



**ACS College of Engineering**  
Approved by AICTE New Delhi, Affiliated to VTU, Belagavi  
(A Unit of RajaRajeswari Group of Institutions)



**DEPARTMENT  
OF  
ELECTRONICS & COMMUNICATION ENGINEERING**

<b>SL.NO</b>	<b>DETAILS OF THE EVENT</b>	
1.	<b>TITLE OF THE EVENT</b>	<b>Two days onsite workshop</b>
2.	<b>YEAR / ODD –EVEN SEMESTER</b>	<b>2023 / ODD SEM</b>
3.	<b>DAY AND DATE</b>	<b>20 &amp;21st December 2023 9:00am to 4:00pm</b>
4.	<b>VENUE</b>	<b>1st floor IoT lab</b>
8.	<b>ORGANIZED BY</b>	<b>ECE Department</b>
9.	<b>CO-ORDINATED BY</b>	<b>ECE HOD and faculty</b>
10.	<b>FACULTY INCHARGE</b>	<b>Mrs. Susmitha B C</b>
11.	<b>PARTICIPANTS</b>	<b>III year ECE Students</b>
12.	<b>BRIEF SUMMARY OF THE EVENT</b>	<b>Report Enclosed</b>
13.	<b>PHOTOS</b>	<b>Photos Enclosed.</b>





**DEPARTMENT OF ELECTRONICS AND COMMUNICATION  
ENGINEERING**

**INVITATION**

We cordially invite you for a workshop on  
**"Training program of IoT and LORA"**

On

**20&21st December 2023**

by

**Mr.Subramanian.K  
&  
Mr.Jagadeshwaran**

**Bengaluru**

**TIME:9:00a.m to 4:00pm**

**Venue:1st floor IoT lab**





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## *Report On Two days onsite workshop*

**Name of event :- Training program of IoT and LORA**

**Date of event :- 20 & 21st December 2023**

**Place of event :- ACS College of engineering**

**Organized by :- Electronics and Communication Engineering department**

**Resource person :- Mr.Subramanian.K & Jagadeshwaran (Enthu technology solutions India Pvt Ltd.)**

### **Introduction:-**

#### ***IoT:-***

The term IoT, or Internet of Things, refers to the collective network of connected devices and the technology that facilitates communication between devices and the cloud, as well as between the devices themselves. Thanks to the advent of inexpensive computer chips and high bandwidth telecommunication, we now have billions of devices connected to the internet. This means everyday devices like toothbrushes, vacuums, cars, and machines can use sensors to collect data and respond intelligently to users.

The Internet of Things integrates everyday “things” with the



internet. Computer Engineers have been adding sensors and processors to everyday objects since the 90s. However, progress was initially slow because the chips were big and bulky. Low power computer chips called RFID tags were first used to track expensive equipment. As computing devices shrank in size, these chips also became smaller, faster, and smarter over time.

### ***LORA:-***

LoRa is a wireless technology that offers long range, low power and secure data transmission for M2M and IoT applications. LoRa is based on chirp spread spectrum modulation, which has low power characteristics like FSK modulation but can be used for long range communications. LoRa can be used to connect sensors, gateways, machines, devices, animals, people etc. wirelessly to the cloud.

LoRa Technologies operates in different frequency bands in different regions: In the United States it operates in the 915 MHz band, in Europe it operates in the 868 MHz band and in Asia it operates in the 865 to 867 MHz, 920 to 923 MHz band.

### **Description :-**

The Department of Electronics and communication engineering conducted a two days onsite workshop on training program of IoT and LORA on the date of 20 & 21 st December 2023. The resource persons for the event was Mr.Subramanian.K and Mr.Jagadeshwaran from Enthu technology solutions India Pvt Ltd.

Mrs.Susmitha BC, faculty of Electronics and communication department welcomed the gathering and introduced the chief guest to the audience.

The program was presided over by the Mr.Subramanian.K and Mr.Jagadeshwaran. Firstly they started with the basic introduction



about IoT. In the two days onsite workshop they thought about IoT and LORA and its applications.

### Topics covered:-

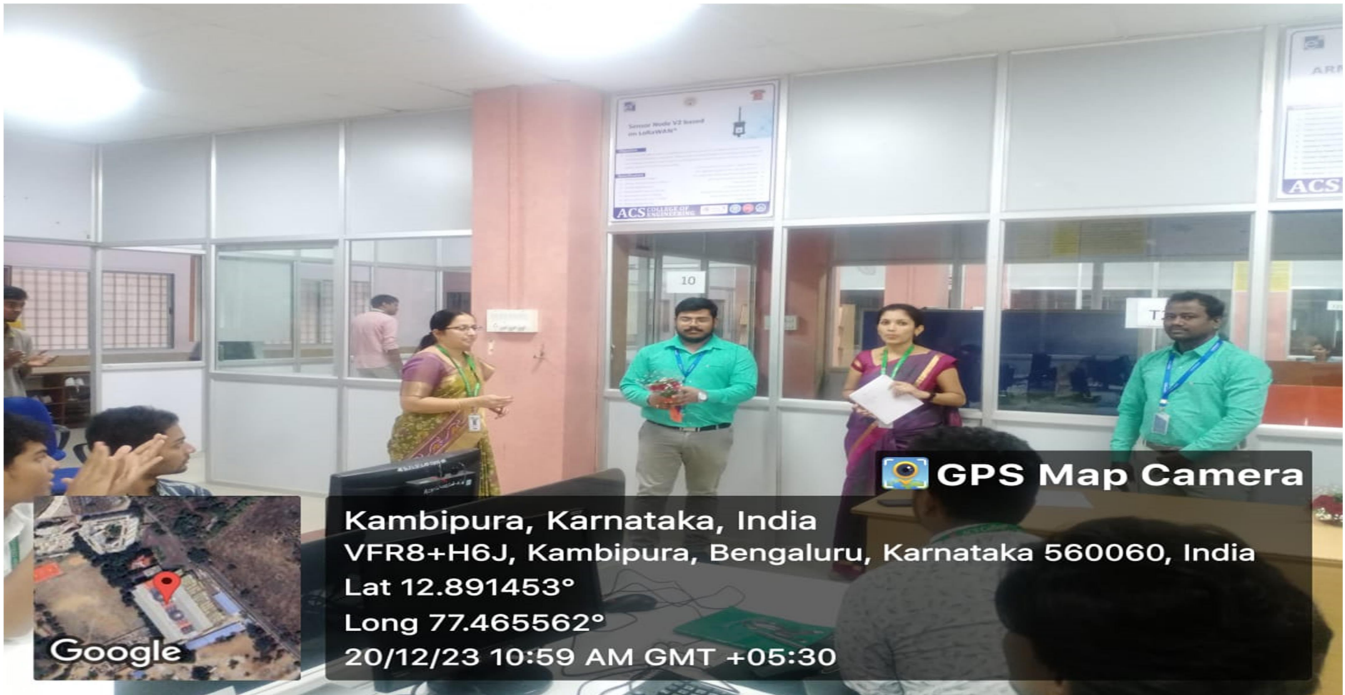
- Basic introduction on IoT
- WiFi
- Bluetooth
- LPWAN
- IR sensor applications and implementation
- DHT sensor applications and implementation
- Push button applications and implementation
- IoT architecture
- LORA
- LORAWAN architecture
- LORAWAN communication
- LORAWAN classes
- Thingspeak
- Cloud integration

### Conclusion:-

After successful completion of the workshop we got to know the importance of IoT and LORA in the present days and basic knowledge about IoT and LORA.



## PHOTOS OF TWO DAYS ONSITE WORKSHOP









**GPS Map Camera**  
Kambipura, Karnataka, India  
VFR8+H6J, Kambipura, Bengaluru, Karnataka 560060, India  
Lat 12.891485°  
Long 77.465536°  
21/12/23 03:57 PM GMT +05:30

*BG*  
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*Anand B Gudi*  
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