



# GTU – Graduate School of Engineering and Technology

## Report On

### Faculty Development Program on

### “Internet of Things with Machine Learning and Artificial Intelligence”

**Sponsored by ISEA (Information Security Education and Awareness) Project – II.**

GTU-Graduate School of Engineering and Technology organized five days online faculty development program on “Internet of Things with Machine Learning and Artificial Intelligence” held during 14-18 September, 2020 in association with Centre for Continuing Education, National Institute of Technology (NIT), Warangal. The FDP is sponsored by ISEA (Information Security Education and Awareness) Project – II.

Objectives of the FDP are to train our Indian technocrats to solve issues address by National Educational Policy (NEP), creation of new knowledge, develop robust research echo-system in IoT, Machine Learning and AI at our University with a collaborations with NIT, Warangal.

In this FDP, various architectures, techniques and algorithms of IoT, ML and AI and various advanced solutions created by professors of IIT, NIT and industries based on IT Sector, are to be incorporated for advanced knowledge for various technocrats for future applications.

We have received more than 1400 registrations across India (Delhi, Chhattisgarh, Harayana, Goa, Assam, Jammu & Kashmir, Jharkhand, Odisha, Madhya Pradesh, Maharashtra, West Bengal, Karnataka, Tamil Nadu, Kerala, Utter Pradesh, Bihar, Telangana, Punjab, Andhra Pradesh, and Gujarat) : 20 states and abroad (various cities of Philippines, Nepal, Kenya, Indonesia, Sri Lanka, Bangladesh, Muscat, Tunisia, Pakistan, Nigeria, Libya and Combodia) : 12 Countries.

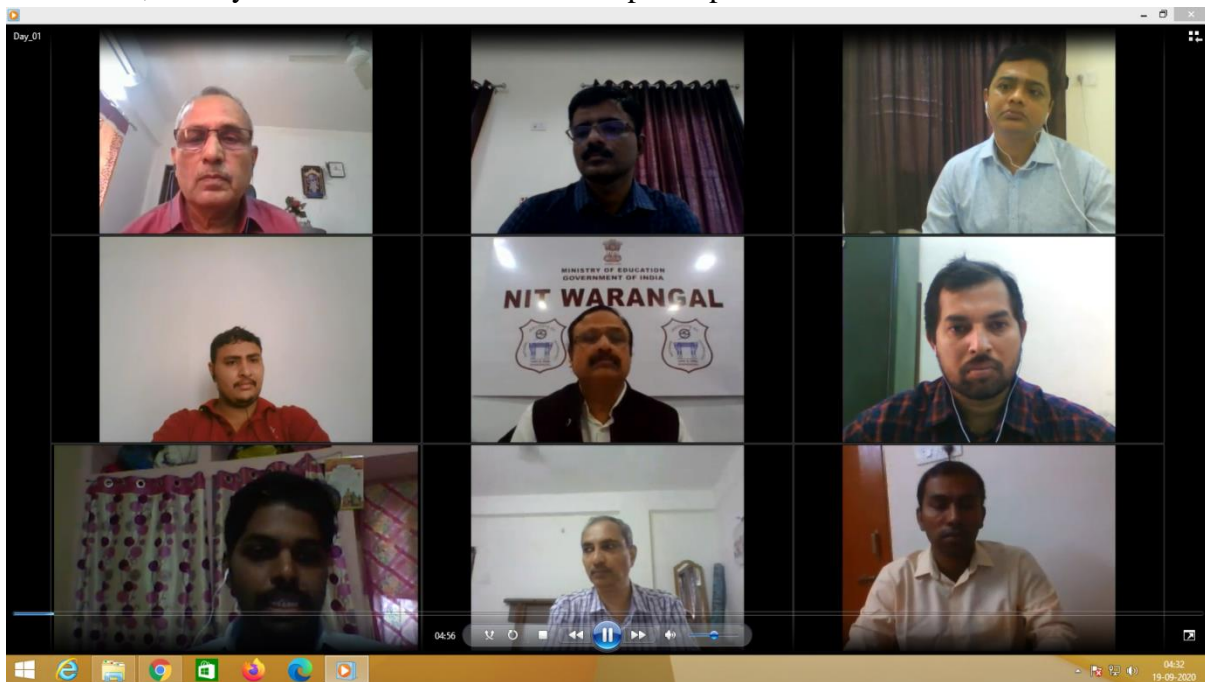
We have received registration from various non-academic institutes such as Indian Navy, Indian Air Force, CID, GUNVL, Prasar Bharti, CSIR, IBM, Oracle, Essar Heavy Engineers, BISAG, TCS, ISR, IPR, ISRO, Adani Power, C-DAC, All India Radio, Crime Investigation Department, Home Department, Cyber Crime Cell, Forensic Science Laboratory, Punjab Policy Academy, einfochips, Reliance Industry Ltd, Tata Elxsi and my more IT related startups and industries.

Based on locations, We have received 500 + registrations from outside the Gujarat, 60+ from abroad, rest from across the Gujarat. We have received registrations from more than 60 Universities (state and Private), 550 engineering colleges and more than 10 NITs. Due to

limitation of online platforms and smooth conduction of the FDP, we have selected only 200 delegates from various universities, colleges, industries across India and Abroad for the FDP.

We have invited renowned and well-experienced resource persons namely, Prof. M. Shiv Kumar, University of Santa Clara, California, USA, Prof. D. Ramesh, IIT, Dhanbad, Prof. A. Chandrashekhara, IIT, Dhanbad, Prof. E. Sauresh, NIT, Warangal, Prof. Raju Bhukya, NIT, Warangal, Mr. Prasad, Software Engineer, K4U Infotech Solution Ltd, Hyderabad, and Mr. Pratap Singh, Senior Software Engineer, Altiux Innovations Ltd, Bengaluru,

The function is inaugurated on 14<sup>th</sup> September, 2020 by Hon'ble Vice Chancellor Sir, Gujarat Technological University and President of the inaugural function Prof. Navin Sheth, in presence of Chief Guest of the Function & Director, National Institute of Technology, Warangal Prof. N. V. Ramana Rao, Guest of Honor & HoD, Department of Computer Science and Engineering, NIT, Warangal Prof. P. Radha Krishna, HoD, Department of Computer Science & Engineering, NIT, Warangal, Prof. Venkatewara Rao Kagita, NIT, Warangal, Prof. Raju Bhukya, Faculty In-charge, Centre of Continuing Education, NIT, Warangal, Prof. S. D. Panchal, Director, GTU-Graduate School of Engineering and Technology, Prof. G. D. Makwana, Coordinator and Prof. Margam Suthar, Co-Coordinator of the FDP, faculty members of the institute and participants.



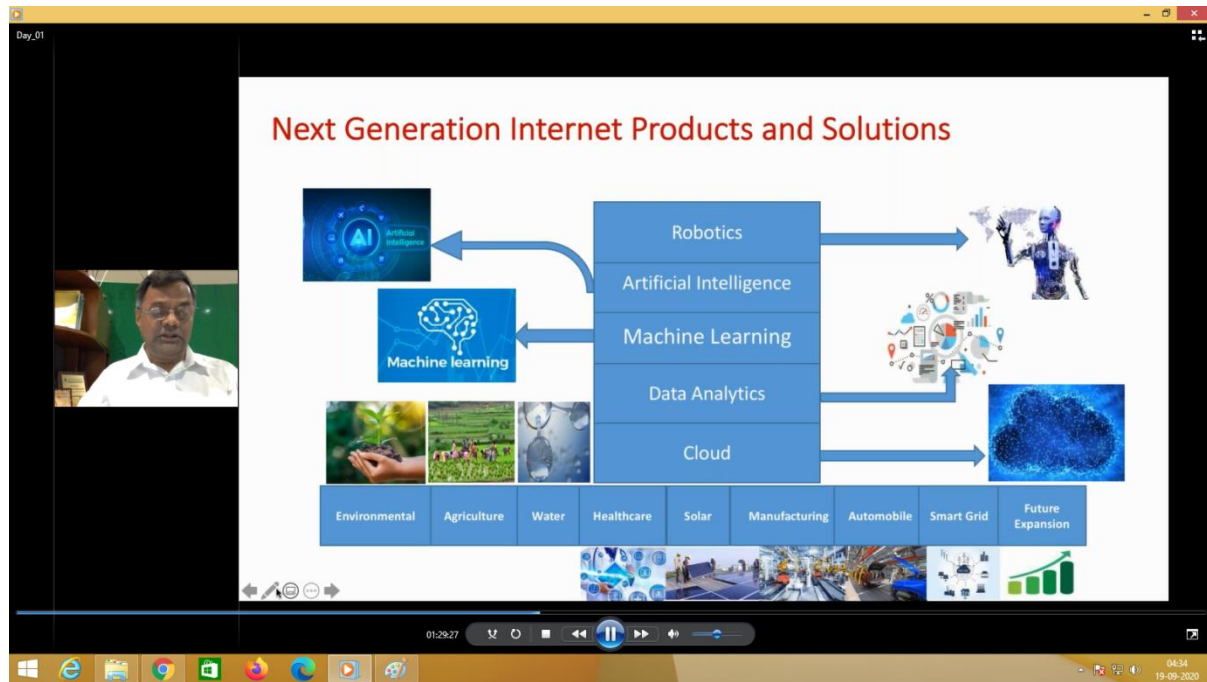
**1<sup>st</sup> Row (L-R): Prof. (Dr.) Navin Sheth, Hon'ble Vice Chancellor, GTU, Prof. (Dr.) S. D. Panchal, Director, GTU-GSET, Prof. G. D. Makwana, Coordinator**

**2<sup>nd</sup> Row (L-R): Participant of the FDP, Prof. N. V. Ramana Rao, Director, NIT, Warangal, Prof. Raju Bhukya, Faculty In-Charge, CCE, NIT, Warangal**

**3<sup>rd</sup> Row (L-R): Prof. Venkatewara Rao Kagita, NIT, Warangal, Prof. P. Radha Krishna, HoD, Department of Computer Science & Engineering, NIT, Warangal, Prof. Killi, NIT, Warangal**

The resource speakers have shared their findings, facts, and demonstration of various new solutions developed by them using IoT, ML and AI in the area of healthcare, agriculture, transportation, water irrigation and home appliance. Various solutions such as Covid-19 detection using Chest X-ray, Social Distance Monitor System, Mask Detection, Object

Detection, Face Recognition System, Smart Crop Yield System, Smart Irrigation System, Flood Monitoring System, Driver Drowsiness System, Smart Rail Traffic System, and Home Security System, have been demonstrated using technologies of IoT, Machine Learning and Artificial Intelligence by professor of Santa Clara University - California, Indian Institute of Technology – Dhanbad, National Institute of Technology – Warangal, and developers of K4U Infotech – Hyderabad and Xtrans Solution, Bangaluru.



**Prof. M. Shiv Kumar, Santa Clara University, California, USA delivers his talk**

The valedictory function organized on 18th September, 2020 in presence of Mr. Ch. A. S. Murty, Associate Director and HoD, Information Security Service, C-DAC, Hyderabad with Prof. Raju Bhukya, NIT, Warangal, Prof. (Dr.) S. D. Panchal, Director, GTU-GSET, Prof. G. D. Makwana, faculty members of the Institute and the participants of the FDP. During the function, open feedback given by Prof. C. H. Vithalani, Professor, GEC, Rajkot, Prof. Chandresh Parekh, Raksha Shakti University, Ahmedabad, Prof. Yusuf Haider M, Higher College of Technology, Muscat, Dr. Ritesh Sugandhi, Institute of Plasma Research, Gandhinagar, and Prof. V. K Thakar, Anand.

At the end of the FDPs, delegates are able to

- To understand fundamentals, technologies, architecture, algorithms of IoT, ML, and AI with its applications.
- To aware various hardware and software platforms to implement any future solutions based on IoT, ML, and AI.
- To identify of optimized algorithms, technologies to develop any future applications.
- To explore various research opportunities and challenges in the field of IoT, ML, and AI and its applications.

**Coordinated By** (1) Prof. Gautam D. Makwana, (2) Prof. Raju Bhukya, NIT Warangal

**Co-Coordinated By** Prof. Margam Suthar