

Dayananda Sagar University
School of Engineering,
Department of Computer Science and Engineering,
Events – 2020-2021

**FDP on Research Perspectives in Futuristic Computing Technologies
(RPFCT)**

The department of CSE organized Five Days online international Faculty Development Program on “Research Perspectives in Futuristic Computing Technologies (RPFCT)” from 6th July 2020 to 10th July 2020, under the leadership of Dr. Mouleeswaran, Dr. Revathi V, Dr. Shamanth, Prof. Ranjini, Prof. Vijin Justin, and Prof. Manu Elappila.

**Five-Day FDP on
“Current Trends in Machine Learning with Python-A Hands-on
Approach”**

Five-Days Online Faculty Development Programme on “Current Trends in Machine Learning with Python-A Hands-on Approach”, was organized by Department of Computer Science and Engineering from 06 - 10 July, 2020 in Zoom platform and live-streamed all the sessions on YouTube Channel, CSE-SOE-DSU.

The support from the management of DSU, Dean SoE, Dean Research, Chairman of CSE set the right ambience for facilitating the faculty development program.

This programme was a combination of theoretical exercise & laboratory experiments. The FDP aims to provide opportunities to faculty members, research scholars, IT professionals from various national and international organizations to enrich their technical knowledge in the field of Artificial Intelligence, Machine Learning, Deep learning, Neural Networks, DataScience, Natural Language Processing and Computer Vision. The FDP placed a strong emphasis on hands-on sessions on Machine Learning tools and Frameworks such as Jupyter, Anaconda using Python intended to develop competency in the subject.

The FDP held four theory and four hands-on sessions that was handled by eminent resource persons from the industry (Wipro, Curefit and Corporate Trainers) and academia (IIIT Dharwad and RVCE), who had shared their expertise on topics.

Registration was restricted to 300 participants due to the Zoom account limit. Active participants at a time were 170 including Zoom and YouTube Viewers from different arenas. The FDP under the guidance of organizing chair Dr. Girisha GS and Dr. Mallanagouda Patil was well coordinated and organized by dynamic faculties of the department of CSE Prof. Roopashree S, Prof. Bhargavi Mokashi, Prof. Gousia Thahniyath, Prof. Nazmin Begum, Prof. Krishna Sowjanya K and Prof. Nandini K.

National Webinar on Cyber Security: An Emerging Technology

Department of Computer Science and Engineering , Dayananda Sagar University , Bengaluru has organized One Day National Webinar on “ CYBER SECURITY : An Emerging Technology “ In association with Computer Society of India ,Bengaluru Chapter, Region 5 on 11th July 2020.The organizer for the event was Mrs Chhaya S Dule .The Inauguration of the event was done by Dr. Sanjay Chitnis ,Chairman ,Dr M.K Banga , Dean R & D and Dr Shaila S.G SJB –CSI Student chapter ,DSU-Bangalore. The webinar was open to all the faculties , Research scholars and students of various institution. The Eminent resource person was Dr Manjaiah D.H, Professor and Chairman BOS ,Mangalore University who has imparted the knowledge about the need of cyber security, importance of cyber security , tools used for cyber security. Key elements of cyber security, challenges of cyber security. The session was very much interactive and informative for all the participants which have made a value-added advantage to learn new about existing technology. Around 1270 participants registered for the event from various institution all over the India , which includes , Andhra Pradesh, Assam, Arunachal Pradesh, Bihar, Chattisgarh, Gujarat, Goa, Himachal Pradesh, Harayna, Jammu and Kashmir , Jharkhand , Karnataka, , Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Telangana , Tamilnadu, Uttarpradesh, Uttarakhand and West Bengal. Many participants are also registered from Nigeria (Lagos, Kaduna, Ibadan, Kano) , Kuwait, South Arabia(Aseer Province) ,Malaysia(Sintok, Kedah), Iraq, Algeria. Total participants who attended the webinar were 938.

Three Day National

Workshop on

“Exploring and Analysing Linked Enterprise Data in Semantic Web”

Department of Computer science and engineering organized 3 days online workshop on “Exploring and Analysing Linked Enterprise Data in Semantic Web” scheduled from 8th July to 10th July 2020.

It was conducted using Google Meet platform. There were 178 participants who attended our FDP from various institutions at national and international level. Around 80 participants were attended the sessions daily.

The eminent Resource Person - Dr. Shreyas Suresh Rao, Associate Professor and Research Coordinator, Dept. of CSE, Sahyadri College of Engineering and Management Mangalore.

The FDP had theory session followed by hands-on session. The FDP had eminent resource person from the academia who shared his expertise topics on Semantic Web. All the sessions were conducted using interesting case studies which helped participants to understand the application aspects of using semantic web.

Objectives:

1. Demonstrate principles of Semantic Web and Linked Data.
2. Hands-on exposure to tools used in creating enterprise linked data.
3. Hands-on deployment of RDF in Virtuoso Server and query execution.
4. Discuss applications of Semantic Web in Research and Industry.

Webinar on Internet of Things

Department of Computer Science and Engineering, Dayananda Sagar University, Bengaluru has organized One Day online Webinar on “Internet of Things” on 29th August 2020. The organizers for the event were Dr. Gudla Balakrishna and Mrs. Chhaya S Dule. The Inauguration of the event was done by Dr. Sanjay Chitnis, Chairman, Dr. M.K Banga, Dean R & D, Dayananda Sagar University, Bengaluru. The webinar was open to all the faculties, Research scholars and students of various institutions. The Eminent resource person was Dr. Vishnu Srinivasa Murthy Y, Senior Assistant Professor, Vellore Institute of Technology, Vellore, Tamil Nadu who has imparted the knowledge about the need of Internet of things, importance of Internet of Things, tools used for Internet of things. Key elements of Internet of things, challenges of Internet of things. The session was very much interactive and informative for all the participants which have made a value-added advantage to learn new about the technology. Around 20 participants registered for the event from various institution all over the South India, which includes, Andhra Pradesh, Karnataka, Telangana.

Prerna 2K21 - Emerging Technological Skill Development Program

DSU started New Year 2021 with a BANG putting students on the fast-forward track for their career, through a very unique opportunity to learn 8 Emerging Technologies in one-week long workshop - Prerana-2K21 organized by the School of Engineering.

Prerna-2K21 is the Emerging Technological Skill Development Program. It is a great platform provided for the students not only to learn new technologies but also Faculties who are experts in these domains' perspective and latest advancements in the emerging technologies like Artificial Intelligence /Machine Learning, Quantum Computing, Cloud Computing, Cyber Security, Internet of Things, Augmented Reality/ Virtual Reality, Mobile Application Development. This boosts a motivation, confidence for the budding first year students, as it gives an overview and practical exposure to these emerging technologies.

It helps the students to imbibe first level of understanding of key emerging technologies so that students will develop interest and feel motivated to learn more in future through self-learning through MOOC courses, attending talks, seminars, workshops etc. It also provides basic programming skills so that students are ready for simple projects that require some programming. It also enhances the student ability to build simple projects in one area of interest there by gaining confidence to do more projects in future on their own.

Convener of the event is Dr Sanjay Chitnis, Chairman-CSE and coordinator Prof. Chhaya S Dule , Assistant Professor ,CSE The hands-on workshop is organized and hosted by the many DSU Faculties Shradha Naik Saswati Debnath Vijin Justin for AI and ML, RG Babukarthik Uma Shankari B Bindu Madavi KP Gaurav Kumar for Cloud Computing, CVS N Reddy, Dr. Sanjay Chitnis for Quantum Computing, Dr. Shamanth N , Abhinav Karan , Dr. Manu Ellappilla for Internet of Things , Gousia Thahniyath, Ranjitha G, Nazmin Begum, Krishna Sowjanya K for Web Application Development, Dr Reeja SR, Aiswariya Milan K for Mobile Application Development, Chhaya S Dule for Augmented Reality / Virtual Reality , Dr. S K Mouleeswaran , Reshma B for cyber security, Ms Sudhadeepthi Dr Manish, Dr Manoj for Digital Manufacturing.

Many Faculties and Students contributed as resource persons to share their knowledge with the first-year students.

The event ended not only with a great and positive response from the participants and but also by imparting the insight of the above-mentioned emerging technologies and bringing translational skills in students in the beginning of career itself.

DEEP DIVE ON RPA

Robotic Process Automation (**RPA**) is software technology that's easy for anyone to use to automate digital tasks. With **RPA**, software users create software robots, or “bots”, that can learn, mimic, and then execute rules-based business processes. It is another step in the evolution of business processes and next logical step to significantly reduce the requirement for employees to perform rules-based activities. Robotic Process Automation is the technology that allows anyone today to build a computer software, or a “robot” to emulate and integrate the actions of a human interacting within digital systems to execute a business process. DSU, CSE Department organized this webinar to give students glimpse/idea about this emerging technology which helps the students for huge employability. Mr. Basavadarshan GN, who is responsible for building mindshare for UiPath, increasing user adoption & working with leading institutions, is an expert in the domain of RPA and also Passionate towards Skill development & working towards bridging the gap between industry & institutions. On 10th Feb 2021, from 3 to 4 PM he addressed around 30 members that includes Faculty and students about RPA, its evolution and its importance.

National Webinar on Graph Theory and Its Applications

Department of Computer Science and Engineering, Dayananda Sagar University, Bengaluru has organized Two Day online Webinar on “Graph Theory and Its Applications (GTIA)” on 26th February 2021 and 27th February 2021. The organizers for the event were Dr. Gudla Balakrishna and Mr. Gaurav Kumar. The Inauguration of the event was done by Dr. Sanjay Chitnis, Chairman, Dayananda Sagar University, Bengaluru. The webinar was open to all the faculties, Research scholars and students of various institutions.

It mainly focuses on research-oriented topics on graph theory which relates to Social networking, data analytics, how to solve complex real-time problems such as disease spread, crime prediction by identifying the main node and its influenced node using centrality measures.

This is a two-day event covering wide concepts of graph theory such as, NP-Completeness on Some Domination Problems, Introduction to Parameterized Algorithms, Graph Applications on Different Centrality Measures, Graph Coloring.

The above resource persons imparted the knowledge about the need of Graph Theory, importance of Graph Algorithms, tools used for Graph Applications. Key elements of Graph Theory, coloring, Algorithms and its Complexity, challenges of Graph Algorithms. The sessions were very much interactive and informative for all the participants which have made a value-added advantage to learn new about the Graph theory and its Applications. Around 82 participants registered for the event from various institutions all over the India, which includes, Andhra Pradesh, Karnataka, Telangana, Tamil Nadu and Rajasthan.

The Eminent resource persons were:

- Dr. P. Venkatasubba Reddy, Assistant Professor, Department of Computer Science and Engineering, National Institute of Technology, Warangal, Telangana-506004. He is expert on Graph Algorithms and Domination. He explained about Complexity, NP-Completeness on some domination problems.
- Dr. Anjeneya Swami Kare, Assistant Professor, School of Computer & Information Sciences, University of Hyderabad, Hyderabad, Telangana - 500046. He is expert on Parameterized Algorithms. He explained about Parameterized Algorithms and its applications where the Discrete Mathematical Structures (DMS) is used.
- Dr. Murali Krishna Enduri, Assistant Professor, Department of Computer Science and Engineering, SRM University, Mangalagiri, Andhra Pradesh - 522240. His specialization on Graph Algorithms and he is working on influence networks. He explained Graph Applications on different centrality measures.
- Dr. V. V. P. R. V. B. Suresh Dara, Assistant Professor, School of Advanced Sciences & Languages, Vellore Institute of Technology, Bhopal, Madhya Pradesh - 466114. He is working

on Graph Theory and Graph Coloring. He explained about graph coloring and different types of colorings and its applications.

Hack 4 Happiness

If you are happy and you know it CLAP YOUR HANDS! If you want to experience real happiness JOIN OUR HANDS! India being a country with huge population unfortunately ranks 144 in the World Happiness Report by the United Nations out of 156 countries. So here we are organizing 'Hack4Happiness' a hackathon to find ways to try and increase the happiness quotient. DAYANANDA SAGAR UNIVERSITY in association with BITES organized a 2 DAY ONLINE Hackathon for Engineering students of Karnataka on 13th and 14th March 2021. The Hackathon is open to students of all branches of engineering. The goal of the Hackathon is to BRING and SPREAD HAPPINESS among yourselves and everyone, and also discover your HACK 4 HAPPINESS!

There were around 42 teams in total who participated in the event with their own innovative ideas presented to the judges. There were two rounds of judging. Participants were given 24 hours of time for identifying their hack to present. The judgement happened in two rounds. In the first round of judging, each participating team had to prepare a short video about their idea to the judges. There were 11 shortlisted teams who then qualified for the second round. The second round was more comprehensive one-on-one interaction with judges, Mr. Mohan Satyaranjan, Founder CTO/Director, Taqanal Energy Pvt Ltd and Mr. V Ramchandran, Founder and CEO, VEERCEE Associates. Top four teams were declared as first, second and third winners respectively.

The third prize was shared between the team “Potterheads” for the idea “Noteify” and team “Happyhome” and were awarded with a cash prize of Rs.5000 each. The second prize was secured by team “Codegama” for their idea “Serenity” awarded with a cash prize of Rs.15,000. And the first prize was won by team “Crazy Coderz Crew” for their idea “Imparare” awarded with a cash prize of Rs. 25,000.

The valedictory function was held on 14th March, 4:30 PM in the presence of Chief Guest, Sri. M.N.Vidyashankar, Co Chairman, BITES, Dr. KNB Murthy, Chairman, BITES and Vice-Chancellor, Dayananda Sagar University, Srinivas A, Dean, School of Engineering and Dr. Sanjay Chitnis, Chairman Department of CSE along with the judges. Prof. Sharvari J N, Assistant Professor, Department of CSE, Dayananda Sagar University, delivered the highlights of the event. Later Sri. M.N.Vidyashankar, Co Chairman, BITES spoke about his vision and emphasized on various hacks for happiness, followed by Dr. KNB Murthy’s words on the conduction of the hackathon. Mr. Mohan Satyaranjan announced the winners.

Nithya Shree Winner team member of Hackathons has expressed that, the Hack4Happiness hackathon was a wonderful experience. It made us collaborate with our team and think about a real-world problem. In such a short span of time, it was extremely interesting to design an innovative hack as well as present it with my team. It was indeed a strong competition with around 85 other teams from the state. We were startled when our team was shortlisted!!! We faced a tough competition presenting our hack to the judges. Our joy knew no bounds when IMPARARE finally won! In all, the hackathon was the most remarkable event of our sixth semester!!!

Faculty Organizers:

Prof. Sharvari J N, Asst.Professor, CSE, Prof. Ranjini K, Asst.Professor, CSE Prof. Arpitha D, Asst.Professor, CSE Prof. Ranjitha G, Asst.Professor, CSE

Student Volunteers:

Mr. Rohith K, Mr. Deepak, Ms. Manjari U, Ms. Pavithra, Ms. Srishti, Ms. Pavana, Ms. Nikitha, Ms. Ramya K S, Mr. Akash S, Ms. Rutuja

Crash Course on C Programming

Programming is an important basic skill for Engineering Students. The ability to understand and implement the programming language is important skill for the students to acquire. These subjects are prerequisite for the other programming courses offered in subsequent semesters. However, many students come from different educational background like biology, electronic, science find it bit difficult to understand, follow and learn with a normal pace. They need a little extra push and support. Keeping this in mind, Department of CSE from Dayananda Sagar University, conducted a 2-day hands-on workshop on C Programming on 20th March 2021 – 21st March 2021. The resource persons are the faculty from CSE department. They are: Prof. Nandini K, Prof. Shwetha S A, Prof. Shwetha G S, Prof. Cauvery Raju, Prof. Bindu Madavi K P, Prof. Krishna Sowjanya K. This workshop focused completely on the basics of the C programming and all the students struggling with these are given extra support. Overall, 150 from I semester have attended and actively participated the sessions. After the session, Prem A thanked the professors for conducting this workshop as it is really beneficial for him to understand these basic concepts as he is from biology background. Shreyas SN, Hrittika N, Lohith RD also expressed their heartfelt thanks to all the faculties for taking this initiative and helping out them by spending so much time with lot of effort and patience.



Learning with Vodafone Programme

Vodafone Intelligent Solutions (_VOIS), formerly known as Vodafone Shared Services (VSS) is a strategic arm of Vodafone Group Plc, for which it creates value by enhancing quality and efficiency of a number of processes in the IT/ ITeS domain. Established in 2006, _VOIS has evolved into a global, multi-functional organization that currently has centres across India, Egypt, Romania and Hungary. In 2009, _VOIS started operating in India and now has established global delivery centres in Pune, Bangalore and Ahmedabad. Vodafone India Foundation network has focused on combining Vodafone's expertise with the company's charitable giving to do social good in the world. As Vodafone's reach continues to expand - moving from mobile to connectivity - there are greater opportunities for Vodafone India Foundation to harness these advancements for the benefit of society. In India, Vodafone India Foundation focuses on addressing challenges relating to education, equality,

and access. We are committed to enabling people and technology to drive innovation, disseminate knowledge and create shared value to improve lives. We work in partnership with key charities, development agencies and the community to drive social change on a large scale in India.

About Connecting Dreams Foundation (CDF) CDF is focused on bridging the academia-industry divide, enhancing student employability, promoting innovation, and creating an entrepreneurial ecosystem for youth. CDF is a social enterprise that believes that lasting changes to society can only come from ubiquitous, high quality, market relevant educational interventions to youth. CDF works to create meaningful interventions for students and working adults. It strives to create a coherent innovation and entrepreneurship-oriented ecosystem that exploits existing opportunities and creates new avenues for economic and social growth. CDF and its associates have worked with state technical universities encompassing thousands engineering colleges around India to improve their curriculum and promote experiential learning.

DSU in collaboration with Vodafone, organized one day online workshop on Linux and Data Analytics Date 20 March 2021 through Microsoft teams.

This workshop provided an opportunity to learn and build foundational skills in some of the widely used industry application areas. To ensure a comprehensive learning experience for students the online workshops are focused on providing a hands-on learning experience for designing applications for several real-world use-cases.

At the end of the program participants will be able to: Open source OS concepts, Execute various useful Linux shell commands, Utilize different Linux text editors for shell scripting, Develop and execute applications in the Linux environment , Learn how to use Python to develop applications, Use data analytics tools and technologies with ease, Understand and experience in building real-world solutions for Data Analytics , Translate data-driven insights into decisions and actions Equip themselves with knowledge in areas of Data Analytics.

Two-day Workshop on Server-Side Scripting Language: Node JS

A constant increase is being noted in the number of enterprises adopting Node JS for web design. Node JS enables developers to write both client-side and server-side code in JavaScript. To provide industry view of Node JS, Department of CSE in association with CSI from 26th March 2021 to 27th March 2021, conducted a two-day work shop on “Server-side Scripting Language: Node JS” with the resource person, Mr. Nagaraj. A, Associate Professor in the Department of Computer Science and Engineering, Jyothy Institute of Technology Bangalore. Around 500 students attended the workshop from various colleges of Bangalore. The resource person has delivered theoretical as well practical sessions for 2 days on Node JS. “It was very well organised and helped the students to learn more about Node JS looking forward to see more such events” in Akshaya Nadathur words.

Organizers: Prof Chhaya S Dule and Prof. Gousia Thahniyath Prof. Krishna Sowjanya ,Prof. Arpitha D ,Prof. Cauvery Raju , Prof. Swetha S A and Prof. Nazmin Begum.

“Alumni” as a Resource Person

Janmejay S Purohit, being an alumnus, came forward as a Resource Person for the one-day work shop on Full Stack Development: React JS conducted by the Department of CSE, in association with CSI on 1st May 2021 to facilitate the students to have a knowledge about the client-side scripting language: React JS.

Mr. Janmejay Purohit, Software engineer in Tesark, full stack developer,1.5-year work experience, Alumni of batch 2015, graduated in 2019 from DSU. The students could connect very well to the resource person, him being alumni of DSU.

The workshop enhanced the students' knowledge in ReactJS, which is a Javascript library for developing Interactive User Interface. The workshop consisted of hands-on sessions in the concepts of ReactJS. The topics covered in the workshop are React overview, Components, Events and JSX. Mode of conduction was on a streamyard platform <https://streamyard.com/xhevtxcaui> and we had live-streaming on YouTube channel https://youtu.be/_-N2-J8GEWg. Around 100 participants from different branch and semesters attended the sessions. The workshop was wonderful reaching in 2K Views within 24hrs.

Ankith Kishore A, Tejashwini V has appreciated the resource person about his knowledge in the domain and the way of his explanation. Rachana D, expressed her happiness to see their Alumni in greater heights.

Organizing Committee:

Prof. Gousia Thahniyath, Prof. Chhaya S Dule, Dr. Shaila SG, Prof. Nazmin Begum, Prof. Shwetha S A, Prof. Cauvery Raju, Prof. Arpitha D, Prof. Krishna Sowjanya K, Prof. Bindu Madavi K P

One-day Webinar on Signal/Image in Frequency domain using MATLAB

MATLAB a programming platform to analyse the data and create models. To enrich the knowledge of students over the usage of the MATLAB platform, Department of CSE, SOE, DSU conducted one-day webinar on Signal/Image in Frequency domain: Analysis and Implementations using MATLAB on 10th April 2021.

Resource persons was Dr. Mohiul Islam covered the basic concepts of signals and frequency domain conversions. Dr Manir Ahmed covered the concepts of image recognition and analysing the image using MATLAB. In addition to this, the resource person has given a good insight on the developing areas and research ideas in Image Recognition domain. Over all the session enabled the students to implement the projects on Image Recognition using MATLAB tool.