

# MOONLIT

ACADEMIC NEWSLETTER

## Editorial Board

### Faculty

Dr.P.Vijayapal Reddy

Mrs.B.J.Praveena

Mrs.C.Hari Priyanka

### Students

K. Nikshith

R. Meghna

K Rajendra Sreevatsa

July to December 2018

Volume 4, Issue 1

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**MATRUSRI ENGINEERING COLLEGE**  
**Approved by AICTE & Affiliated to Osmania**  
**University 16-1-486,Saidabad,Hyderabad-500059**  
**Website: <http://matrusri.edu.in>**

## 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.

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### 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.

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## Word From HOD



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

The Department of Computer Science 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 requirement of the industry and also to meet the needs of major stakeholders. We believe that our students have been well accepted in their job profiles and have consistently exceeded expectations of the corporate world. During study at the department, the students are encouraged to get hands-on experience in the corporate world through internship projects with reputed organizations. In their curriculum they are encouraged to take up mini projects to supplement theoretical knowledge with practical experience. We also encourage students to organise events such as Dhruva Medha (Inter-collegiate Technical festival), participate in technical events organised by other colleges and also get involved in activities of social relevance.

## Faculty Publications

1. **Dr. P. Vijayapal Reddy** published a paper on “Polarity Classification for Telugu Tweets” in the Journal of Applied Science and Computations, Volume 5, Issue 8 in August 2018
2. **Dr. P. Vijayapal Reddy** published a paper on “Sentiment Classification on Telugu Twitter Data Set”, Journal of Applied Science and Computations, Volume 5, Issue 8 in August 2018.
3. **Dr. P. Vijayapal Reddy** published a paper on Sentence similarity using syntactic and semantic features for multi document summarization at ICICC-springer conference in June 2018
4. **Dr. P. Vijayapal Reddy** published a paper on Topic oriented multi document summarization using LSA, syntactic and semantic features at ICICC-springer conference in June 2018.
5. **Dr S Mamatha** published a paper on “A novel technique to provide secure route discovery and data transmission in a MANET using black hole attack.” at IJSER in July 2018.
6. **B. J Praveena** published a paper on “Modified Efficient Geographic Multicasting Protocol in MANET ” at IJETCSE in April 2018.

## List of Workshop/Seminars/Conference attended by the Faculty

1. **Dr.P.Vijayapal Reddy**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
2. **Prof.G.Veereshalingam**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
3. **Prof.G.Veereshalingam**, attended a seminar on “Gender Sensitization” at MECS on 31/08/2018
4. **Dr.S.Mamatha**,attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
5. **Dr.G.Shyama Chandra Prasad**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
6. **Dr.G.Shyama Chandra Prasad**, attended a seminar on “Gender Sensitization” at MECS on 31/08/2018 .
7. **Dr.K.Sunil Manohar Reddy**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
8. **Dr.K.Sunil Manohar Reddy**, attended a seminar on “Gender Sensitization” at MECS on 31/08/2018 .
9. **Dr.K.Sunil Manohar Reddy**, attended a Faculty development program on “Big Data Analytics” conducted by at MVSR from 7/8/2018 to 12/8/2018.
10. **Mrs.J.Samatha**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
11. **Mrs.J.Samatha**, attended a seminar on “Gender Sensitization” at MECS on 31/08/2018.

## List of Workshop/Seminars/Conference attended by the Faculty

12. **Mrs.J.Samatha**, attended an online course on “Hello Bot: introduction to RPA” on 15/09/2018 by Automation Anywhere.
13. **Mrs.J.Samatha**, attended a training program by “CCNA: Connecting Networks by TACT & Cisco” on 02/08/2018.
14. **Mrs.K.Bhagya laxmi**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
15. **Mrs.K.Bhagya laxmi**, attended an online course on “Foundation Program in ICT for Education” conducted by IITBOMBAY from 13/9/2018 to 18/10/2018.
16. **Mrs.K.Bhagya laxmi**, attended an online course on “Pedagogy for Online and Blended Teaching-Learning Process” conducted by IITBOMBAY from 30/10/2018 to 27/12/2018.
17. **Mrs.G.Pratibha**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
18. **Mrs.G.Pratibha**, attended a Faculty development program on “Computational Intelligence using Machine Learning Techniques” conducted by AICTE at MECS from 23/7/2018 to 28/7/2018.
19. **Mrs.G.Pratibha**, attended an online course on “Foundation Program in ICT for Education” conducted by IITBOMBAY from 13/9/2018 to 18/10/2018.
20. **Mrs.G.Pratibha**, attended an online course on “Pedagogy for Online and Blended Teaching-Learning Process” conducted by IITBOMBAY from 30/10/2018 to 27/12/2018.
21. **Mrs.G.Pratibha**, attended an online course on “Hello Bot: introduction to RPA” on 15/09/2018 by Automation Anywhere.
22. **Mr.A.V.Murali Krishna**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
23. **Mr.A.V.Murali Krishna**, attended a seminar on “Gender Sensitization” at MECS on 31/08/2018.
24. **Mr.V.Vinay Kumar**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
25. **Mrs.B.J.Praveena**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
26. **Mrs.B.J.Praveena**, attended a Faculty development program on “Computational Intelligence using Machine Learning Techniques” conducted by AICTE at MECS from 23/7/2018 to 28/7/2018.
27. **Mrs.B.J.Praveena**, attended an online course on “Foundation Program in ICT for Education” conducted by IITBOMBAY from 13/9/2018 to 18/10/2018.
28. **Mrs.B.J.Praveena**, attended an online course on “Pedagogy for Online and Blended Teaching-Learning Process” conducted by IITBOMBAY from 30/10/2018 to 27/12/2018.
29. **Mrs.B.J.Praveena**, attended an online course on “Hello Bot: introduction to RPA” on 15/09/2018 by Automation Anywhere.
30. **Mrs.B.J.Praveena**, attended a workshop on “CCNA Routing & Switching” from 9/07/2018 to 2/08/2018.
31. **Mr.L.Raghavendra Raju**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
32. **Mr.M.Praveen Kumar**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
33. **Mrs.B.Sujatha**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
34. **Mr.P.Ravindra**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
35. **Mrs.M.Priyanka**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
36. **Mrs.M.Priyanka**, attended a Faculty development program on “Computational Intelligence using Machine Learning Techniques” conducted by AICTE at MECS from 23/7/2018 to 28/7/2018.

## List of Workshop/Seminars/Conference attended by the Faculty

37. **Mrs.M.Priyanka**, attended a Faculty development program on “Computational Intelligence using Machine Learning Techniques” conducted by AICTE at MECS from 23/7/2018 to 28/7/2018.
38. **Mrs.M.Priyanka**, attended a seminar on “Gender Sensitization” at MECS on 31/08/2018 .
39. **Mrs.M.Priyanka**, attended a workshop on “Computer Graphics using Open GL” at MVSR on 08/08/2018.
40. **Mr.V.Chandrasekhar** ,attended a Faculty development program on “Computational Intelligence using Machine Learning Techniques” conducted by AICTE at MECS from 23/7/2018 to 28/7/2018.
41. **Mr.V.Chandrasekhar**, attended a seminar on “Gender Sensitization” at MECS on 31/08/2018 .
42. **Mr.V.Chandrasekhar**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
43. **Mr.A.Pramod Kumar**, attended a Faculty development program on “Computational Intelligence using Machine Learning Techniques” conducted by AICTE at MECS from 23/7/2018 to 28/7/2018.
44. **Mr.A.Pramod Kumar**, attended a seminar on “Gender Sensitization” at MECS on 31/08/2018 .
- 45.**Mr.A.Pramod Kumar**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
46. **Mr.P.Siva**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
47. **Mr.K.Vikram Reddy**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
48. **Mrs.T.Aruna jyothi**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
49. **Mrs.T.Aruna jyothi**, attended a seminar on “Gender Sensitization” at MECS on 31/08/2018.
50. **Mrs.M.Swapna Reddy**, attended a Faculty development program on “Computational Intelligence using Machine Learning Techniques” conducted by AICTE at MECS from 23/7/2018 to 28/7/2018.
51. **Mrs.M.Swapna Reddy**, attended a seminar on “Gender Sensitization” at MECS on 31/08/2018.
- 52.**Mrs.M.Swapna Reddy**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
- 53.**Mrs.M.Swapna Reddy**, attended a online course on “Foundation Program in ICT for Education” conducted by IITBOMBAY from 13/9/2018 to 18/10/2018.
- 54.**Mrs.M.Swapna Reddy**, attended a online course on “Pedagogy for Online and Blended Teaching-Learning Process” conducted by IITBOMBAY from 30/10/2018 to 27/12/2018.
- 55.**Mrs.M.Swapna Reddy**, attended a online course on “Hello Bot: introduction to RPA” on 15/09/2018 by Automation Anywhere.
56. **Mrs.M.Swapna Reddy**, attended a workshop on “CCNA Routing & Switching” from 9/07/2018 to 2/08/2018.
- 57.**Mrs.K.Shalini**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
58. **Mrs.K.Shalini**, attended a Faculty development program on “Computational Intelligence using Machine Learning Techniques” conducted by AICTE at MECS from 23/7/2018 to 28/7/2018.
59. **Mrs.C.Hari Priyanka**, attended a Faculty development program on “Python & R Programming” conducted by E & ICT Academy, NIT(Warangal) at MECS from 16/07/18 to 22/07/18.
60. **Mrs.C.Hari Priyanka** attended a Faculty development program on “Computational Intelligence using Machine Learning Techniques” conducted by AICTE at MECS from 23/7/2018 to 28/7/2018.

## Departmental activities

Department has organized a one week Faculty Development Program in collaboration with AICTE on “Computational Intelligence using Machine Learning Techniques” from 23/7/2018 to 28/7/2018.



Department has organized a two weeks Faculty Development Program in collaboration with NIT WARANGAL on “Python & R Programming” from 16/07/18 to 22/07/18.



## Dhruvamedha 2k18

In its endeavour to provide a national platform for the students to showcase their talents and skills in fierce competitions, displaying the cutting edge technology and research from all over the country, having renowned personalities motivate the students and promoting solutions to alleviate the common man of his banal yet significant problems, Dhruva Medha strives for one and all to get inspired and look up to which was held on 28<sup>th</sup>,29<sup>th</sup> September 2k18.



As part of Dhruva Medha various Technical events were conducted like Paper Presentation, Googled, Algorithmiac, Blind Coding, Lan Gaming, Crypt Your Mind, Play and Code with Jenga, Code Puzzle.

### Matrusri Engineering College

Department of Computer Science and Engineering

**Day 1**

Workshop on DevOps  
(Registration - 100/-)

Per event - 75/-  
Combo - 300/-

Spot registrations are available!!

## Dhruva Medha 2K18

28<sup>th</sup> - 29<sup>th</sup> September

Attractive cash prizes!

**Day 2**

Paper Presentation

- Googled
- Algorithmiac
- Blind Coding
- Code Puzzle
- Lan Gaming
- Crypt your Mind
- Play and Code with Jenga

Sponsored by: **Matrusri Education Society**

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## Technical Write-ups



### 5G Wireless Networks

**5G** is the fifth generation of cellular mobile communications. It succeeds the 4G (LTE/WiMax), 3G (UMTS) and 2G (GSM) systems. 5G performance targets high data rate, reduced latency, energy saving, cost reduction, higher system capacity, and massive device connectivity. The first phase of 5G specifications in Release-15 will be completed by March 2019 to accommodate the early commercial deployment. The second phase in Release-16 is due to be completed by March 2020 for submission to the International Telecommunication Union (ITU) as a candidate of IMT-2020 technology. The ITU IMT-2020 specification demand for speeds up to 20 gigabits per second, achievable with millimeter waves of 15 gigahertz and higher frequency. 3GPP is going to submit 5G NR (New Radio) as its 5G communication standard proposal. 5G New Radio can include lower frequencies, from 600 MHz to 6 GHz. However, the speeds in these lower frequencies are only slightly higher than new 4G systems, estimated at 15% to 50% faster.

#### **Advantages:**

##### **Speed**

5G promises superior speeds in most conditions to the 4G network. Qualcomm presented a simulation at Mobile World Congress that predicts 490 Mbit/s median speeds for 3.5 GHz 5G Massive MIMO and 1.4 Gbit/s median speed for 28 GHz mm. 5G NR speed in sub-6 GHz bands can be slightly higher than the 4G with a similar amount of spectrum and antennas, though some 3GPP 5G networks will be slower than some advanced 4G networks, such as T-Mobile's LTE/LAA network, which achieves 500+ Mbit/s in Manhattan.

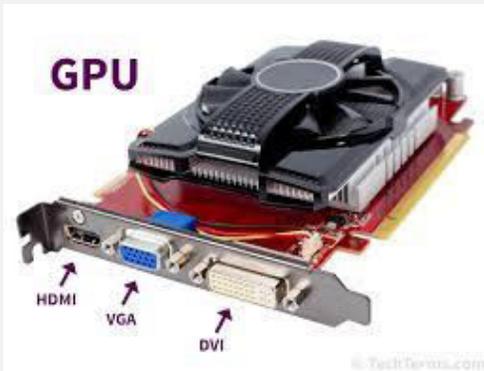
##### **Low communication latency**

Latency is the time it takes to pass a message from sender to receiver. Low communication latency is one improvement in 5G. Lower latency could help 5G mobile networks enable things such as multiplayer mobile gaming, factory robots, self-driving cars and other tasks demanding quick response.

##### **New use cases**

Features of 5G network, including extreme high bandwidth, ultra low latency, and high density connections, are expected to enable many new use cases that are impossible to be done via older network standards.

## Technical Write-ups



### Graphics Processing Unit

A graphics processing unit (GPU) is a computer chip that performs rapid mathematical calculations, primarily for the purpose of rendering images. In the early days of computing, the central processing unit (CPU) performed these calculations. As more graphics-intensive applications such as AutoCAD were developed; however, their demands put strain on the CPU and degraded performance. GPUs came about as a way to offload those tasks from CPUs, freeing up their processing power.

A GPU may be found integrated with a CPU on the same circuit, on a graphics card or in the motherboard of a personal computer or server. NVIDIA, AMD, Intel and ARM are some of the major players in the GPU market.

#### GPU vs. CPU

A graphics processing unit is able to render images more quickly than a central processing unit because of its parallel processing architecture, which allows it to perform multiple calculations at the same time. A single CPU does not have this capability, although multicore processors can perform calculations in parallel by combining more than one CPU onto the same chip. A CPU also has a higher clock speed, meaning it can perform an individual calculation faster than a GPU. Therefore, a CPU is often better equipped to handle basic computing tasks.

K.Amulya Reddy  
CSE III/IV

## Technical Write-ups



### Immersive Environments And Virtual Reality

Today, virtual reality and immersive environments are lines of research which can be applied to numerous scientific and educational domains. Immersive digital media needs new approaches regarding its interactive and immersive features, which means the design of new narratives and relationships with users. Additionally, ICT (information and communication theory) evolves through more immersive and interactive scenarios, it being necessary to design and conceive new forms of representing information and improving users' interaction with immersive environments.

Virtual reality and technologies associated with the virtuality continuum, such as immersive and digital environments, are emerging media. As a medium, this approach may help to build and represent ideas and concepts, as well as developing new languages. This review analyses the cutting-edge expressive, interactive and representative potential of immersive digital technologies. It also considers future possibilities regarding the evolution of these immersive technologies, such as virtual reality, in coming years, in order to apply them to diverse scientific, artistic or informational and educational domains. We conclude that virtual reality is an ensemble of technological innovations, but also a concept, and propose models to link it with the latest in other domains such as UX (user experience), interaction design. This concept can help researchers and developers to design new experiences and conceive new expressive models that can be applied to a wide range of scientific lines of research and educational dynamics.

## Technical Write-ups



### Block chain Technology

The blockchain is an undeniably ingenious invention – the brainchild of a person or group of people known by the pseudonym, Satoshi Nakamoto. But since then, it has evolved into something greater, and the main question every single person is asking is: What is Blockchain?

By allowing digital information to be distributed but not copied, blockchain technology created the backbone of a new type of internet. Originally devised for the digital currency, Bit coin, (Buy Bitcoin) the tech community is now finding other potential uses for the technology.

Bitcoin has been called “digital gold,” and for a good reason. To date, the total value of the currency is close to \$112 billion US. And blockchains can make other types of digital value. Like the internet (or your car), you don’t need to know how the blockchain works to use it.

By storing data across its network, the blockchain eliminates the risks that come with data being held centrally. Its network lacks centralized points of vulnerability that computer hackers can exploit. Today’s internet has security problems that are familiar to everyone. We all rely on the “username/password” system to protect our identity and assets online. Blockchain security methods use encryption technology.

Naga Divya Anjali  
CSE III/IV

## Student Participations

S.No	Name		Class	Event	Date	Institute/ Venue
1	Sai Srinija	CSE IV/IV	Smart India Hackathon	Participated	29/3/2018,30/3/2018	SriVenkateshwara College of Engineering, Bangalore
2	Tejaswini	CSE IV/IV	Smart India Hackathon	Participated	29/3/2018,30/3/2018	SriVenkateshwara College of Engineering, Bangalore
3	Sai Teja Reddy	CSE IV/IV	Smart India Hackathon	Participated	29/3/2018,30/3/2018	SriVenkateshwara College of Engineering, Bangalore
4	Nikshith	CSE IV/IV	Smart India Hackathon	Participated	29/3/2018,30/3/2018	SriVenkateshwara College of Engineering, Bangalore
5	Rishikesh	CSE IV/IV	Smart India Hackathon	Participated	29/3/2018,30/3/2018	SriVenkateshwara College of Engineering, Bangalore
6	Udaya Sri	CSE IV/IV	Smart India Hackathon	Participated	29/3/2018,30/3/2018	SriVenkateshwara College of Engineering, Bangalore
7	Basanthi	CSE III/IV	Run for Cause	Coordinator	01/04/2018	Necklace Road
8	Hanoop	CSE III/IV	Run for Cause	Participated	01/04/2018	Necklace Road
9	Saketh	CSE II/IV	Smart City Hackathon	Participated	01/04/2018,02/04/2018	GRIET,Hyderabad
10	Ch.Krishna Sai	CSE III/IV	Smart City Hackathon	Participated	01/04/2018,02/04/2018	GRIET,Hyderabad
11	Anwesh yadav	CSE IV/IV	RPA workshop	Participated	17/9/2018,18/9/2018	MECS
12	Praneeth Keshav	CSE IV/IV	RPA workshop	Participated	17/9/2018,18/9/2018	MECS
13	Indu Priya	CSE IV/IV	RPA workshop	Participated	17/9/2018,18/9/2018	MECS
14	T.Anthony Mary	CSE II/IV	MUN Workshop	Participated	19/9/2018	MECS
15	M.Ashfaq Uphaq	CSE II/IV	MUN Workshop	Participated	19/9/2018	MECS
16	P.J.S.Hrithik	CSE II/IV	MUN Workshop	Participated	19/9/2018	MECS
17	S.Rashitha	CSE IV/IV	Dhruvamedha 2K18	Coordinator	27/9/2018,28/9/2018	MECS
18	Rajendra	CSE III/IV	Dhruvamedha 2K18	Coordinator	27/9/2018,28/9/2018	MECS
19	Pranitha	CSE III/IV	Dhruvamedha 2K18	Coordinator	27/9/2018,28/9/2018	MECS
20	Pavan Kalyan	CSE III/IV	Dhruvamedha 2K18	Coordinator	27/9/2018,28/9/2018	MECS
21	Sai Kumar	CSE III/IV	Dhruvamedha 2K18	Coordinator	27/10/2018,28/9/2018	MECS
22	V.Amulya sri	CSE II/IV	Code Puzzle	Participated	28/9/2018	MECS
23	V.Amulya sri	CSE II/IV	Blind Coding	Participated	28/9/2018	MECS
24	E.Vishnu Charan	CSE II/IV	DEVOPS workshop	Participated	27/9/2018	MECS