Face Detection API

This repository includes the Face Detection API. Models used for Face Recognition are MTCNN (Multi-task Cascade Convolutional Neural Network) and OpenCV haar cascades. FastApi is used on the API side.

Project Folder

- **env/**
  - This directory includes env files
- **img/**
  - This directory includes test image files
- **models/**
  - opencv
    - haarcascades
      - haarcascade_frontalface_default.xml

- **src/**
  - models.py
- .dockerignore
- .gitignore
- Dockerfile
- main.py
- ReadMe.md
- ReadMe.pdf

Install

1- Install in an Actual Env.

```
pip install -r env/requirements.txt
```

2- Install with a New Env. (Optional)

```
conda env create -f env/env.yaml
conda activate ENV_NAME
```

Run

1- Run on Local System

```
python main.py
OR
uvicorn main:app --reload
OR
uvicorn main:app --reload --host '0.0.0.0' --port 8000
```

2- Run on with Docker System

- **Step 1:** Docker Image Build

```
docker build -t face_detection_api .
```

- **Step 1 Control:**

```
docker image ls
or
docker images
```

- **Step 2:** Create and Run Container from Docker Image

```
docker run -d -p 8000:8000 face_detection_api
or
docker run --name face_detection_api_c -d -p 8000:8000 face_detection_api
```

- **Step 2.1 Control:**

```
docker ps
or
docker ps -a
```

- **Step 2.2 Control:**

```
docker logs <CONTAINER ID OR CONTAINER NAME>
```

- **Step 2.3 Control:**

```
docker container ls -a
docker rm <CONTAINER ID OR CONTAINER NAME>
docker rmi face_detection_api
```

   Check Web Browser:
- `http://127.0.0.1:8000` or `http://localhost:8000`

- `http://127.0.0.1:8000/docs`

- `http://127.0.0.1:8000/redoc`

FaceDetectionApi Service Test:

Step 1: Let's go to `http://127.0.0.1:8000/docs` on the browser and load the test image from the `img/` directory and test it. You can browse files from the env `TestScreen1.jpg` and `TestScreen2.jpg`.

Step 2: Please browse the response results.

Additional information

Joint Face Detection and Alignment using Multi-task Cascaded Convolutional Networks (MTCCN) | https://arxiv.org/abs/1604.02878

ToDo

- ☐ Adult Detection

- [ ] Logging
- [ ] facenet-pytorch Implementation

Contact

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