



EECIT Experiment Kits

#	Cognifront Kit Board	EECIT Experiment Mapped Description
1	Arduino Uno Board - Buzzer (Qty - 1) - LEDs (Qty - 4) - LDR (Qty - 1) - Pushbuttons (Qty - 4) - Patch Cords (Qty - 25) - Data Cable	Experiment 1 : Introduction to Arduino and Digital I/O Control - Connect LEDs and push buttons to Arduino. - Write a program to turn LEDs ON/OFF based on button press. - Observe the response on the Serial Monitor.
2	Sensors and Actuator Board #1 - LM35 - Servo Motor - LCD with I2C Convertor - Potentiometer - Ultrasonic Sensor	Experiment 2 : Analog Sensor Interfacing (Temperature Sensor - LM35) - Connect LM35 to Arduino analog pin. - Write code to read and convert analog voltage to Celsius - Display output on Serial Monitor or LCD. Experiment 3 : Interfacing Potentiometer for Position Control Simulation - Connect potentiometer to Arduino analog input and servo to PWM output. - Map the potentiometer values to servo angles. - Observe servo position change as potentiometer is rotated. Experiment 4 : Interfacing IR or Ultrasonic Sensor for Distance Measurement - Connect HC-SR04 sensor to Arduino. - Write code to calculate distance using time of flight. - Display output in cm on LCD or Serial Monitor
3	Sensors and Actuator Board #2 - DC Motor & DC Motor Driver L293D - Stepper Motor & Stepper Motor Driver ULN2003 - Ai Thinker ESP-01S ESP8266 WiFi Module - SD card module - Micro SD card 16 GB	Experiment 5 : Controlling DC Motor Using Transistor Driver Circuit - Connect the DC motor through to Arduino. - Use analogWrite() to vary motor speed. - Implement a simple ramp-up or potentiometer-based speed control. Experiment 6 : Data Logging Using Arduino and Excel (Serial Communication) - Write Arduino code to send temperature data from LM35 over serial. - Use Excel + PLX-DAQ or Python to capture and save the data. - Plot data over time (optional) Experiment 7 : Stepper Motor Control via Microcontroller - Connect stepper motor and driver to Arduino. - Write code to rotate the motor clockwise and counter-clockwise. - Vary delay to change motor speed.