

# SREE VIDYANIKETHAN ENGINEERING COLLEGE

(AUOTONOMOUS)

Sree Sainath Nagar, Tirupati – 517 102



## DEPARTMENT OF INFORMATION TECHNOLOGY

### A Three Day Hands-On Workshop On “Internet of Things and Applications” (11<sup>th</sup> – 13<sup>th</sup> October, 2018)

Day-1 (11. 10. 2018), **Mr. N. Vikram**, Managing Director, Smart Nuts and Bolts, Tirupati discussed basic definitions, characteristics, applications, challenges of Internet of Things and also covered layers in IoT, Fog Computing, Software Defined Networks, RPL, 6LoWPAN and IPv6 in session 1. In session 2, **Mr. N. Vikram**, discussed the minimum requirements to develop the IoT Applications with different microcontroller boards, Arduino IDE, Things speak cloud platform, Ubidots cloud platform, C language, Python, IoT mini Laboratory and SNB Pocket Computer.



**Mr. N. Vikram delivering the session about basics of IoT**

In session 3, **Mr. K. Hemanth Kumar**, Project Associate, Smart Nuts and Bolts, Tirupati discussed about the Sensors, Actuators that are required to develop IoT products such as PIR, LDR. He also discussed various Sensor types and their applicability in designing the IoT applications. In session 4, **Mr. K. Hemanth Kumar** discussed the components in the IDE, how to add the external boards other than the Arduino blink inbuilt LED, External LED and also provided the hands- on session for installation of IDE.

*Department of Information Technology*



**Mr. K. Hemanth Kumar helping the students in hands on session**

Day-2 (12.10.2018), **Mr. N. Vikram** provided hands- on session with various sensors and actuators with the Arduino Nano and Node MCU boards and also with Switch, LEDs and the seven segment display in session 1. In session 2, **Mr. N. Vikram** demonstrated IoT applications to control LED, Buzzer and Motor using Arduino IDE.



**Mr. N. Vikram demonstrating different applications in the Arduino IDE for students**

In session 3, **Mr. K. Hemanth Kumar** demonstrated PIR, and LDR sensors based IoT applications. In session 4, **Mr. K. Hemanth Kumar** demonstrated a mini-project for controlling the home appliances like Light, Fan, AC etc.

On Day-3 (13.10.2018), in Session1 **Mr. N. Vikram** demonstrated MobileApp development for remotely controlling of various IoT based home appliances.

In session 2, **Mr. N. Vikram** discussed integration of Wi-Fi module to the system onto cloud and send updates to user.



**Students glowed light automatically in the presence of any object**

In session 3, **Mr. K. Hemanth Kumar** provided hands- on training to control the light with the Blynk AndroidApp automatically. In session 4, **Mr. K. Hemanth Kumar** provided hands-on training to control the light with Google assistant (IFTTT) through voice commands.



**Group Photo for the IoT Workshop**



**Certificates Distribution**