Face Recognition Algorithm Documentation

This guide explains how to set up and use the provided face detection and recognition algorithm for seamless integration into your project.

Installation Instructions

1. **Install Required Libraries**
   Ensure you have Python installed. Use the following commands to install the required dependencies:
2. ***pip install face_recognition opencv-python***
3. ***pip install opencv-python-headless numpy dlib***
4. **Add the Code File**
   Place the provided code file (face_rec.py) into your project directory.

How to Use the Algorithm

Step 1: Import and Initialize

To begin, import the class and create an object:

from face_rec import Facerec

sfr = Facerec()

Step 2: Load Images

Store the images to be recognized in a designated folder and load them into the model using:

sfr.load_encoding_images("path-to-your-folder")

Step 3: Run the Algorithm

Run the face detection and recognition process using the run_camera() method:

sfr.run_camera()

Step 4: To stop the camera

To stop the camera, press **Esc**.

Customizing the Output

The run_camera() method offers several optional parameters for customization:

1. **color**
    - **Description:** Sets the bounding box color.
    - **Default:** (0, 0, 200) (Red).
    - **Example:** ***color=(0, 255, 0)*** for a green box.
2. **thickness**
    - **Description:** Defines the thickness of the bounding box.
    - **Default:** 2.
3. **text_color**
    - **Description:** Sets the color of the label text.
    - **Default:** (0, 0, 200) (Red).
    - **Example*: text_color=(255, 255, 255)*** for white text.
4. **text_thickness**
    - **Description:** Specifies the thickness of the label text.
    - **Default:** 2.
5. **text_size**
    - **Description:** Adjusts the size of the label text.
    - **Default:** 1.

Example usage with custom parameters:

sfr.run_camera(color=(0, 255, 0), thickness=3, text_color=(255, 255, 255), text_thickness=2, text_size=2)

This documentation provides a complete setup and customization guide for the face recognition algorithm. Follow these steps to integrate it into your project effectively!

If you have any query to set up the file and to adapt the code, feel free to contact me.