



NEW HORIZON COLLEGE OF ENGINEERING

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

Report on Hands-on Session

“IoT using Raspberry Pi”

DATE: 7th–FEB-2020

TIMING: 9:00 AM – 4:30 PM

VENUE: MCA Laboratory

RESOURCE PERSON: Dr. S. Jagadish, Associate Professor, MSRIT

and **Abhishek K L**, Assistant Professor, MSRIT

OBJECTIVE:

On 7th February 2020, A hands-on session on “IoT using Raspberry Pi” was conducted in New Horizon College of Engineering. The main objective of this session is to demonstrate the aspiring acquaint with the conceptual as well as basic practical knowledge of the amazing world of Internet of Things (IoT) and its fascinating applications. In this session students got to know how Raspberry Pi can be used in hardware and software to interact with a web service on the internet. This session prepares students to work with Raspberry Pi development platform to develop the Innovative Projects in the field of Internet of Things (IoT). It was held for MCA 2nd year students. The session was conducted in MCA Lab to provide a chance to the students to know about various upcoming opportunity and achievements in this field.

ABOUT THE TOPIC:

An IoT system consists of sensors/devices which “talk” to the cloud through some kind of connectivity. Once the data gets to the cloud, software processes it and then might decide to perform an action, such as sending an alert or automatically adjusting the sensors/devices without the need for the user. The IoT provides a platform that creates opportunities for people to connect these devices and control

them with big data technology, which in return will promote efficiency in performance, economic benefits and minimize the need for human involvement. It's the most important development of the 21st century.



Raspberry Pi is a miniature size standalone computer that can work independently and control a system. During this IoT workshop students worked with a Raspberry Pi computer and a DHT sensor and build an electronic device that can stream temperature and humidity data over the internet. The data will be sent to the cloud for storage and analysis purposes. Then, the students programmed the system in such a way that say whenever the temperature exceeds a certain limit, the device will automatically send an email notification. As it involves Python Programming, students pursuing their 2nd year can undergo this training so that they can get skilled in this programming language.

The resource person began his session with the theory explanation about various areas of IOT analytics application. The resource person discussed real life use cases on IOT application and make the session really interactive by providing an opportunity to suggest a solution to real life scenario.

This workshop enables the learners to get hands on experience with the Internet of Things concepts including IoT platforms like Raspberry Pi, Arduino, LDR, IR/IPR and Sensors. Students are interestedly participated the seminar and interacted.

CONCLUSION:

IoT is an ideal emerging technology to influence this domain by providing new evolving data and the required computational resources for creating revolutionary apps. The session provided long insight towards "IoT using Raspberry Pi". This session have impacted much on students to explore much more fields.

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