

Activity Name : TWO DAYS HANDS ON TRAINING OF "INTERNET OF

THINGS"

Date : 25/11/2024 TO 26/11/2024

Time : 9 am till 4.00 pm

Venue : 1<sup>ST</sup> Floor, Seminar Hall, Department of CSE

**ACS College of Engineering** 

No. of Participants: 187

Resource Persons : Mr. Jagadeswaran R, Ms. Sushma, Mr. Ellangovan R and

Mr. Naveen Mugesh H,

Sr. Technical Engineer,

Enthu Technologies, Coimbatore, Tamilnadu

#### **Objective of the Course:**

1. To introduce participants to the fundamentals of IoT and embedded systems, with a focus on LoRa and LoRaWAN communication protocols.

- To enable hands-on experience in interfacing sensors and actuators with Arduino and ESP32 for IoT applications.
- 3. To provide practical knowledge on data communication using LoRaWAN, cloud platform integration, and device-to-cloud communication.
- 4. To teach participants how to build simple IoT applications, such as LED control, environmental monitoring, and streetlight automation, using LoRaWAN.
- 5. To guide participants in using cloud platforms for remote monitoring, data visualization, and device control.

#### **Outcome of the Course:**

- 1. Understand IoT architecture, especially using LoRa and LoRaWAN for long-range communication.
- 2. Configure and register a LoRaWAN gateway on a cloud platform.
- 3. Interface and control devices such as LEDs, ultrasonic sensors, and temperature/humidity sensors using Arduino.
- 4. Send data from multiple sensors to a cloud platform using LoRaWAN for remote monitoring.
- 5. Create dashboards on cloud platforms for real-time data visualization.

- 6. Build a practical IoT application, such as a streetlight control system, using LoRaWAN and cloud integration.
- Gain confidence in building and deploying IoT solutions with cloud connectivity for monitoring and control applications.

#### Day 1 Session I:

- a. Introduction about IoT & Embedded System
- b. IoT Applications
- c. Introduction to LoRa and LoRaWAN Communication
- d. LoRaWAN Architecture
- e. Software installation Arduino IDE Cloud Registration
- f. Gateway Configuration How to Register the Gateway in Cloud Platform
- g. Software Explanation and LMIC Library Installation step

#### Day 1 Session II:

- a. Interfacing LED using Arduino uno
- b. LMIC Code Explanation
- c. Device registration in thingZmate Cloud
- d. LED Control via LoRaWAN
- e. Interfacing Ultrasonic Sensor using Arduino
- f. Activate Alarm System Using Ultrasonic Sensor's data push via LoRaWAN.
- g. Create a Dashboard

#### Day 2 Session I:

- a. Interfacing LED and Ultrasonic Sensor data push via LoRaWAN
- b. Interfacing DHT11 using Arduino
- c. Room temperature and Humidity Monitoring System
- d. Create a Dashboard
- e. Embedded protocol I2C, SPI, UART
- f. Interface BH1750 using Arduino Uno

#### **Day 2 Sessions II:**

- a. Hands-On: Streetlight Controlling System
- b. Students Doubt Clarification

Targeted Audience: CSE students

**Number of Students Participated: 187** 

### **Organizing Committee:**

### **Program Head:**

Dr. T. Senthil Kumaran

Prof. & HOD (CSE)



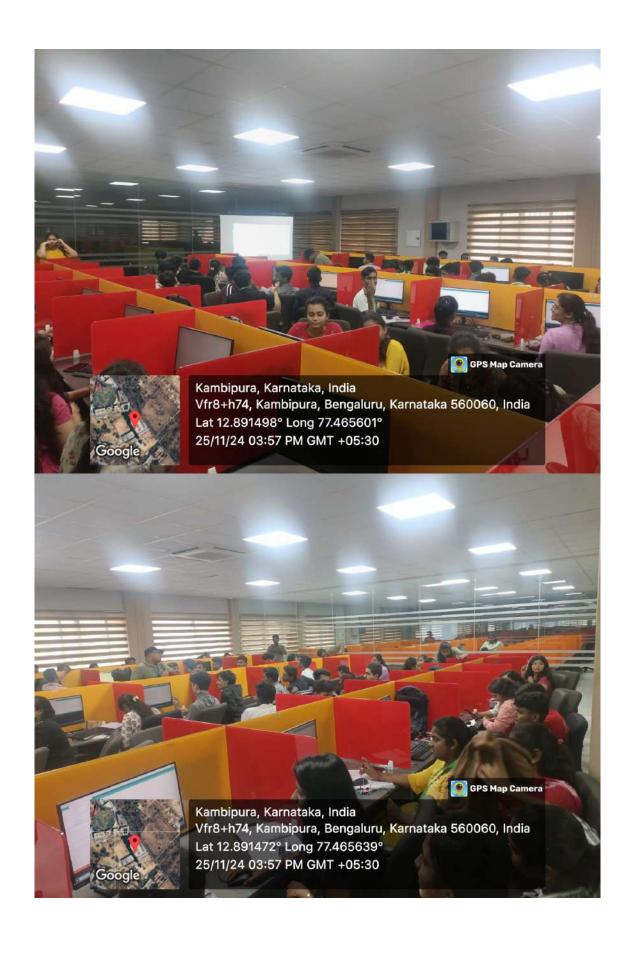
## **Program Coordinator:**

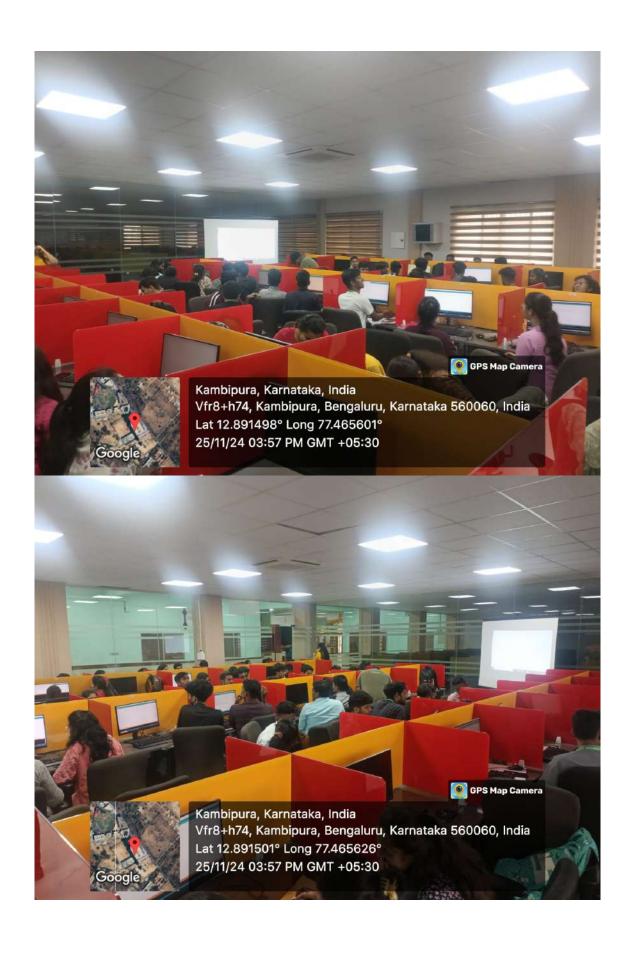
- 1. Mrs. Lakshmipriya, Assistant Professor/CSE
- 2. Mrs. Thamarai Selvi, Assistant Professor/CSE
- 3. Mrs. Divya P, Assistant Professor/CSE

## Lab In charge:

- 1. Mr. Lokesh, Tutor
- 2. Mr. Rajesh, Lab Instructor
- 3. Mrs. Samatha, Lab Instructor



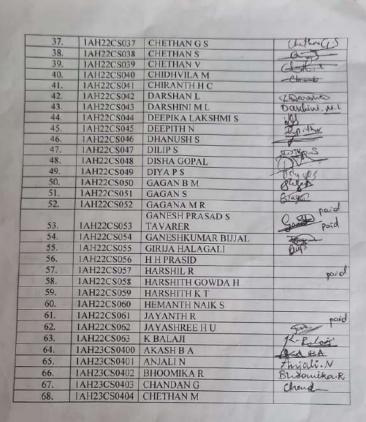






# 2024-25 Odd-Semester 5<sup>th</sup> SEM (A) Student IOT Training List

Sl. No	USN	Name of the Students	sign
1.	1AH22CS001	ABDUL ALEEM	Abdul Heen
2.	1AH22CS002	ABHISHEK BIRADAR	Thomas Made I
3.	1AH22CS003	ABHISHEK K	ATTO.
4.	1AH22CS004	AISHWARYA K K	DEclinosint !
5.	1AH22CS005	AISIRI N	ab.
6.	1AH22CS006	AJAI AARUMUGUM M	gai
7.	1AH22CS007	AJAY M	1 Alay M
8.	1AH22CS008	AJAY TEJAAS	
9.	1AH22CS009	AKAASH M S	M.S Places
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11.	1AH22CS011	AKASH M	Bould
12.	1AH22CS012	AMITH K R	ALSO
13.	IAH22CS013	ANANT RAJ	quar Pre'
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15.	1AH22CS015	ANSH JAMWAL	Anglanus
16.	1AH22CS016	ARCHANA M	Stellen
17.	1AH22CS017	ARUNH	gui.
18.	1AH22CS018	ARUNA L	Annal
19.	1AH22CS019	ASHIKA P	Decy
20.	1AH22CS020	ASHWIN S	
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	1AH22CS021	SHIDDHALINGAPPA	Med
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36.	1AH22CS036	CHETAN KOPARDE	(Malon) long



Faculty Incharge

HOD, CSE





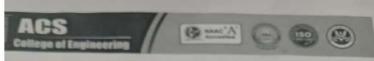




2024-25 Odd-Semester 5<sup>th</sup> SEM (C) Student IOT Training List

SI. No	USN	Name of the Students	2票/11	/2024	2011/2024		
SI. 140	USIN	Name of the Students	F/N	A/F	F/N	A/F	
1.	1AH22CS098	MEGHANA .	Meghat	Meghate			
2.	1AH22CS129	PUSHPA R		Pulper			
3.	1AH22CS130	R RAM	Ramor				
4.	1AH22CS131	RAGAVENDRA BIRADAR	Prode	Penda			
5.	1AH22CS132	RAGHU V	Roche		-		
6.	1AH22CS133	RAGHUVEER G GOUDA	1	Robert			
7.	1AH22CS134	RAJPANDITH	Railer	COAL			
8.	1AH22CS135	RAKSHAK R NAIK	Roleman	Robble			
9.	1AH22CS136	RANGASWAMY C	Sugar	Choon	-		
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# 2024-25 Odd-Semester 5th SEM (B) Students Name List

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	SL No	USN	Name of the Students	
*	1	1AH22CS064	K MOHAMMED FARAZ	
*	(2)	1AH22CS065	K SNEHA COLL	ate.
- 7	(3)	1AH22CS066	K SPANDANA	
*	3	1AH22CS067		
1	5.	1AH22CS069	KARTHIK K P	planeth
*	6)	1AH22CS070	RASHINATH	
-	79	1AH22CS071	KAVERI H S	an I
	(8)	1AH22CS072	KEERTHANKUMAR B M	othene
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