

**DATE: 1 JULY 2025**

**DAY: TUESDAY**

## **DAY 8 – Complete IoT Data Pipeline**

### **LEARNING OBJECTIVES:-**

- Integrate hardware, microcontrollers, and cloud communication.
- Test continuous data streaming.

### **Overview:-**

Day 8 introduced the end-to-end IoT data pipeline from sensor to cloud. This included reading distance on Arduino, sending to ESP32, and pushing updates to ThingSpeak.

### **Activites:-**

- Sent live HC-SR04 readings to cloud via ESP32.
- Analyzed graphs and adjusted update frequency

### **Insights:-**

- Understood importance of buffering and rate limits.
- Observed cloud stability with continuous updates.