

IEEE CIS SOCIETY COMPUTER VISION X IOT PROJECT REQUIREMENTS

General Requirements

- **Python:** Version **3.10.x**
- **Webcam:** A functional integrated or external webcam is necessary for all real-time video processing tasks.
- **VS Code:** <https://code.visualstudio.com/download>
- **Python 3.10:** <https://www.python.org/ftp/python/3.10.9/python-3.10.9-amd64.exe>
- **Arduino IDE with Arduino Board Installed**
https://downloads.arduino.cc/arduino-ide/arduino-ide_2.3.6_Windows_64bit.exe
- **Arduino IDE installation Guide Video:**
<https://www.youtube.com/watch?v=3awCkLS7gHI>
- **Required Libraries:**
 - opencv-python: For video capture and display.
 - mediapipe: For detecting hand landmarks and tracking movements.
 - pyserial: For serial communication with hardware like an Arduino.
- **Installation Command:**
pip install opencv-python mediapipe pyserial