Required Modules and Installation Commands

1. OpenCV

OpenCV is used for image and video processing.

Bash. pip install opencv-python

If you encounter issues with missing image codecs, install the full version:

Bash. pip install opencv-contrib-python

2. Mediapipe

Mediapipe provides pre-trained models for hand tracking and other ML solutions.

Bash. pip install mediapipe

3. ADB (Android Debug Bridge)

ADB is used to interact with an Android device. It requires installation on your system:

* Ubuntu/Debian/Linux:  
  bash. sudo apt update
* sudo apt install android-tools-adb
* Mac:  
  bash. brew install android-platform-tools
* Windows:
  1. Download the ADB tools package from the [Android Developer website](https://developer.android.com/studio/releases/platform-tools).
  2. Extract the zip file.
  3. Add the extracted folder to your system PATH.

4. OS (Standard Library)

The os module is part of Python's standard library, so no installation is needed.

Verifying Installation

After installing, verify that everything is installed correctly:

1. OpenCV:  
    bash. python -c "import cv2; print(cv2.\_\_version\_\_)”
2. If it prints a version number, OpenCV is installed correctly.
3. Mediapipe:  
   bash. python -c "import mediapipe as mp; print(mp.\_\_version\_\_)"

1. ADB: Run the following in your terminal:  
   bash. adb version
2. If you see the ADB version, it's installed and working.