



GLOBAL INITIATIVE OF ACADEMIC NETWORKS

07TH -11TH DEC 2020

INTERNET OF THINGS PLATFORM FOR SMART CITY

COURSE CODE: [191035D09]

Overview

The internet of things (IoT) is the internetworking of physical and virtual objects, living beings, analytics, user interfaces, and network connectivity that allows these objects to collect and exchange data over an internet-based infrastructure. IoT opens the door to facilitate modern interactions and provide new opportunities for infrastructures and services that improve the quality of life, especially in the areas of smart city, smart agriculture, intelligent transportation, healthcare, surveillance, smart policing, smart homes, etc. The course will offer an overview of the general IoT platform to be deployed for a smart city application including smart transportation, smart parking and smart utility and smart surveillance. LORAWAN-LTE network will be used to achieve long range and low-power operation. The design challenges of both hardware and software development will be presented. Finally, the development of the general purpose IoT platform will be discussed.

Course participants will learn these topics through lectures and hands-on experiments on all days. Also case studies and assignments will be shared to stimulate research motivation of participants.

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| Modules | Internet of Things (IoT) & IoT Architecture Network Layers in IoT & IoT sensor node prototype Machine learning for IoT & Hardware-Software code sign IoT solution for smart city & Fundamentals of Smart Surveillance systems Applications of Video Surveillance in Smart Cities & introduction to Smart Surveillance systems using python & opencv | 07th DEC 2020 08th DEC 2020 09th DEC 2020 10th DEC 2020 11th DEC 2020 |
| You Should Attend If... | <p>You are an engineer or research scientist interested in IoT, sensors, Smart surveillance system and smart cities.</p> <p>You work in the industry that deals with (IoT) & IoT Architecture, IoT solution for smart city</p> <p>You are a student or faculty from academic institution interested in learning how to conduct research on IoT & Smart Surveillance systems</p> | |
| Fees | <p>The participation fees for taking the course is as follows:</p> <p>Participants from abroad: US \$500 Industry/ Research Organizations: Rs. 10,000/- Academic Institutions Faculty: Rs. 3,000/- Students and Research Scholars: Rs. 2,500/-</p> <p>The above fee includes all instructional materials, computer use for tutorials and assignments, laboratory equipment usage, and internet facility. The participants will be provided accommodation on payment basis.</p> | |

The Faculty



Dr. Khan A. Wahid is a Professor of Department of Electrical & Computer Engineering, University of Saskatchewan, Canada. His research interests include Internet of things (IoT): design, development and deployment, IoT-drone generic infrastructure, security and cyber-physical systems, smart-city, Sensors and systems, wireless sensor network, body area network.



Dr. Varun P. Gopi is an Assistant Professor of the Department of Electronics and Communication Engineering, National Institute of Technology, Tiruchirappalli, Tamilnadu, India. His research interest includes Artificial Intelligence, Signal Processing, Medical image Processing, UAV, Smart City & Computer Vision.



Dr. P. Palanisamy is a Professor of the Department of Electronics and Communication Engineering, National Institute of Technology, Tiruchirappalli, Tamilnadu, India. His research interest includes Signal Processing, Array Signal Processing, Medical Image Analysis, Wireless/Mobile Communication, and Smart City

Course Coordinators

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