER

Editorial Board

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January to June 2018

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MATRUSRI ENGINEERING COLLEGE
Approved by AICTE & Affiliated to Osmania University 16-1-486,Saidabad,Hyderabad-500059
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Vision and Mission of the Department

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 programmes 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.

Word From HOD

Dr.P.Vijayapal Reddy
Professor,
M.Tech,Ph.D.

As we embark on a new academic year, may I take this opportunity to welcome you all back with an invigorating energy! The department is always looking forward to opportunities that would create future success of our educational system which is only possible through the power of collective effort in promoting excellence in teaching and research! The last academic year yielded to great achievements as a result of collaboration among all the stakeholders of the department. I am encouraging you to maintain such trend of collaboration and innovation to accelerate our strategic goals this academic year 2018-2019 as well! Have a great and rewarding semester ahead!

Faculty Publications

1. **Dr. P. Vijaya Pal Reddy** published a paper on "Nativity Language age and prediction using a document weighted Approach" in the National Conference On Trends In Science, Engineering & Technology, Volume-6 Issue-1 Pg 85 – 88, Feb 2018.
2. **Dr. P. Vijaya Pal Reddy** published a paper on "Sentence Similarity using Syntactic and Semantic features for Multi Document Summarization" in the Springer - International Conference on Innovative Computing and Communication, Volume54, May, 2018.
3. **Dr. G. Shyama Chandra Prasad** published a paper on "Particle Swarm Optimization Methodology for Classification of Images" in the Ist national conference on Trends in Science, Engineering and Technology NTSET 2018, March 2018.
4. **Dr. K. Sunil Manohar Reddy** published a paper on "Analyzing Various Face Recognition Techniques Using Neural Networks" in the International Journal of Creative Research Thoughts, Special Issue, Pg 63-65, February 2018
5. **Mrs. J. Samatha** published a paper on "Sentiment Analysis On Product Reviews Using Big Data" in the International Journal of creative research thoughts, Volume-6, Issue-1, Pg No: 66-69, Feb 2018.
6. **Mrs. K Bhagya Laxmi** published a paper on "Home automation using MQTT Server" in the International Journal of creative research thoughts, Volume: 6, Issue: 1, Pg No: 82-84, Feb 2018.
7. **Mr. V Vinay Kumar** published a paper on "Black box optimization for information retrieval through dynamic parameter" in the International Journal of scientific research in computer science and engineering and information technology, Volume- 3 Issue -5, Pg 82-87, May 2018.
8. **Mrs. B J Praveena** published a paper on "IoT and cloud computing in health care systems" in the International Journal of Research, Volume- 5 Issue- 5, Pg 1005-1011,May 2018.
9. **Mrs. B J Praveena** published a paper on "Cloud computing and IoT in health care system" in the Ist national conference on Trends in Science, Engineering and Technology NTSET 2018, March 2018.
10. **Mr. M Praveen Kumar** published a paper on "A comparative analysis of routing issues in mobile adhoc networks" in the International Journal of creative research thoughts, Volume-6, Issue-1, Pg 107-110 Feb 2018.
11. **Mr. M Praveen Kumar** published a paper on "Trust evaluation algorithm to identify malicious node in MANET" in the International Journal of creative research thoughts, Volume- 6, Issue-1,Pg 95-98 Feb 2018.
12. **Mrs. G.Pratibha** published a paper on "Parsing setiment in telugu language sentences" in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018, March 2018.
13. **Mrs. P Ravindra** published a paper on Survival prediction for titanic data using machine learning algorithms in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018,March 2018
14. **Mr. V Chandra Shekhar** published a paper on A survey on concise patterns over data streamIst national conference on Trends in Science,Engineering and Technology NTSET 2018 March 2018
15. **Mrs. M.Swapna Reddy** published a paper on Data Partition in cloud computing in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018 March 2018.

Faculty Publications

16. **Mrs.M.Priyanka** published a paper on Data security threats, challenges, and techniques to protect data in cloud in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018, March 2018
17. **Mr.M. Praveen Kumar** published a paper on "Threat with Identity access management in cloud computing and ways to handle them" in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018
18. **Mr.M. Praveen Kumar** published a paper on "Data security threats, challenges, and techniques to protect data in cloud" in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018
19. **Mrs.B.Sujatha** published a paper on "Student's Data Assessment Using Association Rules in Mining" in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018 March 2018
20. **Mr.L. Raghavendar Raju** published a paper on "Trust Evaluation Algorithm (TEA) to Identify Malicious Node in MANETs" in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018 March 2018a
21. **Mr.L. Raghavendar Raju** published a paper on "A Comparative Study on Routing Protocols in Mobile Ad hoc Networks (MANETs)" in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018 March 2018
22. **Mr.L. Raghavendar Raju** published a paper on "Approach for Reciprocity of Key for Secure Routing in MANETs" in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018 March 2018
23. **Mr.L. Raghavendar Raju** published a paper on "Routing Security in Mobile Ad hoc Networks (MANETs) using Dynamic Encryption" in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018 March 2018
24. **Mrs.K Shalini** published a paper on "Shield log management and user invalidation in cloud computing" in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018 March 2018
25. **Mrs.M.Priyanka** published a paper on "Threat with Identity access management in cloud computing and ways to handle them" in the Ist national conference on Trends in Science,Engineering and Technology NTSET 2018 March 2018

List of Workshop/Seminars/Conference attended by the Faculty

1. **Dr. K. Sunil Manohar Reddy** attended workshop on Internet of Things (IoT) and Data Analytics conducted at University College of Engg(A), OU, Hyd in Association with VSSUT,Burla,Odisha on 23-03-2018 to 24-03-2018

2. **Mrs G Pratibha** attended workshop on Big Data Analytics and Deep Learning(FDP) at MJCET from 03-01-2018 to 08-01-2018

3. **Mr.A.V. Murali Krishna** attended workshop on Sensing Visitor outside the door & sending notification to the owner(Internal Guide) selected for Anveshana 2018

4. **Mr. A. V Murali Krishna** attended workshop on CCNA: Routing & Switching Essentials at MVSR from march-may 2018

5. **Mrs.B.J. Praveena** attended workshop on FDP beyond syllabi at Matrusri Engineering College from 08/01/18 to 10/01/18

6. **Mr.L. Raghavendra Raju** attended workshop on FDP beyond syllabi at Matrusri Engineering College from 08/01/18 to 10/01/18

7. **Mr.V. Chandrasekhar** attended workshop on FDP beyond syllabi at Matrusri Engineering College from 08/01/18 to 10/01/18

8. **Mr.A.Pramod Kumar** attended workshop on FDP beyond syllabi at Matrusri Engineering College from 08/01/18 to 10/01/18

9. **Mr.P.Siva** attended workshop on FDP beyond syllabi at Matrusri Engineering College from 08/01/18 to 10/01/18

10. **Mrs.M. Swapna Reddy** attended workshop on FDP beyond syllabi at Matrusri Engineering College from 08/01/18 to 10/01/18

11. **Mrs.B.Sujatha** attended Research Methodology (Course work) at JNTUH from 22/01/2018 to 29/01/2018

12. **Mr.P.Ravindra** attended DATA SCIENCES(National Seminar) at VRSEC, Vijayawada from 23/02/2018 to 24/02/2018

13. **Mrs.T.Aruna Jyothi** attended Internet of Things (IoT) and Data Analytics(Seminar) conducted at University College of Engg(A), OU, Hyd in Association with VSSUT,Burla,Odisha on 23-03-2018 to 24-03-2018

14. **Mrs.M. Swapna Reddy** attended Massive Data Processing in Internet Applications(seminar) at Badruka College PG Centre, Hyd from 19/02/18 to 20/02/18

15. **Mrs.K.Shalini** attended workshop on FDP beyond syllabi at Matrusri Engineering College from 08/01/18 to 10/01/18

16. **Mrs.C.Hari Priyanka** attended workshop on FDP beyond syllabi at Matrusri Engineering College from 08/01/18 to 10/01/18

Departmental activities

Step Up at Deloitte Program

A 1-day program on "Step Up at Deloitte" was organised by the Department of Computer Science & Engineering on 16th Mar,2018 for the students of BE- ¾, in association with TASK

Data Science using R

A guest lecture on "Data Science using R" was delivered by Mr. P. Ravindra, Asst. prof, Matrusri Engineering College, Saidabad on 17th march 2018 for the students of BE(CSE) II, III, IV years.

Deep Learning

A Guest lecture on "Deep Learning" was delivered by Mr. Subba Reddy Oota, Data Scientist, Tera Data on 12th march 2018 for the students of B.E (CSE)-III Year students

Cisco CCNA training

Department of CSE organizing CISCO-CCNA R & S Instructor Training Program from 12 March to 24 March 2018

Alumni

Alumni are an integral and a prestigious part of our educational heritage. Hence to strengthen that heritage Alumni meet was organized 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

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 counseling 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, GGK Technologies, Kony India, Enter Pi, Fission Labs, Spoors technologies, IMI Mobile, Dilytics 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.

Technical Write-ups

Soft Robot Helps The Heart Beat

Heart failure affects 41 million people worldwide. Today, some of the treatment options are mechanical pumps called ventricular assist devices (VADs), which pump blood from the ventricles into the aorta, and heart transplants. While VADs are continuously improving, patients are still at high risk for blood clots and stroke.

To create an entirely new device that doesn't come into contact with blood, Harvard researchers took inspiration from the heart itself. The thin silicone sleeve uses soft pneumatic actuators placed around the heart to mimic the outer muscle layers of the mammalian heart. The actuators twist and compress the sleeve in a motion similar to the beating heart.

The device is tethered to an external pump, which uses air to power the soft actuators.

The sleeve can be customized for each patient, said Roche. If a patient has more weakness on the left side of the heart, for example, the actuators can be tuned to give more assistance there. The pressure of the actuators can also increase or decrease over time, as the patient's condition evolves.

The sleeve is attached to the heart using a combination of a suction device, sutures, and a gel interface to help with friction between the device and the heart.

The cardiac field had turned away from idea of developing heart compression instead of blood-pumping VADs due to technological limitations, but now with advancements in soft robotics it's time to turn back," said Frank Pigula, a cardiothoracic surgeon.

M.Shravya
CSE III/IV

Technical Write-ups

The WOEBOT

The message I couldn't ignore appeared around 6pm. I was on the bus. Instinctively, I cupped a hand around my phone and stole a furtive glance at the newest blue bubble on the screen.

"Hey Erin, you ready to check in?" someone - or something - asked.

The message was from Woebot, an artificially intelligent chatbot designed to help people cope with feelings of depression and anxiety. It was my latest jaunt into the new and often uncharted territory of digital mental health care.

Alison Darcy, the clinical psychologist at Stanford University who created Woebot , based the tool on a type of treatment called cognitive-behavioural therapy, a heavily-researched clinical approach to depression that encourages people to examine how they react to challenging situations.

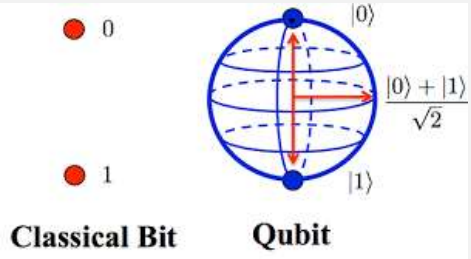
Woebot isn't a replacement for an in-person therapist, according to Darcy, nor will it help you find one. Instead, the tool is part of a widening array of approaches to mental health. But it's fundamentally different from any form of therapy that's existed before.

"The Woebot experience doesn't map onto what we know to be a human-to-computer relationship and it doesn't map onto what we know to be a human-to-human relationship either," Darcy told Business Insider. "It seems to be something in the middle."

The uniqueness of Woebot could prove to be its biggest strength - or cause its downfall. But with roughly one in five Americans struggling with some form of mental illness or psychiatric disease, experts agree that it's time for something new.

P.Durga Shashidhar
CSE II/IV

Technical Write-ups



More with Quantam Computing

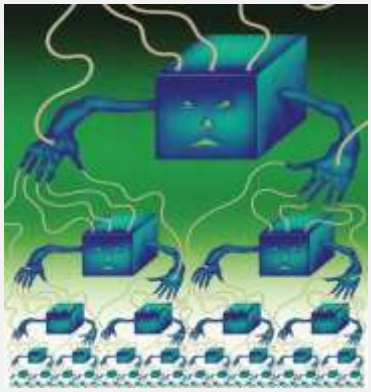
Quantum computing is computing using quantum-mechanical phenomena, such as superposition and entanglement. A **quantum computer** is a device that performs quantum computing. Such a computer is different from binary digital electronic computers based on transistors. Whereas common digital computing requires that the data be encoded into binary digits (bits), each of which is always in one of two definite states (0 or 1), quantum computation uses quantum bits or qubits, which can be in superpositions of states. A quantum Turing machine is a theoretical model of such a computer and is also known as the universal quantum computer. The field of quantum computing was initiated by the work of Paul Benioff and Yuri Manin in 1980, Richard Feynman in 1982, and David Deutsch in 1985.

Both practical and theoretical research continues, and many national governments and military agencies are funding quantum computing research in additional effort to develop quantum computers for civilian, business, trade, environmental and national security purposes, such as cryptanalysis.Noisy devices with a small number of qubits have been developed by a number of companies, including IBM, Intel, and Google. IBM has made 5-qubit and 16-qubit quantum computing devices available to the public for experiments via the cloud on the IBM Q Experience. D-Wave Systems has been developing their own version of a quantum computer that uses annealing.

Large-scale quantum computers would theoretically be able to solve certain problems much more quickly than any classical computers that use even the best currently known algorithms, like integer factorization using Shor's algorithm (which is a quantum algorithm) and the simulation of quantum many-body systems. There exist quantum algorithms, such as Simon's algorithm, that run faster than any possible probabilistic classical algorithm. A classical computer could in principle (with exponential resources) simulate a quantum algorithm, as quantum computation does not violate the Church–Turing thesis. On the other hand, quantum computers may be able to efficiently solve problems which are not *practically* feasible on classical computers.

K.Rajendra
CSE II/IV

Technical Write-ups



Botnet of Things

Botnet architecture has evolved over time in an effort to evade detection and disruption. Traditionally, bot programs are constructed as clients which communicate via existing servers. This allows the **bot herder** (the person controlling the botnet) to perform all control from a remote location, which obfuscates their traffic. Many recent botnets now rely on existing peer-to-peer networks to communicate. These P2P bot programs perform the same actions as the client-server model, but they do not require a central server to communicate.

Client-server model

A network based on the client-server model, where individual clients request services and resources from centralized servers

The first botnets on the internet used a client-server model to accomplish their tasks. Typically, these botnets operate through Internet Relay Chat networks, domains, or websites. Infected clients access a predetermined location and await incoming commands from the server. The bot herder sends commands to the server, which relays them to the clients. Clients execute the commands and report their results back to the bot herder.

In the case of IRC botnets, infected clients connect to an infected IRC server and join a channel pre-designated for C&C by the bot herder. The bot herder sends commands to the channel via the IRC server. Each client retrieves the commands and executes them. Clients send messages back to the IRC channel with the results of their actions.

Peer-to-peer

A peer-to-peer (P2P) network in which interconnected nodes ("peers") share resources among each other without the use of a centralized administrative system

In response to efforts to detect and decapitate IRC botnets, bot herders have begun deploying malware on peer-to-peer networks. These bots may use digital signatures so that only someone with access to the private key can control the botnet.

Newer botnets fully operate over P2P networks. Rather than communicate with a centralized server, P2P bots perform as both a command distribution server and a client which receives commands. This avoids having any single point of failure, which is an issue for centralized botnets.

In order to find other infected machines, the bot discreetly probes random IP addresses until it contacts another infected machine. The contacted bot replies with information such as its software version and list of known bots. If one of the bots' version is lower than the other, they will initiate a file transfer to update.This way, each bot grows its list of infected machines and updates itself by periodically communicating to all known bots.

K.Nikshith Reddy
CSE III/IV

Student Participations

S.No	Name	Class	Event	Date	Institute/ Venue
1	V Anusha	CSE II/IV	Anveshana	29/01/18	Agastya International Foundation
2	K. Nikshith Reddy	CSE III/IV	Reflexes	29/01/18	Matrusri Engineering College
3	Divya P	CSE II/IV	Anveshana	29/01/18	Agastya International Foundation
4	D Saiteja Reddy	CSE III/IV	Machine Learning WorkShop	07/02/18 12/02/18	MVSR Engineering College
5	J.Sri Hari Priya	CSE III/IV	Machine Learning WorkShop	07/02/18 12/02/18	MVSR Engineering College
6	G.Deepika	CSE II/IV	TechnoLadder	29/01/18	Matrusri Engineering College
7	S Kaushiq Reddy	CSE II/IV	Codeathom	09/02/18 10/02/18	MVSR Engineering College
8	B Yamini	CSE II/IV	Tech Quiz	09/02/18 10/02/18	MVSR Engineering College
9	D Manjusha	CSE II/IV	Tech Quiz	09/02/18 10/02/18	MVSR Engineering College
10	G Rithisha	CSE II/IV	Unity 3D Workshop	09/02/18 10/02/18	MVSR Engineering College
11	K Akshya	CSE III/IV	Unity 3D Workshop	09/02/18	MVSR Engineering College
12	S Udayasri	CSE III/IV	Unity 3D Workshop	09/02/18	MVSR Engineering College
13	M Indupriya	CSE III/IV	Unity 3D Workshop	09/02/18	MVSR Engineering College
14	J Sri Haripriya	CSE III/IV	Project Poster	09/02/18 10/02/18	MVSR Engineering College
15	J.Haripriya	CSE III/IV	Codeathon	09/02/18 10/02/18	MVSR Engineering College
16	J Sri Haripriya	CSE III/IV	Codeathon	09/02/18 10/02/18	MVSR Engineering College
17	J.Sri Hari priya	CSE III/IV	Machine Learning WorkShop	07/02/18 12/02/18	MVSR Engineering College
18	D Saiteja Reddy	CSE III/IV	Project Poster	09/02/18 10/02/18	MVSR Engineering College
19	D Saiteja Reddy	CSE III/IV	Codeathon	09/02/18 10/02/18	MVSR Engineering College
20	S KoushiK Reddy	CSE II/IV	Codeathon	09/02/18 10/02/18	MVSR Engineering College
21	K Bhargav	CSE III/IV	Powerlifting Tournament	Jan 18	Birla Institute of Technology and Science
22	D Saiteja Reddy	CSE III/IV	State Level CSI Student Convention Fusion-2k18	09/02/18 10/02/18	MVSR Engineering College
23	Sri Hari Priya	CSE III/IV	State Level CSI Student Convention Fusion-2k18	09/02/18 10/02/18	MVSR Engineering College