Expression Finder

The following is a brief explanation of a Python program that utilizes OpenCV and DeepFace libraries to recognize faces in a given image or video and predict the most prominent emotion displayed in those faces. The program has the ability to accept a path to a video file or access the camera to recognize emotions in real-time.

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Requirements

- Python 3.6 or later
- PySimpleGUI
- OpenCV
- DeepFace
- YOLOV5

You can install the required packages using pip:

```
pip install PySimpleGUI opencv-python deepface ultralytics
```

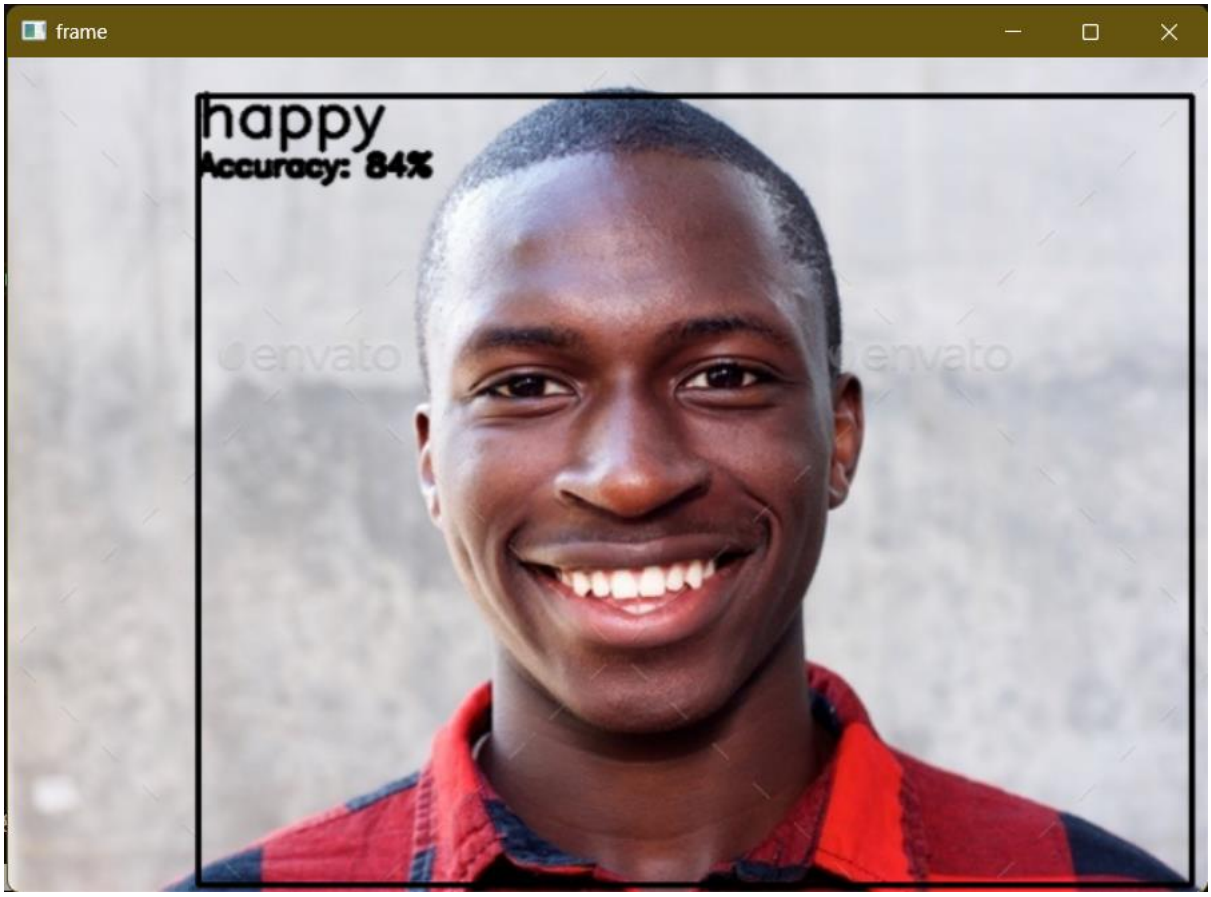
Usage

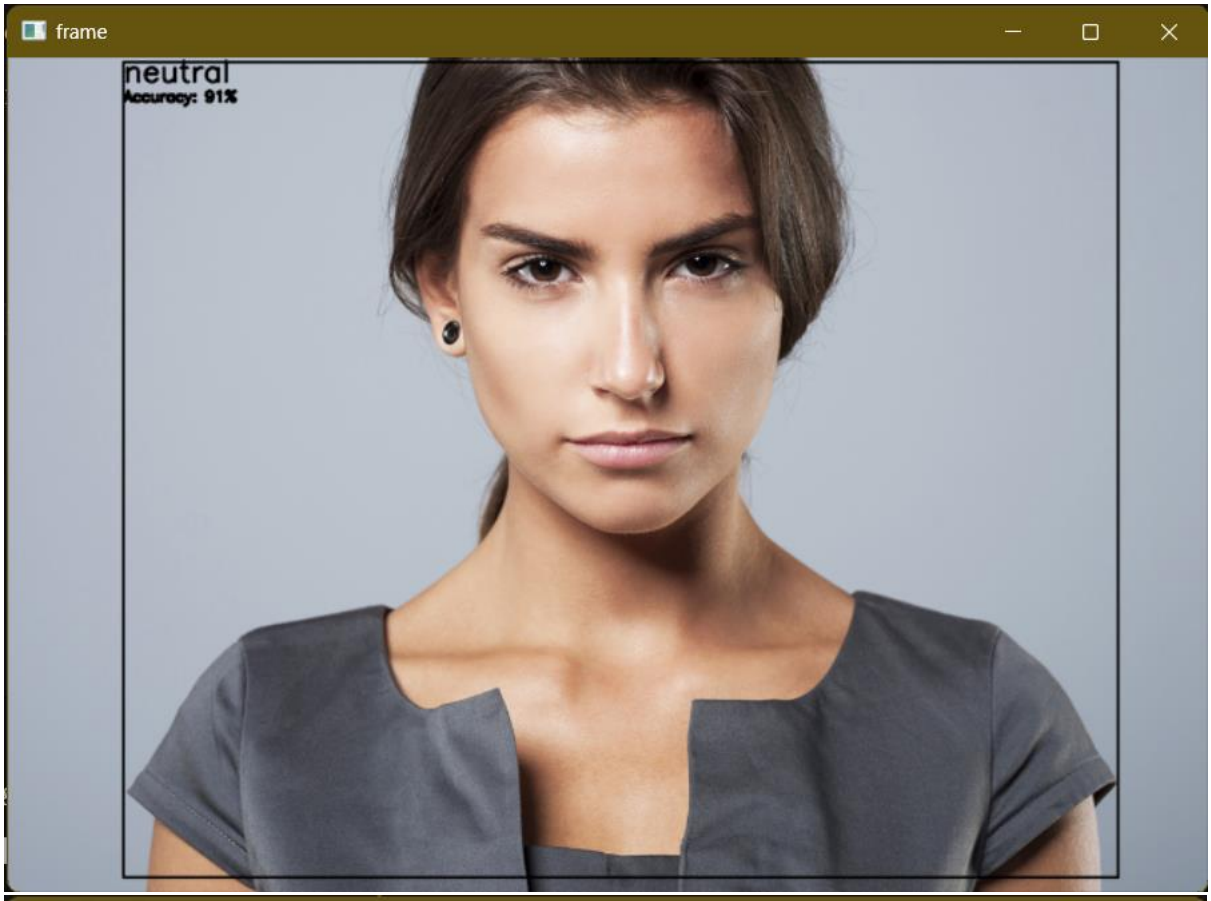
To run the program, navigate to the project directory and run the following command:

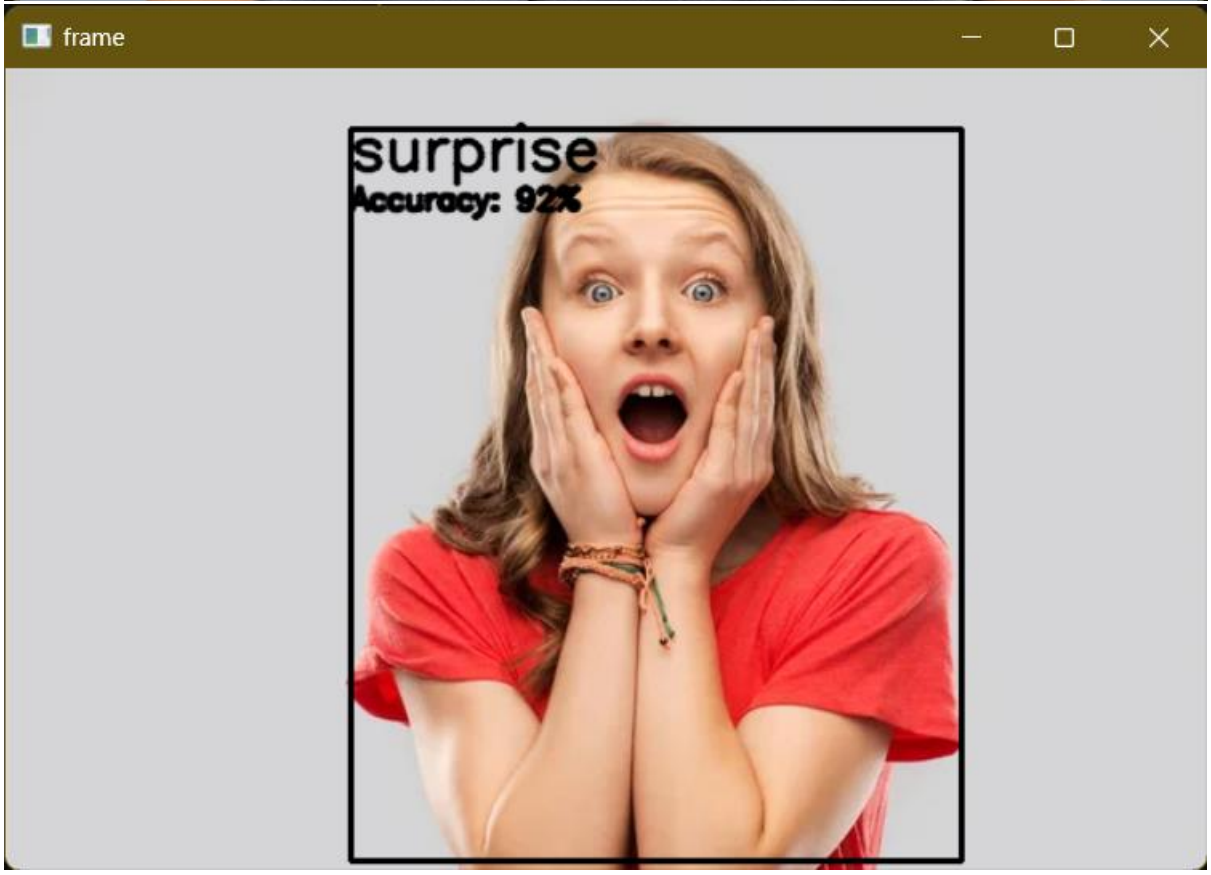
```
python User Interface.py
```

The program will display a GUI window that prompts the user to enter a file path to a video or to use the camera. After selecting the appropriate option, click on the "Proceed" button to start emotion detection. You can exit the program by clicking on the "Quit" button or by pressing the "Q" key.

Outputs




frame
neutral
Accuracy: 91%


frame
surprise
Accuracy: 92%


frame
disgust
Accuracy: 92%


frame
sad
Accuracy: 91%