HOW IT WORKS?

FACEAPP

Flask

Flask is a micro-web framework. Flask aims to keep the core simple but extensible. Flask is based on the Werkzeg WSGI toolkit and the Jinja2 template engine

An WSGI (Web Server Gateway Interface) instance means that the web server passes all the requests it receives

main.py

```
app = Flask(__name__)

app.add_url_rule('/', 'app', views.memorize, methods=['GET', 'POST'])

app.add_url_rule('/faceapp', 'predicted', views.recognize, methods=['GET', 'POST'])
```

An WSGI (Web Server Gateway Interface) instance means that the web server passes all the requests it receives

add_url_rule() accepts endpoint and name of view function to call. The endpoint simply refers to the unique name given to the route, typically name of view function is used as an endpoint.

main page

```
app = Flask(__name__)
app = Flask(__name__)
```

faceapp page

faceapp

1) Read image

OpenCV is an open source computer vision and machine learning software library.

image= cv2.imread("/ ")

2) Resize image

Resize images that uploaded by users. To keep server more secure and responsive.

img = cv2.resize(img, None, fx=scaling_factor, fy=scaling_factor, interpolation=cv2.INTER_AREA)

3) Encode image

face_recognition.face_encodings, return the 128-dimension face encoding for each face in the image.

see_encodings = face_recognition.face_encodings(image, see_face_locations)[0]

4) Compare Images

Compare the first image and second image that is how much two photos alike.

face_recognition.compare_faces, takes first image's encode and second image's encode values.

face_recognition.api.compare_faces(known_face_encodings, face_encoding_to_check, tolerance=0.6)

5) Find Distance(Reverse Probability)

Compare a known face encoding and get a euclidean distance for each comparison face.

face_recognition.face_distance, take an image with a face and an image that contains lot's of faces.

face_recognition.api.face_distance(face_encodings, face_to_compare)

6) Record

Add all images and date to .csv file to read after.

face_recognition.compare_faces, takes first image's encode and second image's encode values.

7) Amazon EC2

This little app works on AWS EC2.

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