DATE: 24 JUNE 2025 **DAY: TUESDAY**

DAY 2 — Arduino UNO & ESP32 Architecture

LEARNING OBJECTIVES:-

- Explore the internal structure and features of Arduino UNO.
- Understand ESP32 capabilities including Wi-Fi, BLE, and dual-core processing.

Overview:-

Day 2 introduced the architecture and capabilities of microcontrollers used in IoT—Arduino UNO and ESP32. The session explained GPIO functions, timers, ADC, communication protocols, and memory structure. Comparative study helped identify which controller suits different tasks in IoT pipelines.

Activites:-

- Reviewed datasheets of Arduino UNO and ESP32.
- Compared processing speed, memory, and communication interfaces.

Insights:-

- Learned why ESP32 is ideal for IoT + security tasks.
- Understood Arduino UNO’s stability for sensor interfacing.