



MEENAKSHI SUNDARARAJAN ENGINEERING COLLEGE

363, Arcot Road, Kodambakkam, Chennai – 24
Approved by AICTE & Affiliated to Anna University
email Id: principal@msec.edu.in
Website : www.msec.edu.in

3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

Project/Awards	Year
TOYCATHON	2021
RADIATION EXPOSURE LEVEL MONITOR FOR PROXIMITY WORKERS	2021
LOW COST PORTABLE VENTILATOR FOR COVID-19 PATIENTS	2020
SUPPORTING RURAL AREA THROUGH AGRO-ENTERPRISE DEVELOPMENT	2020
INVADER AND SPARROW	2020
AWARD FOR LEADING ENGINEERING COLLEGE 2020	2020
KURUKSHETRA AWARD	2020
COGNIZANT'S "THE BIG IDEA 2K17" CONTEST.	2017

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TOYCATHON

- Students of MSEC grabbed the unique opportunity to conceptualize novel toys and games based on Indian civilization and history by participating in TOYCATHON, an initiative by our Hon'ble Prime Minister, Shri. Narendra Modi under the 'Aatma Nirbhar Bharat Abhiyan.
- A total of 7 teams participated in the event and 3 of them entered the final round.
- An innovative team named MSEC (Magnificent Sustainable Engineers under Construction) along with their team mentor Mr.S Elangovan participated and won the competition by making V-Mult calculator which is used to solve 2 and 3 digits multiplication.
- Another team which entered finals through digital mode is the Coin conqueror team.



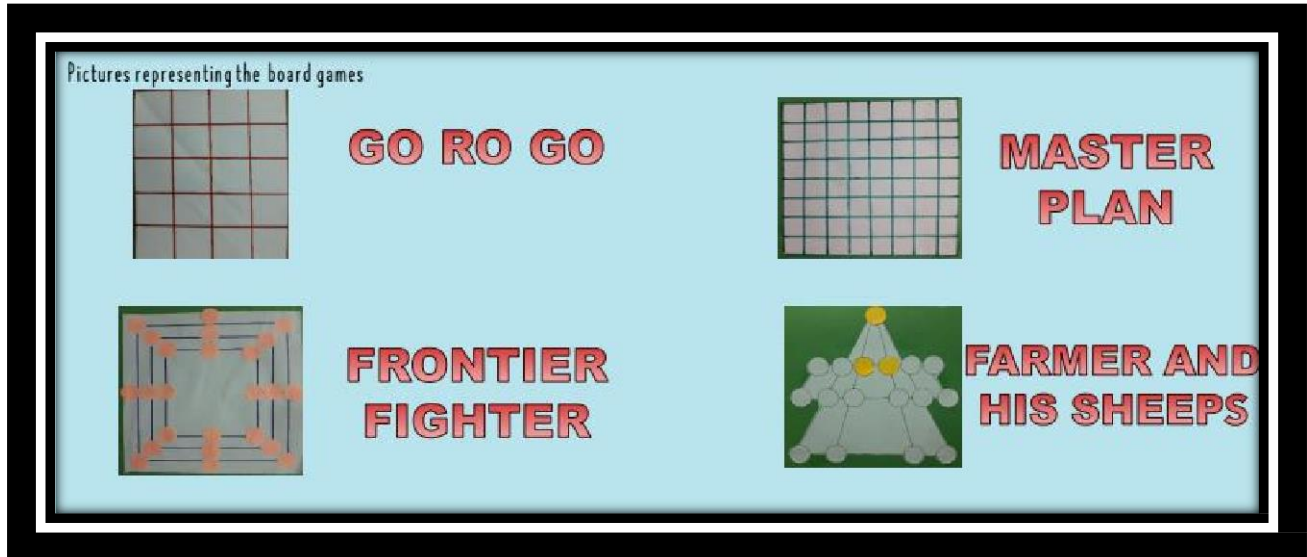
V-Mult calculator


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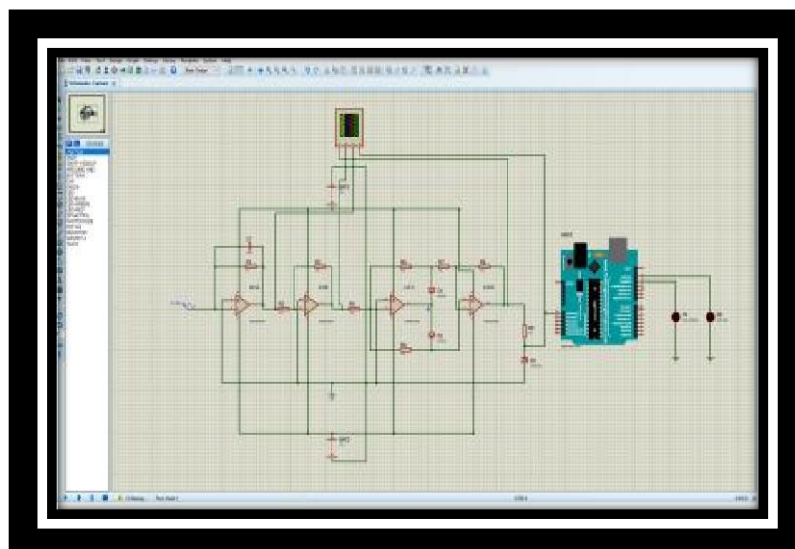
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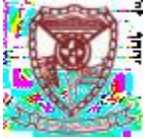
Coin conqueror

RADIATION EXPOSURE LEVEL MONITOR FOR PROXIMITY WORKERS

- Innovation starts with spotting a need. With this idea in mind, a very innovative project called Radiation Exposure Level Monitor For Proximity Workers which solely focuses on improving the lives of proximity works of nuclear power plants has been proposed by the students of MSEC in the guidance of Dr. Srinivas Talabutta an Associate Professor of Electrical Communication Engineering.
- The project was proposed in Foundation for Advancement of Education and Research (FAER) and is currently in its research and funding state.
- The objective of the project is to focus on the maintenance workers working in nuclear power plants are exposed to nuclear radiation in the long run, despite precautions.
- In some cases, the dosage of nuclear radiation can increase which might create the risk of side effects such as cancer.
- The ideas has been simulated using Proteus 8 Professional 8.6 software.




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LOW COST PORTABLE VENTILATOR FOR COVID-19 PATIENTS

- Low Cost Portable Ventilator for Covid-19 patients that will inspire the budding engineers to benefit the society has been developed by Mr.Kishore Kumaran, an alumnus of MSEC who has signed MOU with MSEC for Engineering services along with six students of MSEC that addresses the issue of rapid spread of covid-19 which resulted in increased demand for respiratory aiding systems. The prototype developed in a bid to bridge the shortage of ventilators was much less than their estimated cost of 11,500/- .
- The prototype was build in 17 days and has also been shortlisted by the National Innovation Foundation for its C3 competition.
- The innovative prototype was recognised by the press media and was published in THE HINDU newspaper.

Chennai youth jointly fight COVID-19

Meenakshi Sundararajan Engineering College opens gates for researches

Chennai, April 26:
We have all been thrown into a new environment, terms like social distancing, isolation, green zones and red zones have become common. Large communities around the world are enveloped in fear. Despite these unprecedented difficulties, a group of young minds in Chennai are finding purpose in this moment of crisis.

Kishore Kumaran, an Alumnus of Meenakshi Sundararajan Engineering College, and the founder of Missile Ingeniator, A Research and Product Development start-up, collaborated with students from the same college to develop the prototype of a "Low - Cost Portable Ventilator".

The Ventilator has a pressure monitoring system and works in an assist-control-mode for invasive and non-invasive conditions. It is designed by considering necessary medical parameters such as Respiratory Rate and Inspiration to Expiration Ratio.

"The machine can check breathing rate, blood oxygen levels, and blood pressure levels. These values will be displayed on an Organic Light-Emitting Diode (OLED) screen," says Kishore Kumaran.

There are 4 buttons to set parameters by the doctor according to patient requirements. Upon pressing the START button, two motors start driving piston gears on either side. This, in turn, presses an Artificial Manual Breathing Unit



Kishore Kumaran
founder of Missile Ingeniator



Vasupradha
a third-year student who has been associated with Missile Ingeniator

gratitude to doctors for their medical guidance, Tamilnadu Police, Government Officials, and Hardware Suppliers for their constant support throughout the development process. They also thanked Meenakshi Sundararajan Engineering College for supporting them all the way.

M Roshini

Kishore Kumaran ushers in start up culture



Inspired by Kalam, propelled by dream


All our dreams can come true, if we have the courage to pursue them. The future belongs to those who believe in the beauty of their dreams. Hold fast to dreams, for if dreams die, life is a broken-winged bird that cannot fly... so said former President Abdul Kalam, and in a bid to bridge the shortage of ventilators in the country amid rising cases, a team comprising eight members, emerged with a prototype of the ventilator.

The first version of their prototype was developed with available components and will be upgraded further in the upcoming versions. The team is now heading towards government and testing laboratories for official guidance to develop the prototype into a functioning product that can serve the mass. The team expressed their

The team includes Kishore Kumaran, undergraduate, and former students of Meenakshi Sundararajan Engineering College.

Ventilator Project Team details:

1. Vasupradha - 3rd Year ECE B
2. Sneha - 3rd Year ECE B
3. Vidhyashree - 3rd Year ECE B
4. Smruthi - 2nd Year ECE B
5. Kartick - 2nd Year ECE A
6. Thulasiram - ECE 2019 Batch
7. Yashwanth - ECE 2019 Batch


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THE HINDU ePaper Search here

JUST IN Gmins Top news of the day: Violence against medical staff made non-bailable offence; 22mins Coronavirus | BHU professors plan clinical trial of ayurvedic drug against

MENU HOME NEWS OPINION BUSINESS SPORT CRICKET LIFE & STYLE THREAD

CITIES BENGALURU CHENNAI COIMBATORE DELHI HYDERABAD WATCH: WHAT WILL BE

NEWS - CITIES - CHENNAI

CHENNAI
COVID-19 offers students a chance to showcase their skills
R. Sujatha

CHENNAI, APRIL 22, 2020 17:51 IST
UPDATED: APRIL 22, 2020 17:51 IST

SHARE ARTICLE PRINT A | A | A

Student groups have come up with apps and low-cost ventilators

Several engineering college students in the city have come up with apps, websites and in some cases, prototypes of low-cost ventilators.

A group of students from Meenakshi Sundararajan Engineering College have developed a prototype for a low cost ventilator (₹11,500) which has now been shortlisted by the National Innovation Foundation for its C3 competition.

Kishore Kumaran, a 2017 batch ECE graduate leads a team of six juniors, four of whom are currently students at the college. It took them 17 days to develop the prototype. "It is an opportunity for shared learning," says Mr. Kishore.

A third year CSE student S.R. Sankar Narayanan has developed a website for tracking COVID-19 <http://coronanewapp.herokuapp.com/>. He uses government data for the purpose.

மீனாட்சி சுந்தரராஜன் என்ஜினீயரிங் கல்லூரி முன்னாள் மாணவர்கள் உருவாக்கினர்

கொரோனா நோயாளியைக் காப்பாற்ற
ரூ.11 ஆயிரத்து 500 விலையில் வெண்டிலேட்டர்
தாளாளர் பாபாய் பெருமிதம்

சென்னை, ஏப்.22- கோடம்பாக்கம் மீனாட்சி சுந்தரராஜன் என்ஜினீயரிங் கல்லூரியின் முன்னாள் மாணவர்கள் ஒன்று சேர்ந்து ரூ. 2 லட்சம் மதிப்புள்ள செயற்கைக் கருவியை (வெண்டிலேட்டர்) ரூ. 11 ஆயிரத்து 500 விலையில் உருவாக்கி சாதனை படைத்துள்ளனர்.

கல்லூரி தாளாளர் பாபாய் சுந்தரராஜன் ஊக்கமளித்ததால் இது செயல்படுத்த முடிந்தது என்று முன்னாள் மாணவரும், மிசைல் இன்ஜெனீட்டர் நிறுவன டைரக்டருமான கிஷோர் குமரன் தெரிவித்தார்.

கிஷோர் குமரன் ஒருங்கிணைப்பில் இந்த குழுவில் முன்னாள் மாணவர்கள் சினோகா, வசுபிரதா, ஸ்ம்ருதி, வித்யாஸ்ரீ, கார்த்திக், துளசிராம், யஷ்வந்த் மற்றும் சாய் பிரகாஷ் பங்கேற்று ஆராய்ச்சி செய்தனர்.

ஏற்கனவே மார்க்கெட்டில் கிடைக்கும் பொருட்களை வைத்து மாநிரி வெண்டிலேட்டர் உருவாக்கப்பட்டது. இதில் தேவைப்படும் பொது நவீனப்படுத்த வசதியும் சேர்க்கப்பட்டுள்ளது. இந்த மாநிரி அரசு பரிசோதனை ஆய்வகத்துக்கு அனுப்பப்பட்டுள்ளது. அங்கீகாரம் கிடைத்தவுடன் தொழில் ரீதியில் உற்பத்தி செய்யப்படும் என்றார் அவர்.

இந்த குழுவினருக்கு மீனாட்சி சுந்தரராஜன் என்ஜினீயரிங் கல்லூரி தாளாளர் பாபாய் சுந்தரராஜன், எலக்ட்ரானிக்ஸ் கம்யூனிகேஷன் துறை பேராசிரியர்கள், ஆராய்ச்சி பிரிவு நிபுணர்கள் ஆதரவு அளித்தனர் என்றார்.

நுரையீரல் கவாச பிரச்சினைக்கு துல்லியமாக உதவ இந்த வெண்டிலேட்டர் உதவும். பல்வேறு டிஜிட்டல் கணக்கீடு கருவிகள் இதில் உள்ளன.

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SUPPORTING RURAL AREA THROUGH AGRO-ENTERPRISE DEVELOPMENT

- Urban and rural areas can benefit from each other if well connected. With the desire to improve the lives of rural area workers who not only suffer from lack of resources and assets, but also are affected by major changes in the agricultural sector brought about by globalization and market integration, students of MSEC Vasupradha S and Sneha M have come up with an idea to support rural areas through agro-enterprise development providing a web application based solution.
- It provides policy advice and technical assistance related to market-oriented farming and small- and medium-scale agroenterprise development.
- Objectives –
 - Recognize and adjust to trends in farm commercialization .
 - Develop reliable farm-to-market and farm-agribusiness linkages
 - Establish roles of the public sector as service providers in marketing and business management.
 - Provide the private sector essential marketing, finance, business and input supply services.
 - Support producer organizations
 - Overcome constraints to participation in export and high value product market channels.
- The idea has also received VISHWAKARMA award.





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INVADER AND SPARROW

- Another innovation by young MSECians with a desire to raise the perspective towards developing advanced ideas is an innovation called SPARROW and INVADER designed with the technical support of HYORISTIC INNOVATIONS PVT LTD.
- The innovation by TEAM INVADER ranked 290th in 2020 by the International Rover Design Challenge (IRDC).
- Team INVADER won 26th by competing with top universities worldwide.
- The team has participated in events like MARS SOCIETY South Asia and International Rover Challenge.
- Team SPARROW is going to be a part of International Planetary Aerial System Challenge.



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AWARD FOR LEADING ENGINEERING COLLEGE 2020

- MSEC believes in collaborating with industries and placements so that students can obtain best possible exposure to multiple learning experiences.
- MSEC has received an award presented by BEGINUP RESEARCH INTELLIGENCE PRIVATE LIMITED in NATIONAL EDUCATIONAL EXCELLENCE AWARDS AND CONFERENCE 2020 for emerging as the Leading Engineering College of the year 2020, Tamil Nadu in the category of industrial collaborations and placements.



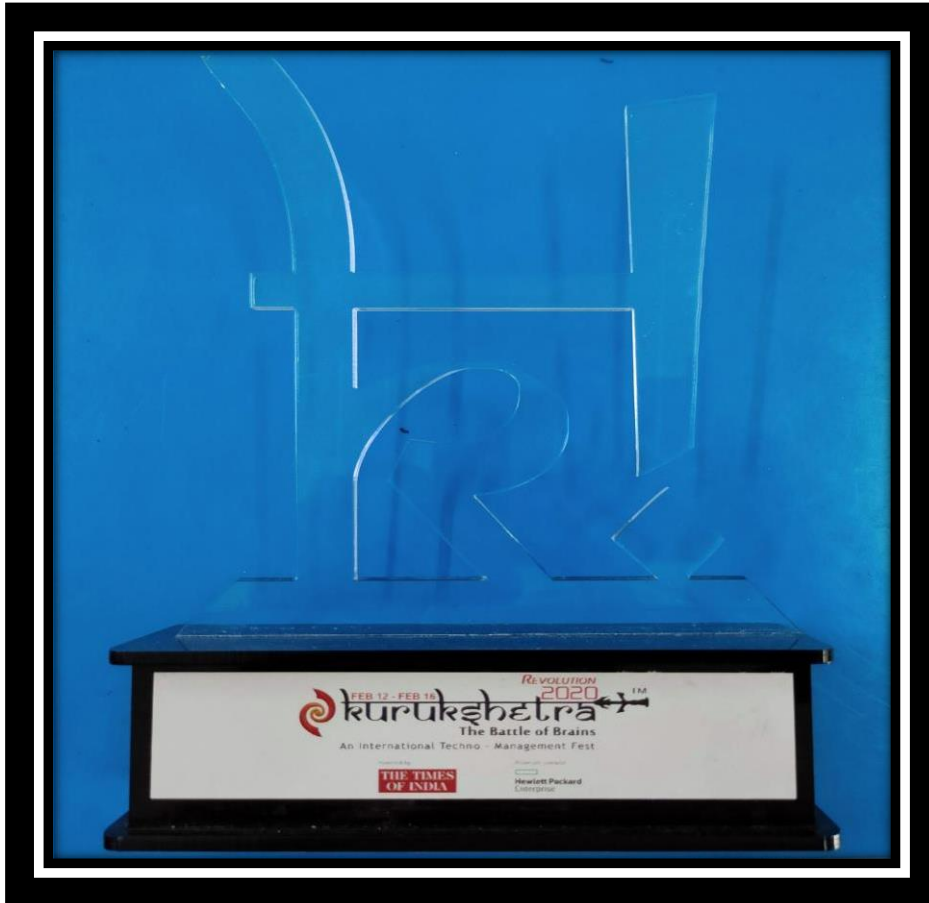

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KURUKSHETRA AWARD

- Students of MSEC won KURUKSHETRA award for project presentation.



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COGNIZANT'S "THE BIG IDEA 2K17" CONTEST.

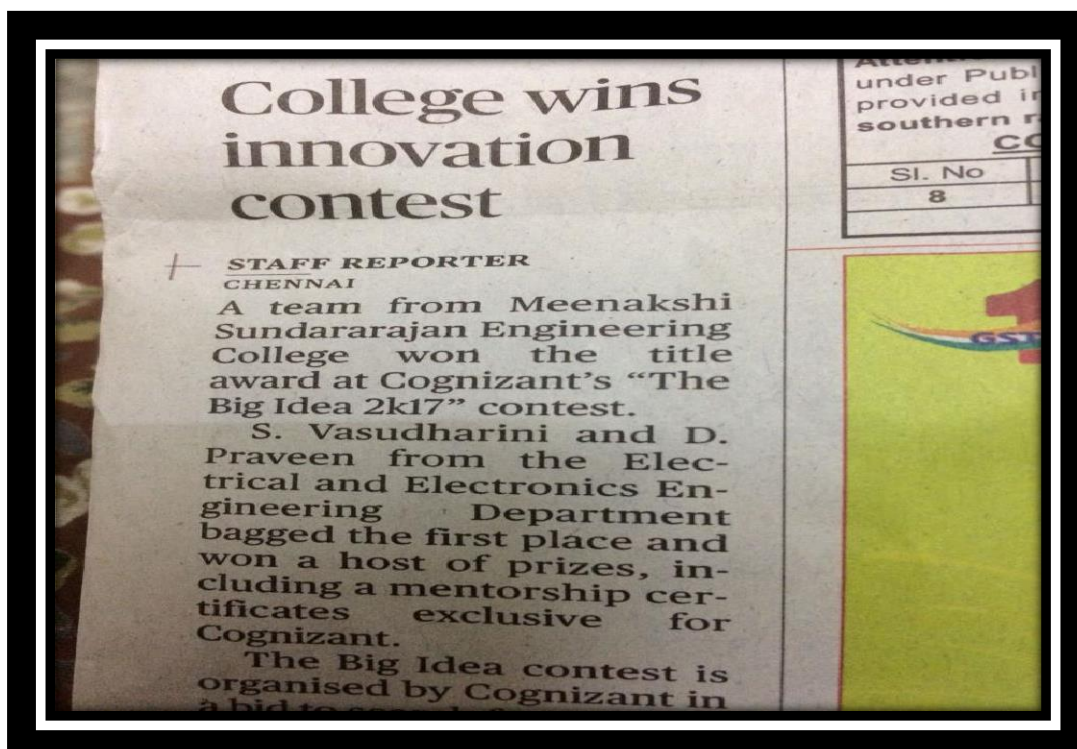
A team from Meenakshi Sundararajan Engineering College won the title award at Cognizant's "The Big Idea 2k17" contest.


S. Vasudharini and D. Praveen from the Electrical and Electronics Engineering Department bagged the **first place** and won a host of prizes, including a mentorship certificates exclusive for Cognizant.

The Big Idea contest is organised by Cognizant in a bid to search for and promote creativity and innovation among young talent. The contest was based on themes such as Future Database Systems, Migration of Software Platforms, Software Programs Of 2030 and New Emerging Technologies. The contestants were required to go through two rounds of examinations.

According to a press release, the college emerged victorious from among 23 institutions which participated in the final rounds.

While the contest kick-started with an online idea submission round that saw the participation of nearly 2,000 students, 10 teams competed in the idea presentation round which was held on October 7.




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3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

A) IPR ACTIVITIES

Institution encourages faculty members and students to involve in patentable works and filed more than five patents to initiate to IPR cell.

SNo	Title of the Patent	Status	Patent No	Date	Level
1.	Smart BlindStick Using AT mega 328P Microcontroller	Filed	202241035242	24/06/2022	National
2	System and Approach For Interactive examination for visually challenged candidates in English and Tamil Language	Filed	202241035045	22/07/2022	National
3	Smart bin with UV interface(Sun Clave)	Filed	202241028898	17/6/2022	National
4	Wheel Chair Canopy	Filed	202241027340	27/05/2022	National
5	System and Method for visual rendering based learning Aid for hearing impaired students	Filed	202241024514	13/05/2022	National
6	Smart Water Dispenser	Filed	202241043888	05/08/2022	National
7	A method for repelling water from hydrophobic soil	Filed	202141030130	16/07/2021	National

B)Research Activities

- Events like FDP , guest lectures are conducted for faculty members to gain knowledge on journal publications and to have experience in working on coveted projects.



Resource Person:Dr.V Antony Arulraj,
Professor,Dept. of MECH Engg.
Easwari Engg.College
Date:22/08/2022
Topic:Quality Research Publications


- To provide unique curriculum delivery for more application oriented based projects using several state-of-the-art laboratories in the institution.



Mechanical Engineering Students
Equipment Utilized from the institution Hot Plate Magnetic Stirrer

B) IIC Activity

Institution promote research temperament amongst students with the help of faculty mentors by adding value to the institute as well as society(more than 200 beneficiaries).


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Innovative products done by students distributed by honorable Tamil Nadu Chief minister Dr.M K Stalin on 26/02/2022

- Students are encouraged to actively participate in events like Toycathon conducted by AICTE as well as intercollege events.
- Institution march ahead with zeal to achieve and make difference from the awards won by students with the help of faculty members.



John

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J. Srinivas

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Institution received 3 stars Certificate from Ministry of Education Government of India

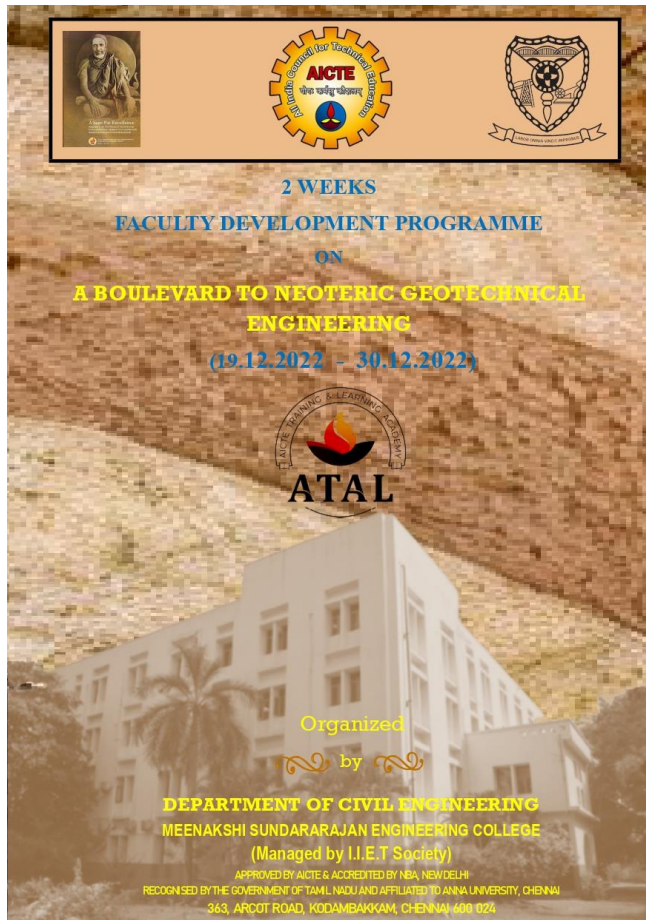


Certificate No : 3676

Issued On : 2022-01-03

J. S.
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ATAL Sponsored FDP




The poster features a background image of a modern white building with palm trees in front. At the top, there is a banner with three logos: a portrait of a man, the AICTE logo (All India Council for Technical Education), and the college's crest. The text is centered and reads: '2 WEEKS FACULTY DEVELOPMENT PROGRAMME ON A BOULEVARD TO NEOTERIC GEOTECHNICAL ENGINEERING (19.12.2022 - 30.12.2022)'. Below this is the ATAL logo (All India Training & Learning Academy). The organizing department is listed as 'DEPARTMENT OF CIVIL ENGINEERING, MEENAKSHI SUNDARARAJAN ENGINEERING COLLEGE (Managed by I.I.E.T Society)'. At the bottom, there is a small text block with approval and accreditation details.




2 WEEKS
FACULTY DEVELOPMENT PROGRAMME
ON
A BOULEVARD TO NEOTERIC GEOTECHNICAL
ENGINEERING
(19.12.2022 - 30.12.2022)

ATAL

Organized
by
DEPARTMENT OF CIVIL ENGINEERING
MEENAKSHI SUNDARARAJAN ENGINEERING COLLEGE
(Managed by I.I.E.T Society)

APPROVED BY AICTE & ACCREDITED BY NBA, NEW DELHI
RECOGNISED BY THE GOVERNMENT OF TAMIL NADU AND AFFILIATED TO ANNA UNIVERSITY, CHENNAI
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WEEK 2 OFFLINE			
29/12/2022 THURSDAY SESSION 12&13	9.30-12.00	Swami Apavargananda, Editor, Sri Ramakrishna Vijayam, <i>Enlightened Citizenship for Personal & National Fulfilment</i>	
	12.00-1.00	MCQs Organized by Mr.S.Saravanan	
	2.00-4.30	Dr.P.K.Suresh, Principal, Meenakshi Sundararajan Engineering College, <i>Geotechnical characteristics of earthen dams</i>	
	4.30-5.00	<i>Teaching Practices</i> - Dr.K.Dhanasekar, Professor, Adi Shankara Institute of Engineering and Technology, Kerala	
30/12/2022 FRIDAY SESSION 14	9.30-12.00	Mr. T. Livingstone Eliazer, CGM, CMRL, <i>Soil-structure Interaction in UG Metro Works</i>	
	12.00-1.00	<i>Visit Report - Team</i>	
	2.00-3.00	<i>Reflection Journal</i> Moderator - Dr.V.Balakumar	
	3.00-5.00	Valedictory Function- Feedback & Vote of Thanks by Dr.L.Ramajeyam, HOD / Dean-PG Studies, MSEC	

ABOUT THE COLLEGE

Meenakshi Sundararajan Engineering college was established in 2001 by the Indian Institute of Engineering Technology and founded by late Prof.K.R.Sundararajan with a vision of making it a centre of excellence in the field of engineering. The institute offers UG programmes in Civil, CSE, EEE, ECE, Mechanical, IT & AI and a PG programme in Construction Engineering and Management. The institute imparts knowledge and skills with excellent learning facilities for practical training to the youth. The college has signed MOU's with research organisations and industries to promote constant interaction in the areas of technology development, student training, curriculum and establishing state-of-art-centres of excellence. Encouraging and inculcating the spirit of innovation is the hallmark of the institution.

ABOUT THE DEPARTMENT

The Department of Civil Engineering, accredited by NBA, was started in the year 2002. The Department with an ICI students' chapter has a distinct association with PWD, Highways department, TWAD, SERC, CMRL, URC, Kesthana Infrastructures, Chennai Port Trust, Metro Water, L&T, Uracon structural Systems and Langdoneseah. The department regularly conducts national & international seminars, conferences, workshops, FDPs to keep the faculty and students updated on the trends and latest research areas in the field of Civil Engineering. Ever since its inception, the department has been providing induction and orientation on the opportunities available in various PSUs. This has paid rich dividends as many alumni have been well placed in prestigious PSUs. A number of our brilliant students have successfully completed their research in IITs and in Universities abroad while a good number are exemplary entrepreneurs.

ABOUT THE FDP

This FDP's focus to highlight the prominence of Soil mechanics and Foundation Engineering, series of sustainability in Geotechnical and Geo-environmental Engineering and its transition towards zero carbon. It is scheduled to impart the influence of particle characteristics and the Engineering behaviour of soil grains and soil structure interaction in UG metro works. This programme also focuses on the recent trends in design and application of deep foundation elements, reliability based design in Geotechnical Engineering, prediction of heave on expansive clay using soil water characteristic curve. It also discusses the efficacy of stone columns in fly ash area, geotechnical aspects of seismic microzonation and modelling and analysis of shell foundation using PLAXIS software, a topic scheduled on enlightened citizenship for personal and national fulfilment will lead to accomplish the ethical values.



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COURSE SCHEDULE & RESOURCE PERSONS

WEEK 1 ONLINE 9.00-9.30 (INTERACTIONS)

19/12/2022 MONDAY SESSION 1	7.00-7.15	Inaugral Session - Dr.K.S.Babai, Secretary, Dr.P.K.Suresh, Principal, Dr.R.Arivazhagan, Associate Professor, MSEC	 
	7.15-7.50 & 8.00-8.50	Prof.Krishna R Reddy, University of Illinois Chicago, USA, <i>A ddrressing Sustainability in Geotechnical and Geoenvironmental Engineering</i>	
20/12/2022 TUESDAY SESSION 2	7.00-7.50 & 8.00-8.50	Dr.R.Arivazhagan, Associate Professor, MSEC, <i>The Influence of Soil Grains Characteristics in their Engineering Behaviour</i>	
21/12/2022 WEDNESDAY SESSION 3	7.00-7.50 & 8.00-8.50	Mr.M. Shivadiya, Engineer GMICE, Marine Geotechnical Engineer, COWI, <i>Geotech a Transition towards Sustainability and Zero Carbon</i>	
22/12/2022 THURSDAY SESSION 4	7.00-7.50 & 8.00-8.50	Prof.R. G. Robinson, Head, Department of Civil Engineering, IIT Madras, <i>One Dimensional Consolidation and Interpretation.</i>	
23/12/2022 FRIDAY SESSION 5	7.00-7.50 & 8.00-8.50	Prof.K.Muthukkumaran, Professor, NIT Tiruchirappalli, <i>Geotechnical Engineering Theories and Practices</i>	
24/12/2022 SATURDAY SESSION 6	7.00-7.50 & 8.00-8.50	Prof.S.Jayalekshmi, NIT Tiruchirappalli, <i>An Outline on Remedial Measures for a Few Failed Geotechnical Structures</i>	
	9.00-9.30	MCQs Organized by Mr.S.Saravanan	

WEEK 2 OFFLINE

26/12/2022 MONDAY SESSION 7	9.00-9.30	Inaugral Session - Kamalakannan KK, Managing Director, Utracon Structural System Pvt. Ltd, Chennai.	
	9.30-12.00	Prof. G. R. Dodagoudar, IITM, <i>Reliability-Based Design in Geotechnical Engineering: Recent Advances and a Few Case Studies</i>	
	1.00-4.00	Local Visit - National Institute of Ocean Technology, Pallikaranai, Chennai	
27/12/2022 TUESDAY SESSION 8&9	9.30-12.00	Dr.V.Balakumar, Senior Consultant, Simplex Infrastructures, <i>Recent Trends in the Design and Application of Deep Foundation Elements</i>	
	12.00-1.00	<i>Article 1 Discussion</i> - Chaired by Dr.V.Balakumar	
	2.00-4.30	Mr. Kondapalli Bairagi, Chief Engineering Manager, L&T–Construction, <i>Efficacy of Stone Columns in Flyash Area</i>	
	4.30-5.00	<i>Teaching Practices</i> - Dr.L.Ramajeyam, HOD / Dean-PG Studies	
28/12/2022 WEDNESDAY SESSION 10&11	9.30-12.00	Prof.K.Premalatha, Anna University, <i>Prediction of Heave of Expansive Clay using Soil Water Characteristic Curve</i>	
	12.00-1.00	<i>Article 2 Discussion</i> - Chaired by Dr.V.Balakumar	
	2.00-4.30	Dr.Vijaya Ravichandran, Joint Project Director, NIOT, <i>Field Testing of Suction Piles as Foundations in Coastal Applications</i>	
	4.30-5.00	<i>Teaching Practices</i> - Dr.P.Asha, Professor, St.Peter’s Institute of Higher Education and Research, Chennai	

COURSE CONTENTS

Sustainability in Geotechnical and Geo-environmental Engineering, Geo-tech a transition towards zero carbon, The engineering behaviors of soil grains, Geotechnical Engineering Theories and Practices, An outline on remedial measures for a few failed geotechnical structures, Soil-structure interaction, Recent Trends in the Design and Application of Deep Foundation, Recent Advances and a few Case Studies in Geotechnical Engineering, Prediction of heave of expansive clay using soil water characteristic curve, Enlightened Citizenship for Personal & National Fulfilment.

EXPECTED OUTCOME

This programme intends to impart a clear understanding of fundamentals of geotechnical engineering related to the criteria for selection of suitable foundation right from planning, analysis and design which includes both field and laboratory testing and observations thereby conclusions maybe arrived with expertise. The participants of this Faculty Development Programme will also be able to apply numerical and finite element techniques for solving complex geotechnical problems, thus enabling a better understanding of the practical scenario related to analysis and solutions to the problems related to geotechnical engineering. The interactive sessions of field tests, advanced laboratory testing related to experimental setup, observation of results, data interpretation, etc. will definitely give good exposure to the participants involved in geotechnical research. The sessions related to numerical modelling, analysis and design of geotechnical structures will lead the idea of theory to practice. The sessions related to academic interest will impart theory background to the participants involved in industries and also sessions by field experts will lead to good exposure about the field to the participants from academic institutions.

INSTRUCTIONS FOR PARTICIPANTS

The faculty members of AICTE approved institutions, research scholars, PG Scholars, participants from Government, MoE / AICTE / UGC, bureaucrats / technicians / participants from industry, CBSE teachers, etc., and staff of host institutions (not more than 10%).

FDP e-link invite to join the program and other instructions will be shared via e-mail to all registered participants. Participants should have good internet connection to access uninterrupted live streaming of online sessions. Minimum 80% attendance and 70% marks in assessment are Mandatory requirements for obtaining the certificate.

CHIEF PATRONS

Dr.K.S.Lakshmi, Correspondent
Dr.K.S.Babai, Secretary
Mr.N.Sreekanth, Director

PATRONS

Dr.P.K.Suresh, Principal
Dr.K.Umarani, Dean Academics
Dr.L.Ramajeyam,
HOD / Dean-PG Studies

COORDINATOR

Dr.R.Arivazhagan
Associate Professor

CO-COORDINATOR

Mr.S.Saravanan
Assistant Professor

ORGANIZING COMMITTEE

Mrs.U.Nirmalamba, ASP
Mrs.G.Anbu Neema, AP
Mrs.M.Malini Gayathri, AP
Mr.N.Ravikumar, AP
Dr.Eswary Devi, AP
Dr.M.Ponni, AP
Mr.P.Sivakumar, AP
Mr.M.Ashwin, AP

For any queries, contact:
9003116690, 7397686669, 9080944092
email-id: civileventmsec@gmail.com
www.msec.edu.in

Anna University Sponsored FDP

ABOUT THE INSTITUTION

Meenakshi Sundararajan Engineering College (MSEC) was established by the IIET Society in 2001. This institution is a part of the prestigious KRS Group of Institutions which also includes the renowned IIET (Indian Institute of Engineering Technology) established in 1947 by Founder Late Shri K.R.Sundararajan. MSEC is known for the quality education they impart and their stringent levels of discipline. MSEC has consistently outshone in academics, co-curricular and extra-curricular activities as well.

ABOUT THE DEPARTMENT

The department of Information Technology was started in the year 2001 with intake of 60 students focusing on the area. Under the erudite leadership of the Head of the department along with the efficient faculty members and students, the department has won laurels to the college. The department constantly strives with the singular aim of producing students with outstanding academic excellence. Department has MoU with 14 IT companies and conducts FDPs, Guest Lectures, Seminars and workshops regularly for the benefit of faculty members and students. Students of this department are placed in top MNCs including ZOHO, WALMART, TCS, CTS, WIPRO, ACCENTURE, etc. The department of AI & DS was started in the year 2021 with intake of 60 students.

LOCATION

Meenakshi Sundararajan Engineering College is located in Kodambakkam, Chennai, Tamil Nadu, India and the campus is very close to Kodambakkam railway station.

ABOUT THE ONLINE-FDTP

The Online-FDTP is intended to provide opportunity for faculty members affiliated to Anna University to acquire knowledge on the Course **AD8302 Fundamentals of Data Science** and to become equipped with the required knowledge to facilitate the students to learn this course.

TOPICS TO BE COVERED

The following topics will be covered in this FDTP:

- Introduction to Data science
- Data Pre-processing
- Exploratory data analysis
- Presenting and building applications
- Interpreting distributions, graphs, aggregation of qualitative and ranked data
- Frequency distributions and Outliers
- Numpy arrays & aggregations
- Boolean logic – fancy indexing- structured arrays
- Data manipulation with Pandas
- Indexing , combining datasets , aggregation and grouping
- Normal distributions and z scores
- Correlation, scatter plots, computational formula for correlation coefficient
- Regression, Interpretation of r^2 , multiple regression equations, regression toward the mean
- Visualization with matplotlib, Density and contour plots, histograms, binnings, and density
- Three dimensional plotting – geographic data data analysis using statmodels and seaborn
- Graph plotting using Plotty, interactive data visualization using Boken

RESOURCE PERSONS

Resource Persons are experienced faculty members from reputed institutions and experts from Industry.

- Dr. P. Geetha, Anna University, Chennai
- Dr. Radha Senthikumar, MIT, Chennai
- Dr. P. Gunrama Senthivel, Galgotas University, Noida
- Dr. G. Janarthanan, NITTR, Chennai
- Dr. D. Doreen Robin, CIRF, Chennai
- Dr. V. Ajantha Devi, AP3 Solutions, Chennai
- Mr. S. Balaji, Purchasing Power, Chennai
- Dr. G. Suganya, VIT, Chennai
- Dr. K. Vijaya, SRMIST, Chennai
- Dr. R. S. Ponmagal, SRMIST, Chennai
- Dr. S. Vigneshwari, Sathyabama University, Chennai
- Dr. K. Sathiyamurthy, Pondicherry Engineering College
- Dr. D. Thenmozhi, SSN Engg. College, Chennai
- Dr. K. Ananthajothi, MIM Jain Engg College
- Dr. R. Geetha, S A Engg College
- Dr. Uma N. Dulhare, Muffakham Jah College of Engineering & Technology, Hyderabad
- Ms. Sofia Pillai, Noida Institute of Engineering & Technology

Online - Six Days FDTP

ON

AD8302

FUNDAMENTALS OF DATA SCIENCE

From 27/06/2022 to 02/07/2022

Co-ordinators

Dr.A.Kanimozhi, Associate Professor

Dr.P.Chitra, Professor



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Engineering College
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Dr. K. S. Babai,
Secretary, MSEC



Dr. P. Geetha,
Anna University



Dr. P.K. Suresh,
Principal, MSEC



Dr. G. Janarthanan, NITTR



Dr. G. Suganya, VIT



Dr. Ponmagal, SRMIST



Dr. K. Sathiyamurthy
Puducherry
Technological University



Dr. D. Thenmozhi,
SSN Engg. College



Dr. Radha Senthilkumar,
MIT



Dr. M.K. Sandhya, MSEC



Dr. Vigneshwari,
Sathyabama University



Dr. A. Kanimozhi, MSEC



Ms. Sofia Pillai,
Noida Institute of
Engineering & Technology



Dr. D. Doreen Robin,
CIRF



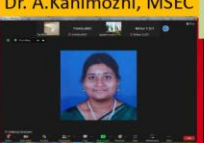
Dr. K. Vijaya, SRMIST



Dr. R. Geetha, SAEC



Dr. P. Gururama Senthivel,
Galgotias University, Noida



Ms. N. Mathangi, MSEC



Dr. P. Chitra, MSEC



Dr. Uma N. Dulhare
Muffakham Jah College of
Engg. & Technology,
Hyderabad.

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MEENAKSHI SUNDARARAJAN ENGINEERING COLLEGE

6 Days Online FDTP
On **AD8302 FUNDAMENTALS OF DATA SCIENCE**
FROM 27/06/2022 TO 02/07/2022

2. ONE PAGE REPORT

Online - Six Days faculty development training program on "AD8302 FUNDAMENTALS OF DATA SCIENCE" was organized from 27/06/2022 to 02/07/2022 by Meenakshi Sundararajan Engineering college.

This FDTP was organized through Zoom- virtual meet platform from 9.00am to 4.15p.m for 6 days. FDTP started on 27th June, 2022 with the inaugural address by Dr.K.S.Babai, Secretary, MSEC and special address by Dr. P.K. Suresh, Principal, MSEC and Dr. K. Uma Rani, Dean, Academics, MSEC.

Day1(27-06-2022) : Session 1 was handled by Dr. Radha Senthil Kumar, Associate Professor, MIT, Chennai and focused on needs, benefits facets and process of data science. She also discussed the latest trends observed in various industries and its perception. Session2 was handled by Dr.P. Gururama Senthilvel, Galgotias University, Noida and discussed about retrieving data – cleansing, integrating and transforming data. The third session was conducted in the topic Exploratory data analysis by Dr. K. Vijaya, SRMIST and continued to Session 4 by Dr. A. Kanimozhi, MSEC on Building the models, Presenting and building applications.

Day 2 (28-06-2022): Session1 was handled by Dr.K.Ananthajothi from MNM Jain Engineering College, Chennai, had exchanged ideas on the topic Frequency distributions , outlier & relative frequency distributions followed by Dr.M.K.Sandhya from MSEC on the topics Interpreting distributions and graphs . 3rd session was handled by Dr. Geetha.R from S.A Engineering College focused on degrees of freedom & interquartile range and Dr. G. Janarthanan from NITTTR Chennai handled Design of Assessment (QP) with rubrics.

Day 3 (29-06-2022): Session1 was on Basics of Numpy arrays and its computations by Dr. G.Suganya VIT, Chennai followed by Dr.Vigneshwari, Sathyabama Institute of Science and Technology on the topic Comparisons, masks, Boolean logic, fancy indexing and structured arrays .The third and fourth sessions were on Data manipulation with Pandas by Dr. K. Sathiyamurthy, Pondichery University.

Day 4 (30-06-2022): Sessions 1 & 2 were handled by Ms. Sofia Pillai, Noida institute of Engineering & Technology on Normal distributions, z scores, normal curve problems, finding proportions, finding scores, and correlation coefficient for quantitative data. The third session was on Regression by Dr. P. Geetha, Anna University followed by Dr.R.S. Ponmagal, SRMIST on Interpretation of r^2 , multiple regression equations and regression toward the mean.

Day 5 (01-07-2022): Session1 was on Density and contour plots, histograms, binnings, and density with examples by Dr. D. Thenmozhi, SSN Engineering College and followed by Dr.V. Ajantha Devi, Research Head, AP3 Solutions provided content on Visualization with matplotlib.

Day 6 (02-07-2022): Session1 was addressed by Dr. Uma N. Dulhare, Muffakham Jah College of Engineering & Technology, Hyderabad on Application and case study in data science and made the discussion very lively. Session 2 was Group / Panel Discussion with Dr. K. Vijaya, Dr. Sandhya, . Dr. P. Chitra, Dr. Gururama Senthilvel and Dr. A. Kanimozhi. 3rd session was online test for participants and was conducted by Ms. R.Gayathri and Ms.G.S.Devilakshmi. And finally participants shared their feedback and FDTP was concluded with the vote of thanks by the coordinators.


COORDINATORS




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MEENAKSHI SUNDARARAJAN ENGINEERING COLLEGE

6 Days Online FOTP
On AD8302 FUNDAMENTALS OF DATA SCIENCE
FROM 27/06/2022 TO 02/07/2022

3. DETAILED SCHEDULE OF THE TRAINING PROGRAMME

Day	Session 1 9.00a.m. to 10.30a.m.	Session 2 10.45a.m. to 12.15p.m.	Session 3 1.00p.m. to 2.30p.m.	Session 4 2.45p.m. to 4.15p.m.
Day- 1 27/06/2022 Monday	Introduction to Data science Dr. Radha Senthilkumar, MIT, Chennai	Data Pre-processing Dr. Gururama Senthilvel, Galgotia University, Noida	Exploratory data analysis Dr. K. Vijaya, SRMIST	Presenting and building applications Dr. A. Kanimozhi, MSEC
Day- 2 28/06/2022 Tuesday	Frequency distributions and Outliers Dr.K.Ananthajothi MNM Jain Engineering College, Chennai	Interpreting distributions, graphs, aggregation of qualitative and ranked data Dr. Sandhya, MSEC	Describing variability, Degrees of freedom, interquartile range – variability for qualitative and ranked data Dr. Geetha R. S.A Engineering College	Design of Assessment (QP) with rubrics Dr. G. Janarthanan NITTTR, Chennai
Day- 3 29/06/2022 Wednesday	Basics of Numpy arrays & aggregations Dr. Suganya VIT, Chennai	Boolean logic – fancy indexing, structured arrays Dr. Vigneshwari Sathyabama University, Chennai	Data manipulation with Pandas Dr. K. Sathiyamurthy Pondichery Engineering College	Indexing , combining datasets , aggregation and grouping Dr. K. Sathiyamurthy Pondichery Engineering College
Day- 4 30/06/2022 Thursday	Normal distributions and z scores Ms. Sofia Pillai, Noida Institute of Engineering & Technology	Correlation, scatter plots, computational formula for correlation coefficient Ms. Sofia Pillai, Noida Institute of Engineering & Technology	Regression – least squares regression line – standard error of estimate Dr. P. Geetha Anna University	Interpretation of r^2 – multiple regression equations – regression toward the mean Dr. Pomagal SRMIST
Day- 5 01/07/2022 Friday	Visualization with matplotlib Dr. D. Thenmozhi, SSN Engineering College	Density and contour plots – histograms, binnings, and density Dr. V. Ajantha Devi Research Head AP3 Solutions, Chennai	Three dimensional plotting – geographic data – data analysis using statmodels and seaborn Dr. D. Dorine Robin CIRF, Chennai	Graph plotting using Plotly – interactive data visualization using Bokeh Dr. D. Dorine Robin CIRF, Chennai
Day- 6 02/07/2022 Saturday	Application and case study in data science Dr. Uma N. Dulhare Muffakham Jah College of Engineering & Technology, Hyderabad.	Group / Panel Discussion Dr. K. Vijaya, Dr. Sandhya, Dr. Gururama Senthilvel, Dr. P. Chitra & Dr. A. Kanimozhi	Feedback by Participants and Valedictory Ms. R. Gayathri, MSEC	Online test Ms. R. Gayathri & Ms. G.S. Deviakshmi, MSEC

Dr. Uma N. Dulhare
Co-ordinators



Dr. K. Sathiyamurthy

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