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Section:BSAI 4A
Subject:Programming for AI
LAB TASK 6

How and why:

This project is a web application that analyzes a person's face from a photo and attempts to predict personality traits based on facial features. When the picture is uploaded it will process the image and detect the face and based on the expressions it will generate personality traits or scores like openness, conscientiousness, extraversion, agreeableness, and neuroticism.

This project is a combination of html css for the front end python and flask for the backend and also uses openv for image processing which will detect faces using the model haar cascade which is a pre trained model which identifies facial features in an image.
 Once a face is detected, the program analyzes basic characteristics like symmetry, brightness, and contrast of the facial region. These measurements are then used to generate personality trait scores.

How to use it:

Visit the website and upload a photo of a face and click the analyze personality button. After a few moments, the results appear showing both the original image and the detected face with a box around it. Below these images, the personality traits are listed with numerical scores and a radar chart provides a visual representation of these traits.

I have done the Personality Analysis on the basis of these five personality traits which are commonly used in psychology which are

- Openness - how open someone is to new experiences
- Conscientiousness - how organized and careful someone is
- Extraversion - how outgoing and social someone is
- Agreeableness - how cooperative and compassionate someone is
- Neuroticism - how sensitive to stress and anxiety someone is

The app assigns scores between 0 and 1 for each trait based on the facial analysis.These scores are calculated using simple formulas that combine different aspects of the facial features.For examole a brighter face might suggest higher extraversion.

Output ss:

```
PS C:\Users\eshaa\OneDrive\Desktop\Face profiling> python app.py
 * Serving Flask app 'app'
 * Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 226-313-423
127.0.0.1 - - [04/Mar/2025 18:56:08] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [04/Mar/2025 18:56:08] "GET /placeholder.svg HTTP/1.1" 404 -
```

AI Face Personality Analyzer

Discover personality insights through facial features using advanced AI analysis

Guidelines For uploading an image 📸

- Use a clear, front-facing portrait photo
- Ensure good lighting and a neutral background
- Keep your face clearly visible and unobstructed
- Maintain a natural expression
- Use a recent photo for accurate analysis

Choose Image

Choose Image

Analyze Personality

Predicted Personality Traits:

Trait	Value
Agreeableness	0.60
Conscientiousness	0.64
Extraversion	0.38
Neuroticism	0.31
Openness	0.39