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University with Graded Autonomy Status
Maduravoyal , Chennai - 600 095

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MGR Association
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Department of CSE Event Report

EVENT TYPE   : Faculty Development Program

EVENT TITLE   : Advancements in Computational Technologies

SPONSORED BY   : Department of Computer Science and . . Engineering in association with Academic Staff College

DATE / TIME   : 28-03-2022/02:30PM-04:00PM

VENUE   : Zoom

GUEST SPEAKER   : Dr. Anantha Narayanan

DEPARTMENT HEAD : Dr. S. Geetha

EVENT COORDINATOR : Mrs. T. Kirubadevi
Mr. M. Arun

TARGET AUDIENCE   : Faculty from various colleges all over India

DAY 1

SESSION DESCRIPTION:

    A 5-Day Virtual Faculty Development Program is organized by Department of Computer Science and Engineering, Dr. M.G.R Educational and Research Institute in association with Academic Staff College on "ADVANCEMENTS IN COMPUTATIONAL TECHNOLOGIES" on a virtual platform from 28/03/2022 to 01/04/2022. On Day-1 the session was on the topic: Enabling Technologies for Smart Cyber Physical System. The session was started by Mrs. T. Kirubadevi, Faculty of CSE Department and She requested Dr. S. Geetha, HoD, CSE Department to welcome everyone. Our HoD Dr. S. Geetha warmly welcomed everyone to the session an Dr. S.

Geetha Lakshmi, Vice Chancellor, Dr. M.G.R Educational and Research Institute inaugurated the session by her thoughtful speech. Dr. V. Cyril Raj, AddIn Registrar, Dr. M.G.R Educational and Research Institute gave a wonderful felicitation address with wonderful insights on importance of AI and Computational Technologies and then Dr. Gunasekaran, Faculty of CSE Department, Dr. M.G.R Educational and Research Institute introduced the Guest Speaker Mr. Anantha Narayanan, Asst Professor, Amrita School of Engineering to the participants and handed the session to the Guest Speaker.

Dr. Ananthan Narayanan started his session on "Enabling Technologies for SmartCyber Physical Systems".

Dr. Ananthan introduced himself to the participants and talked about the agenda of the Session and Dr. Anantha explained about the smart systems and it's components and it's combinations in this generation of technical Intelligence and cognitive functions. Dr. Anantha explained about the enabling systems for smart systems and IoT like embedded systems, Wireless sensor networks etc. Dr. Anantha explained about the M2M, 2 C's in M2M and 4C's in M2M, M2M evolution to IoT and about the logical view in cognitive loop. Dr. Anantha explained about the Industry 4.0 and how it's works and about the Industrial IoT comparing with Industry 4.0 to get the global competitiveness. Dr. Anantha talked about the implementation of Industry 4.0 by the top companies and about the applications created by the companies using this technology. Dr. Anantha talked about various hardwares which are used to connect the applications wit IoT and explained about Smart CPS, how people and processes are linked, Mbed – Rapid IoT device development, circuits boards like Nucleo Board STM 32 MCU's, Sony Spresense, Nordic BLC. Dr.Anantha explained the connectivity options for IoT, LPWAN, eMTC, AIOTI- WG, Levels of Processing in Data Rest and Motion. Dr. Anantha explained about the AWSIoT Architecture, IoT Smart Greenhouse, IoT Hardware devices. Dr. Anantha Narayanan Concluded his session by clarifying a couple of questions from the participants. The session ended with the vote of thanks by Dr. Gunasekaran, Faculty of CSE   Department.

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DAY 2

SESSION DESCRIPTION:

A 5-Day Virtual Faculty Development Program is organized by Department of Computer Science and Engineering, Dr. M.G.R Educational and Research Institute in association with Academic Staff College on "ADVANCEMENTS IN COMPUTATIONAL TECHNOLOGIES" on a virtual platform from 28/03/2022 to 01/04/2022. On Day-2 the session was on the topic: Machine learning and Data Science Applications of the Future. The session was started by Mrs. T. Kirubadevi, Faculty of CSE Department and she requested Dr. S. Geetha, HoD, CSE Department to address the participants. Our HoD Dr. S. Geetha warmly welcomed everyone to the session and to continue with the session, Dr. T.V.Ananthan, Faculty of CSE Department, Dr. M.G.R Educational and Research Institute introduced the Guest Speaker Mr. M. Shanmugasundaram, Data Consultant, Tasker Inc to the participants and handed the session to the Guest Speaker.Mr. M. Shanmugasundaram started his session on "Machine learning and Data Science Applications of the Future."Mr. M. Shanmugasundaram introduced himself to the participants and talked about the importance of Machine Learning and Data Science.Mr. M. Shanmugasundaram explained about how today's Data Science is a combination of Big Data and Big Compute,Ultimate goal of data science and about how successful Data Science happens.Mr.M.Shanmugasundaram explained the process with book Recommendations as an example and takes about the process which includes theprediction, historical data to take action.Mr. M. Shanmugasundaram explained about how data is used in provides the right Applications and explained about the Big Data Characteristics with Geospatial Big Data and Biomedical Big Data as an example. Mr.M. Shanmugasundaram explained the amplification of value of Big Data, ecosystemfor it and about the basic steps in Data Science process, workflows, Metrics, Implementation and Evaluation. Mr. M.Shanmugasundaram talked about the social good using big data and explained it using some examples and shared some Machine learning case Studies. Mr. M. Shanmugasundaram concluded his session by clarifying acouple of questions from the participants. The session ended with the vote of thanks by Dr. T. V. Ananthan, Faculty of CSE Department.

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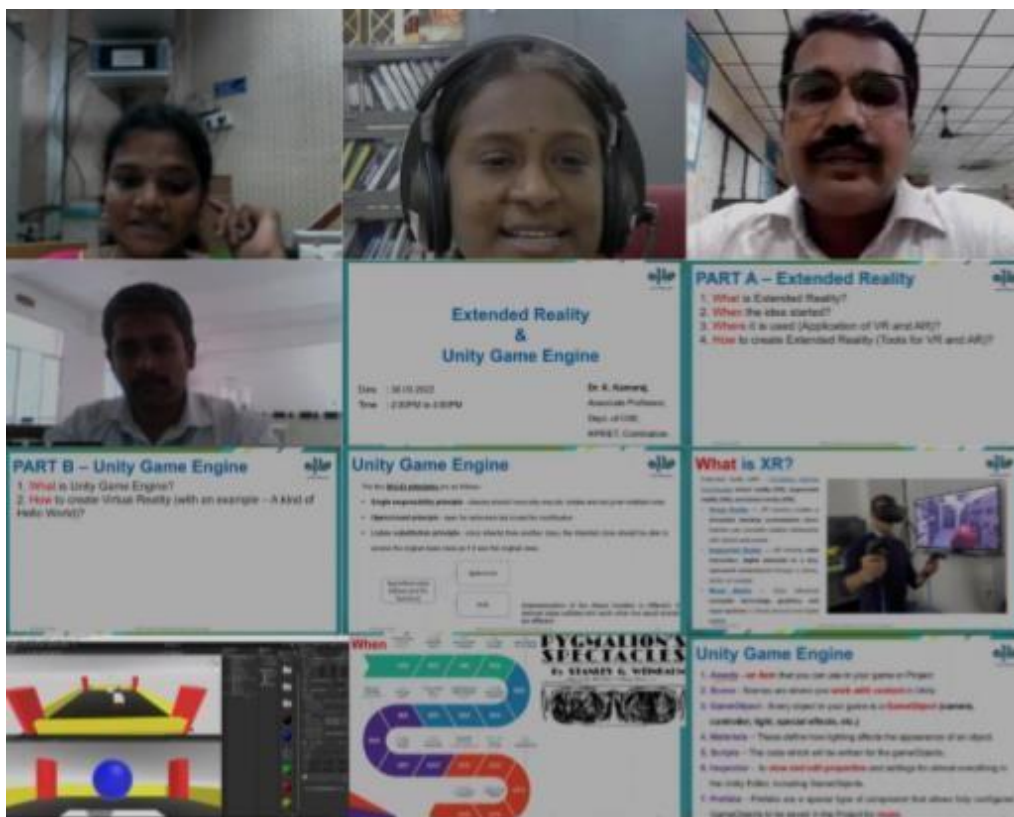
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DAY 3

SESSION DESCRIPTION:

A 5-Day Virtual Faculty Development Program is organized by Department of Computer Science and Engineering, Dr. M.G.R Educational and Research Institute in association with Academic Staff College on "ADVANCEMENTS IN COMPUTATIONAL TECHNOLOGIES" on a virtual platform from 28/03/2022 to 01/04/2022. On Day-3 the session was on the topic : Introduction to Extended Reality and Unity Game Engine. The session was started by Mrs. T. Kirubadevi, Faculty of CSE Department and She requested Dr. Kumanan, Faculty of CSE Department, Dr. M.G.R Educational and Research Institute to welcome and introduce the Guest Speaker Dr. Kamaraj, Asst Professor and Head, KPRIET to the participants. Dr. Kumanan welcomed and Introduced the Guest Speaker Dr. Kamaraj to the participants gracefully and handed the session to the Guest Speaker.Dr. Kamaraj started his session on "Introduction to Extended Reality and Unity Game Engine". Dr. Kamaraj introduced himself to the participants and talked about the agenda of the Session. Dr. Kamaraj gave a detailed explanation on Extended Reality and also explained about it's tools, hardware that is used and about the VR and AR Technology Applications. Dr. Kamaraj talked about the VR and AR Devices that are used in the Applications to live in the Extended Reality and also talked about the Market demand and Job Opportunities in this Sector. Dr. Kamaraj explained where the idea of Extended Reality was created and also about the applications in the real-time world. Dr. Kamaraj explained about Unity Game Engine is created and how it works and also about how it is used to create games in VR and AR Technology. Dr. Kamaraj gave the participants a stimulation example on creating a 3D AR Objects and then explained the components required to use this Applications and also about the special lab facilities. Dr. Kamaraj concluded his session by clarifying a couple of questions from the participants. The session ended with the vote of thanks by Dr. Kumanan, Faculty of CSE Department.

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DAY 4

SESSION DESCRIPTION:

A 5-Day Virtual Faculty Development Program is organized by Department of Computer Science and Engineering, Dr. M.G.R Educational and Research Institute in association with Academic Staff College on "ADVANCEMENTS IN COMPUTATIONAL TECHNOLOGIES" on a virtual platform from 28/03/2022 to 01/04/2022. On Day-4 the session was on the topic: Role of AI in Autonomous Vehicle. The session was started by Mrs. T. Kirubadevi, Faculty of CSE Department and She requested Dr. S. Geetha, HoD of CSE Department, Dr. M.G.R Educational and Research Institute to welcome address. Our HoD Dr. S. Geetha welcomed everyone gracefully and then to continue with the session Dr. Rameshbabu, Faculty of CSE Department introduced the Guest Speaker Dr. K.S.Gayathri, Asst Professor of IT Department, SSN College of Engineering to the participants and handed the session to the Guest Speaker. Dr. K.S.Gayathri started her session on "Role of Al in Autonomous Vehicle". Dr. K.S.Gayathri introduced herself to the participants and explained about the Autonomous Vehicle and about the benefits and growth of using Autonomous vehicle. Dr. K. S. Gayathri explained about levels of self driving cars and it's autonomy forecast and also explained about time line of full automation of vehicles. Dr. K.S. Gayathri also explained about the role of AI in automating vehicles and it's approach, techniques, sensors, cameras, light detection and ranging, Radio detection and ranging, Inertial measurement Unit and about design of Autonomous Vehicles, Role of HD Map and about its need, composition, production. Dr. K.S.Gayathri explained about localization, object detection, motion prediction, decision making, Trajectory, Work flow of Autonomous Vehicles and also about the stack and datasets required and about how the stimulation works. K.S.Gayathri concluded her session by clarifying a couple of questions from the participants. The session ended with the vote of thanks by Dr.Rameshbabu, Faculty of CSE Department.

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DAY 5

SESSION DESCRIPTION:

A 5-Day Virtual Faculty Development Program is organized by Department of Computer Science and Engineering, Dr. M.G.R Educational and Research Institute in association with Academic Staff College on "ADVANCEMENTS IN COMPUTATIONAL TECHNOLOGIES" on a virtual platform from 28/03/2022 to 01/04/2022. On Day-5 the session was on the topic: Research Challenges in Cloud . The session was started by Mrs. T. Kirubadevi, Faculty of CSE Department and She requested Dr.P.Dhivya, Faculty of CSE Department, Dr. M.G.R Educational and Research Institute to give the welcome address and introduce the guest speaker to the participants. Dr.P.Dhivya welcomed and introduced the Guest Speaker Dr. Sakthivel, Asst Professor Senior Grade SCOPE, VIT to the participants and handed the session to the Guest Speaker.

Dr. Sakthivel started his session on "Research Challenges in Cloud".

Dr. Sakthivel introduced himself to the participants and explained about the evolution of cloud computing and Iot and also gave an overview of cloud and IoT. Dr. Sakthivel explained about the components, IoT market share of 2020, IoT Protocol Organization, General Architecture of Cloud centric IoT and also about AWS core and and it's features and about the services provided by AWS such as Analysis, Button, Siteview, Events and Core weeks. Dr. Sakthivel explained about the sensor data processing on AWS using IoT Core, Apache Spark etc., and also gave us a stimulation of AWS Cloud. Dr. Sakthivel concluded his session by clarifying a couple of questions from the participants. The session ended with the vote of thanks by Dr. Dinesh Kumar, AddIn HoD, of CSE Department.

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