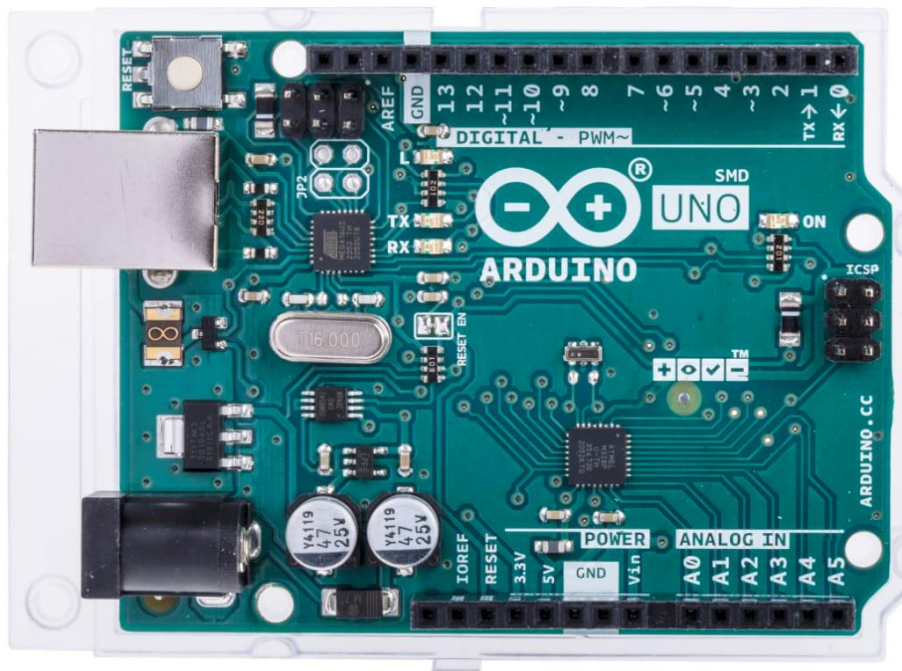


ARDUINO



**TEACHER:
CERTIFIED
TRAINER**

**DURATION:
16 CLASSES (x2 LEVELS)
(1 HOUR PER CLASS)**

**MODE:
ONLINE AND
OFFLINE**

The Internet of Things (IoT) refers to a network of interconnected physical devices, such as sensors, appliances, and vehicles, that collect, exchange, and analyze data through the internet. These devices communicate with each other and can be controlled remotely, enabling automation and smarter decision-making. IoT enhances efficiency in various fields, including healthcare, agriculture, manufacturing, and smart homes, by providing real-time insights and enabling predictive actions.

COURSE CURRICULUM

Level 1 : Beginner level Arduino Projects (Group Age 11-16)

- Introduction to Arduino Microcontroller
- Introduction of LEDs
- Disco light master (learn to blink led using Arduino)
- Robo driving base (learn to move driving base in different directions)
- Distance dash (measure distance using ultrasonic sensor)
- Bi-directional visitor counter (learn how to count visiting people)
- Line follower robo (learn how to work line follower robo)
- Challenge

Level 2: Intermediate Arduino Projects (Groups Age 11-16)

- Obstacle avoiding robot (learn how to avoid obstacle for robot)
- Smart Dustbin (learn how to work how to control smart dustbin using arduino)
- Arduino calculator (learn how to work calculator using Arduino)
- Arduino colour sensor (learn about colour sensors)
- Joystick controlled car (learn to control a robotic car using joystick commands)
- Plant watering system (learn how to detect soil moisture levels)
- Smoke/Gas Detector (learn how sensors detect harmful gas)
- Bluetooth Controlled devices (learn to control systems wirelessly using Bluetooth)
- Obstacle avoidance car (learn how to avoid collisions with a robotic car)
- Piano Using Buzzer (learn to generate musical tones using Arduino and buzzer)
- Robotic Claw (Design a robotic claw to pick up objects)