



DAYANANDA SAGAR  
UNIVERSITY



SCHOOL OF  
ENGINEERING

## SOE - "The Weekly Buzz"

The Official Weekly Newsletter of **School of Engineering**



Week#30 (July 22 to 27, 2024)

[www.dsu.edu.in](http://www.dsu.edu.in)

# SCHOOL OF ENGINEERING

## VISION

- Transform lives through excellence in engineering education, research and innovation with an emphasis on sustainability, inclusive technologies and global needs.

## MISSION

- Design and deliver contemporary engineering curricula to address regional and global needs while emphasizing ethics, values, integrity and regional relevance.
- Carryout high impact academic research, industry projects and innovation activities with active student engagement to advance science and engineering knowledge and state-of-the art industry practices.
- Develop regional and national leaders to advance the society and economy.

# Faculty Contributions

## Department of CSE

Dr. Arunkumar Gopu, Associate Professor, Department of CSE delivered a webinar (guest lecture) at Department of computer Science and Engineering, SRM Madurai college of Engineering and Technology during 23rd July 2024 on the topic “Bio-inspired algorithms for solving real word problems”.

**SRM MADURAI**  
COLLEGE FOR ENGINEERING AND TECHNOLOGY  
Approved by AICTE, New Delhi (Affiliated to Anna University, Chennai)

Department of Computer Science and Engineering  
&  
Computer Society of India

Organizes a

**Webinar on**  
"Bio Inspired Algorithms for Solving  
Real World Problems"



**Dr. Arunkumar Gopu**  
Associate Professor / CSE  
Dayananda Sagar University, Bangalore  
**23.07.2024 , at 2.00 PM-3.00 PM**

Registration link:  
<https://forms.gle/B8miv4X3M1otwHt5>

HOSTING PLATFORM:GOOGLE MEET

We cordially invite all faculty members to join the webinar.!

Co-ordinator: Dr.S.J.Subhashini, Associate Professor/CSE, SRMMCET  
Co-Convener: Dr.C.Callins Christiyana, HoD-CSE, SRMMCET  
Convener: Dr. S. DURAIRAJ, PRINCIPAL, SRMMCET

Solving TSP using ACO Algorithm without Evaporation

- $\mu = 1$
- Consider  $A_1$  tour = A → B → C → D → A. Best  $L_1 = 18$ .
- Consider  $A_2$  tour = A → C → B → D → A. Best  $L_2 = 20$ .
- $Ph_1 = \frac{1}{18}$
- $Ph_2 = \frac{1}{20}$

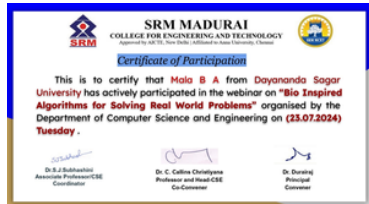
The slide displays a graph with four nodes (A, B, C, D) and edges with weights: A-B (10), A-C (12), B-C (8), B-D (9), C-D (7).

Solving TSP using ACO Algorithm with Evaporation

- Consider the initial pheromone deposit  $\tau$  on all the edges.  
 $\tau = 0.5$
- Consider  $A_1$  tour = A → B → C → D → A. Best  $L_1 = 18$ .
- Consider  $A_2$  tour = A → C → B → D → A. Best  $L_2 = 20$ .
- $Ph_1 = \frac{1}{18}$
- $Ph_2 = \frac{1}{20}$

The slide displays a graph with four nodes (A, B, C, D) and edges with weights: A-B (10), A-C (12), B-C (8), B-D (9), C-D (7).

Prof. Suvika K V, Prof Mala B A, Prof Sasikala N, Prof Shilpa Sudheendran, Prof Bharathy Vijayan and Prof. Navya Damodar, Assistant Professors, Department of CSE from Dayananda Sagar University has actively participated in the webinar on “Bio Inspired Algorithms for Solving Real World Problems” organised by the Department of Computer Science and Engineering SRM Madurai college of Engineering and Technology during 23rd July 2024.



- Prof Manjushree T L, Assistant Professor, has successfully completed the online courses in the Infosys Springboard platform titled “Data Visualization with Python” on 18th July, 2024 and “Advanced Python for Data analysis” on 26th July 2024.
- Prof Mala B A, Assistant Professor, has successfully completed the online courses in the Infosys Springboard platform titled “Solidity Smart Contract Programming for Ethereum Blockchain” and “Connecting with the Internet of Things” on 23rd July, 2024.



## Workshop on Python-Django

The staff and students of the Computer Science and Engineering department participated in a one-day online hands-on course on Django, the Python web framework, on July 27, 2024. The main objective of the workshop is to provide our faculty with the required tools to teach Python-Django, one of the courses included in the fifth-semester curriculum's skill enhancement program.

About eighty people attended the event and learned how to use Django to create web apps. Mr. Chandrasekhar Rao Kuthyar, Lead Consultant at Sangam One Connected Services Private Limited, served as the resource person.

## Data Science Innovation Lab

Dr. Viktor K. Prasanna of the University of Southern California underlined during the conversation how important a Data Science Innovation Lab is to supporting multidisciplinary research and real-world applications of data science methods. In areas like data analytics, machine learning, and big data technologies, he emphasized the need of giving researchers and students practical experience. In order to prepare students for real-world difficulties in the quickly developing field of data science, Dr. Prasanna argued that the lab should bridge the gap between academic knowledge and actual execution.

Dr. Prasanna went over the technology needs and necessary infrastructure for the lab. To manage big datasets and intricate calculations, he suggested setting up high-performance computing clusters and cloud-based resources. He also recommended adding reconfigurable computing resources to provide flexibility.

**SCHOOL OF ENGINEERING**  
**DAYANANDA SAGAR UNIVERSITY**  
 SCHOOL OF ENGINEERING  
 Devarakagalahalli, Hanahalli, Kanakapura Road, Ramnagara Dist- 562 112  
 Department of Computer Science and Engineering

**ONE DAY WORKSHOP ON PYTHON-DJANGO**  
 COMPLETELY HANDS-ON  
 MODE : ONLINE

**Registration Link**  
 Register through the Link or Scan the QR Code  
<https://forms.gle/833222>  
<https://forms.gle/833222>

Join the workshop through this below Link Or Scan the QR Code  
<https://dssu.org.com/3885>  
 

**RESOURCE PERSON**



**Chandrashekar Rao Kuthyar**  
 Lead Consultant at SangamOne  
 Connected Services Private Limited

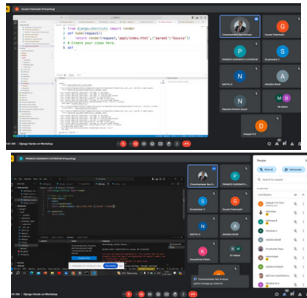
**CONVENERS**

- Dr. Udaya Kumar Reddy K R  
 Dean of CSE-DSSU
- Dr. Girisha S S  
 Chairman CSE-DSSU

**Faculty COORDINATORS**

Prof. Deepak H.G,  
 Assistant Professor, CSE  
[deepak\\_hg\\_cse@dssu.edu.in](mailto:deepak_hg_cse@dssu.edu.in)  
 +91 99165 62149

**Date & Timings**  
 27th July 2024  
 9:30 am to 12:30 pm  
 1:30 pm to 4:30 pm



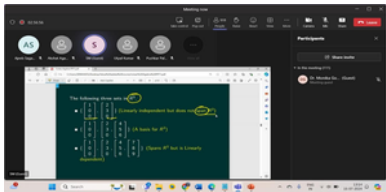
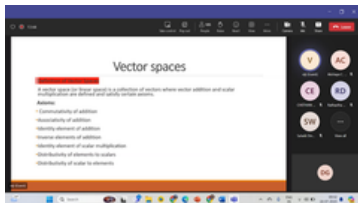
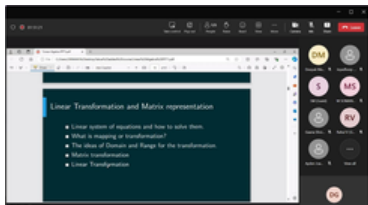
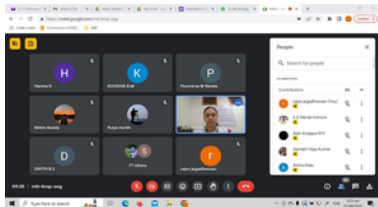
### “Machine Learning Models”

The five-day value-added course "Machine Learning Models and its Mathematical Framework" for 5th-semester CSE (AI&ML) students began on July 16–23, 2024, via Microsoft Teams.

Dr. Jayavrinda Vrindavanam discussed machine learning ideas and trends on the first day. The following seminars were led by specialists on fundamental and advanced topics. Srimanta Maji taught basic math, while Rangaraj explained the Markov Model and its applications. The extensive coverage gave them a good foundation in machine learning and mathematics. Sessions over the next few days taught students about machine learning.

Dr. Durbadal Chattaraj, Dr. Vegi Fernando A, and Prof. Subhash Mondal studied probability theory, matrix decomposition, and data preparation ML libraries. Dr. Mude Nagarjuna Naik and Dr. Shreyas Rajendra Hole demonstrated regression analysis and model development. Dr. Vinutha N, Dr. Sumit Kumar Yadav, and Prof. Pavithra A led SVM, model assessment, and clustering sessions. Prof. Pradeep Kumar, Prof. Uday Bhaskar, and Prof. Sharanabasappa Tadkal concluded the course by discussing machine learning in IoT, NLP, and cybersecurity on the final day. Dr. Monika Goyal, Dr. Shreyas R Hole, and Prof. Ayain John coordinated the programme to guarantee success and learning.

The value-added course "Machine Learning Models and its Mathematical Framework" received daily Google Forms feedback, proving that it accomplished its goals and illuminated machine learning mathematics. The course taught students leading machine learning techniques and their applications in IoT, cybersecurity, and NLP.



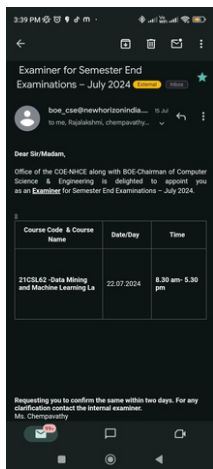
Expert talk about Foundational Models of Deep Learning at Surana College.

Dr. Vinutha N, Associate Professor in CSE(AI&ML) had delivered expert talk on foundational models of deep learning for MCA students on 25th July 2024 at Surana College, Kengeri Satellite town, Bangalore.



## Department of CSE (cyber security)

- Dr. Durbadal Chattaraj and Prof. Sharanabasappa Tadkal , gave a Technical Talk entitled "Machine Learning in Cyber Security. The Rise and Benefits" for the Department of CSE (AIML), DSU, for their Value added Course on 23-07-2024.
- Prof. Ranjima P, went as SEE (External Practical Examiner) at New Horizon College of Engineering for two days dated 22.07.2024 and 23.07.2024



## Department of Aerospace and Electronics & Communication Engineering

- The IEEE Space 2024 was held at Sheraton grand Conventional centre Bangalore on 21-23 July 2024.
- Dr. Prasantha kumar H G, Associate Professor, Aerospace presented a paper on the track “Technologies for CAN/CubeSat” titled as Level - 1 Digitally Twinned 1U CubeSat (DT1UC): Concept to Reality. This paper was co-authored by Prof Sripad Kulkarni, Assistant Professor, Aerospace. Mr Vatsal (ENG22AS0023), Krish Agarwal (ENG22AS0023), Mr. Jaiman (ENG22AS0026), Mr. Ashwani (ENG22AS0024).
- Prof. Sripad Kulkarni Assistant Professor, Aerospace, Mr Yashas (ENG21AS0051), Mr Raghav (ENG21AS0016), Prof GNV Prasad presented a paper on the track “Technologies for CAN/CubeSat” titled as CanSat Deployment: Electro thermal and Electromechanical Methods.
- Dr. Arun Balodi presented a research paper at the IEEE SPACE Conference. Our paper, "Simulation Analysis of Ge2Sb2Te5 Vertical Photodetectors on Silicon Photonic for Varying Thickness Levels," explored the impact of thickness on device performance. held on July 22-24, 2024 at the Sheraton Grand Bengaluru Whitefield Hotel & Convention Center.
- Dr. Arun Balodi had the opportunity to attend the IEEE Leaders Meeting. The event brought together distinguished IEEE leaders including Dr. Thomas Coughlin (Past President), Prof. Saifur Rahman (Present President), and Prof. Kathleen Kramer (Future President). He also interacted with esteemed members of the IEEE Bangalore Executive Committee. The meeting was further enriched by the presence of Dr. Deepak Mathur, Vice President of IEEE Membership and Geographic Activities, Prof. Purna Gaur, Chair-Elect of the IEEE India Council, and Dr. Sameer S M, candidate for IEEE Region 10 Director-Elect.



# Student Activities

## Department of CSE (Cyber Security)

- Mr. Aditya G. Kulkarni (ENG22CY026), Ms. Raveena Dharmappa (ENG22CY019), and Mr. Yash Bagga (ENG22CY050), students of the 4th Semester, have presented their technical paper entitled "BI-IEA: A Bit-Level Image Encryption Algorithm using Transformation and Chaotic Skew Tent Map based Substitution for Fingerprint Images", under the guidance of Dr. Prajwalasimha S. N., Prof. Naveen Kulkarni, and Prof. Deepthika Karuppusamy. The conference took place at K. Ramakrishnan College of Engineering in Trichy, Tamil Nadu, on 25.07.2024, as part of the 2024 Third IEEE International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT 2024).
- Mr. Prajwal N Halvi (ENG22CY037), student of the 4th Semester, has presented their technical paper entitled "IDEA-PTLMS: Designing Secure Image Encoding and Decoding Algorithms using Pixel Transposition and Logistic Map based Substitutions", under the guidance of Dr. Prajwalasimha S. N., Dr. Durbadal Chattaraj, Prof. Naveen Kulkarni and Prof. Deepthika Karuppusamy. The conference took place at K. Ramakrishnan College of Engineering in Trichy, Tamil Nadu, on 25.07.2024, as part of the 2024 Third IEEE International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT 2024).
- Seventeen erudite students (both Third and Fourth Year: CSE-Cyber Security) have volunteered and actively participated for the "Nasscom AI Confluence" event at Radisson Blu, Marathahalli, Bangalore, Karnataka on 24th July 2024 between 9:00 AM - 07:00 PM. Under the guidance and supervision of Dr. Durbadal Chattaraj, Associate Professor & Chairman, Department of CSE (Cyber Security), Dayananda Sagar University and Mr. Sudeep Kumar Das, Program Manager (NASSCOM AI).



PROUDLY PRESENTED TO  
**Vaishnav A**

**eJPT**  
Junior Penetration Tester

*Tracy Wallace*  
Tracy Wallace  
Director of Content Development

*Dara Warn*  
Dara Warn  
Chief Executive Officer



July 24, 2024  
Date Awarded  
119070299  
Certification ID



PROUDLY PRESENTED TO  
**P Kushal**

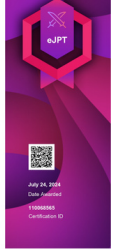
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**SCHOOL OF  
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