**Download Dependencies**

Download all dependencies by running below command

***pip install -r requirements.txt***

**How to Run**

**Step 1: Collect Training Data**  
You can collect facial and hand data to train your custom model by running:

***python data\_collection.py***

* + Follow the on-screen instructions to provide your name or label for data collection.
  + The system will collect data points from your face and hands.

**Step 2: Train the Model**  
After collecting the data, train the emotion detection model:

***python data\_training.py***

* + This will train the model and save it as model.h5.

**Step 3: Run Emotion Detection**  
To detect emotions in real-time and receive music recommendations based on your mood, run:

***python inference.py***

* + The system will access your webcam, detect your face and hands, predict your emotion, and start playing corresponding music.

**Step 4: Music Recommendation**  
To recommend the music based on the detected emotion by running the ***music.py.*** Song will opening in YouTube.

**Detailed Description**

**Emotion Detection Module**

* **File:** inference.py
* **Functionality:**
  + Captures the video feed using OpenCV and detects facial and hand landmarks using Mediapipe.
  + The coordinates of the facial landmarks are processed, and the data is passed to the pre-trained model for emotion prediction.
  + Uses TensorFlow/Keras to load the trained model (model.h5) and predict the current emotion based on the input data.

**Music Recommendation Module**

* **File:** music.py
* **Functionality:**
  + Open the recommend song in YouTube based on the emotions and user input.
  + Upon receiving an emotion from the inference.py script, the system recommend the song.