Real-Time Face Recognition Web App

**Objective:**

The project will make the jetson device to run as an server that will be running an API for handling the face recognition model and that can be accessed through other devices .

### Step by step instructions :

**Step 1:**

Create an new repository and redirect to that repository

**Step 2:**

Install the following libraries and packages

pip install fastapi uvicorn face\_recognition opencv-python Pillow jinja2 python-multipart

**Step 3:**

**Connect an USB cam or CSI camera in the jetson nano and run the following program**

DatasetCreator.py

**While running the program please ensure that you’re inside the desired project repo then on successful running of the program the GUI will open**

Picture1

**Enter the person’s name and select the model then start capturing the image the collected images will be stored under separate folders**

**Picture2**

**Picture3**

**Step 4:**

**Then we can start training the model with the collected data for training the model use this code**modeltraining.py

Picture4

**When the training is completed a new file with .pkl extension will be created in your repository that will contains the encodings of the training data**

**Step 5 :**

**Create an new file named main.py and paste the following server code in it**

Main.py

**Step 6:**

**Then create an new folder inside the project directory and name it as templates**

**Inside that folder create an new file index.html and paste the following code in it**

Client.py

**Step 7:**

**Now run the backend main.py file using this command**

**Uvicorn main:app --host 0.0.0.0 –port 5000**

It will show the output as

picture5

now find the IP of the jetson nano

Picture6

Then add the IP into the below URL then search it on the browser ( both devices has to be connected on the same network )

http://<Jeston IP >:5000/

picture7

It will open the server on remote device

Picture8

Select and upload the image for detecting faces in It

Picture9