Topic: Real-Time-Facial-Emotion-Recognition-Using-Deep-Learning

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Project Current Report:2

Introduction: This project develops a real-time facial emotion detection system to classify expressions like Surprise, Happy, Sad, Angry, and Neutral from images or live video. It has applications in security, human-computer interaction, and mental health analysis, with potential for a user-friendly interface.

Testing: After training the model, I tested it using three images from the project folder. I imported the **cv2** library to load images and **NumPy** for multidimensional calculations. Then, I loaded the trained model using **keras.model** and specified the model's file path. Next, I loaded the **Cascade Classifier** with **cv2.CascadeClassifier** by providing the correct path to detect faces in the images.

To classify emotions, I assigned labels such as **0 for Angry, 1 for Disgust, 2 for Fear, 3 for Happy**, and so on. I then loaded the test images, formatted them to match the dataset, and used **model.predict** to analyze the emotions. After saving the file, I ran the program in the terminal, and the output successfully detected emotions like **Happy, Angry, Sad, Surprise, Neutral, and Fear** with around **90% accuracy**.

The next step in this project is to implement **real-time facial emotion detection using a webcam**, allowing the system to analyze and classify emotions live.

For any further suggestion, please feel free to advise me.

Regards,
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