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Melody-Music is the Language of Emotions

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ABSTRACT: Human emotions play an important role today. Emotions are based on human emotions that cannot be expressed. Emotions indicate a person's personality and can be many things. Extract the desire to know one's own human behavior status. The purpose of this research is to eliminate facial expressions and explore emotions.
Play music as needed.
However, while there are many existing methods that use pre-recorded data to describe music, other algorithms used are often slow, inaccurate, and still require the use of additional equipment such as an EEG or physical activity. Use the local camera or the built-in camera to capture the face. Here we use feature recognition algorithms on captured images. Therefore, the system automatically plays music when it sees a human face.

I. INTRODUCTION

Music is an essential part of our daily lives and people listen to music for many reasons, such as relaxing, motivating and having fun. right music to suit people's feelings, especially if they are not sure what kind of music they want to listen to. This is where suggested music can help.

Music recommendation aims to provide personalized music recommendations to users based on factors such as users' music preferences and listening history. One of the emerging trends in music recognition is to use facial recognition to identify a person's emotional state and suggest music.

Facial recognition is artificial intelligence (AI) that detects and analyzes human faces, including facial expressions and emotions. By using this technology in music recommendation, we can calculate the mood of the person according to his/her face and suggest music suitable for the mood.

Against this background, this project is designed to create visual music using a visual interface. The system uses facial recognition to identify a person's mood and suggest music. Using the system, users can enjoy a personalized music experience that stimulates their emotions, thereby improving their overall listening skills.

II. LITERATUR SURVEY

Many studies have explored the integration of facial recognition technology into music recognition. A research report reports:

Jain et al. (2020) discussed the importance of incorporating facial recognition into music recognition. This study provides a comprehensive evaluation of various face recognition techniques used in music recognition.

In (2018) proposed an emotion-based music recommendation system that uses facial expressions to detect the user's emotional state. This study used a convolutional neural network (CNN) to classify faces and detect beauty based on the user's emotional state.

Yu et al. (2019) reported a music recommendation system that combines voice and facial cues to determine the user's emotional state. This work uses deep learning for subtraction and classification.
In (2019) reported an emotion-sensitive music application that uses facial recognition to influence the user's emotional state. This work uses CNN for facial recognition and collaborative filtering for beauty recognition.

In (2019) proposed a music recommendation system that uses various features such as faces, voices, and songs to determine the user's emotional state.

This work uses deep neural networks for feature aggregation and classification.

Collectively, these studies demonstrate the potential for facial recognition technology to be used in music recognition. These systems can enhance the overall listening experience by using facial expressions to reveal the wearer's mood, offering personalized beauty recommendations tailored to the wearer's mood.

III. SYSTEM ARCHITECTURE
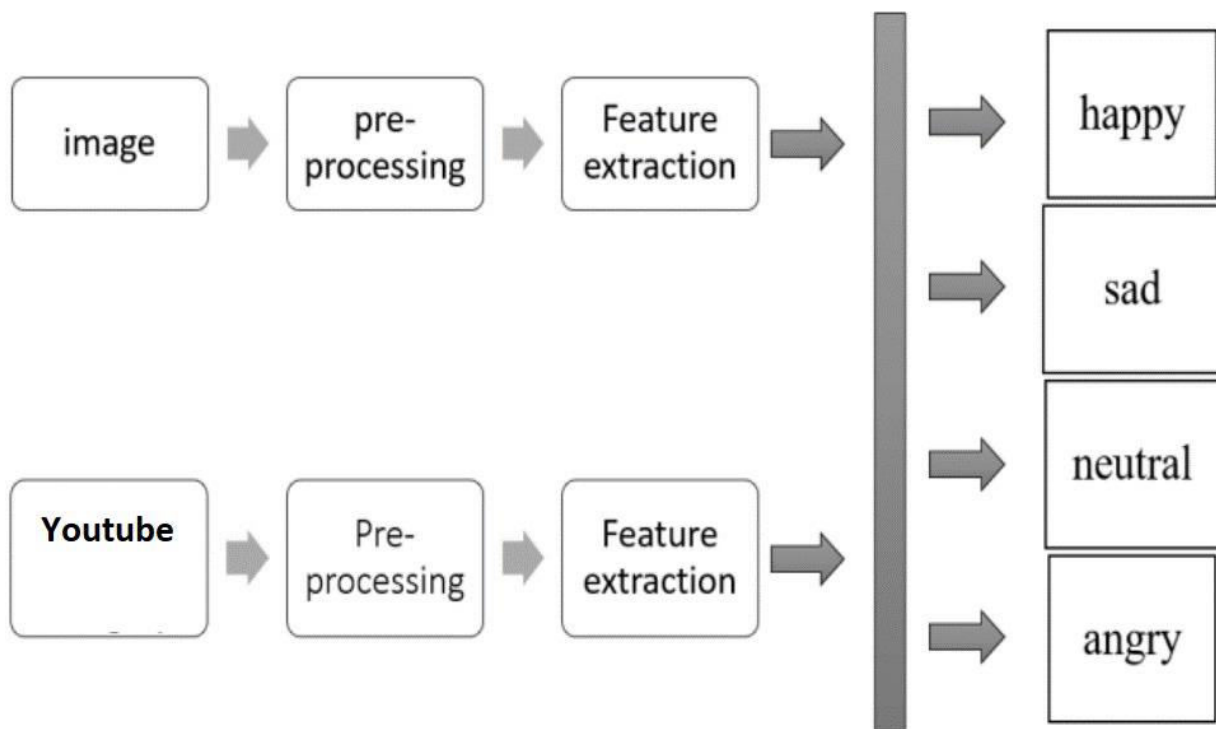
Figure 1 – System Architecture

IV. GOALS AND OBJECTIVES

Objective:

- Develop a music recommendation system that uses facial recognition to identify the user's mood and suggest music accordingly.

- Provides a personalized music experience that fits the user's mood, improving the overall listening experience.

Purpose:

- Collect data on facial images for training and physical examination.
- Extract facial expressions that can be used to determine the emotional state of the user.
- Combining machine learning models with music recognition to find music based on user's mood.

Overall, the goal of this project is to create a music recommendation system that can provide personalized recommendations based on the mood of the user. By integrating facial recognition into the system, the accuracy of the recommendations can be increased, resulting in a better user experience.

V. LIST OF FUNCTIONALITYIES

Below is the music recommendation capability that uses facial recognition to determine the user's mood and suggest music based on:

Face Detection: The system must be able to detect and recognize the user's face from the image or video feed.

Facial Expression Recognition: The system should be able to recognize the face and identify the emotional state of the user.

Feature Extraction: The system should extract facial features such as eyes, mouth, and eye expression that can be used to determine the user's emotional state.

Emotional state classification: The system should use machine learning algorithms to classify the user's emotional state based on facial expressions.

Music recommendation: A music recommendation system suitable for the user's mood and music preferences.

VI. TRAINIG MODEL

1. Input Train data
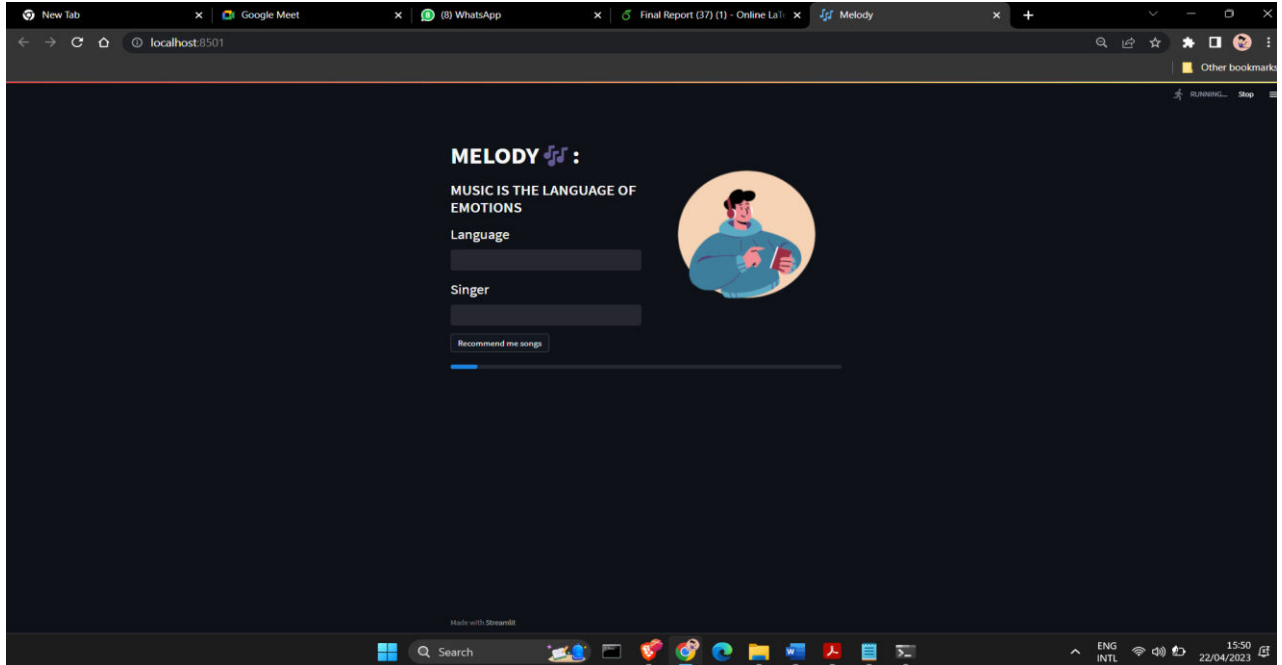

Figure 2 - Training

VII. RESULT

FIGURE 3 - GUI
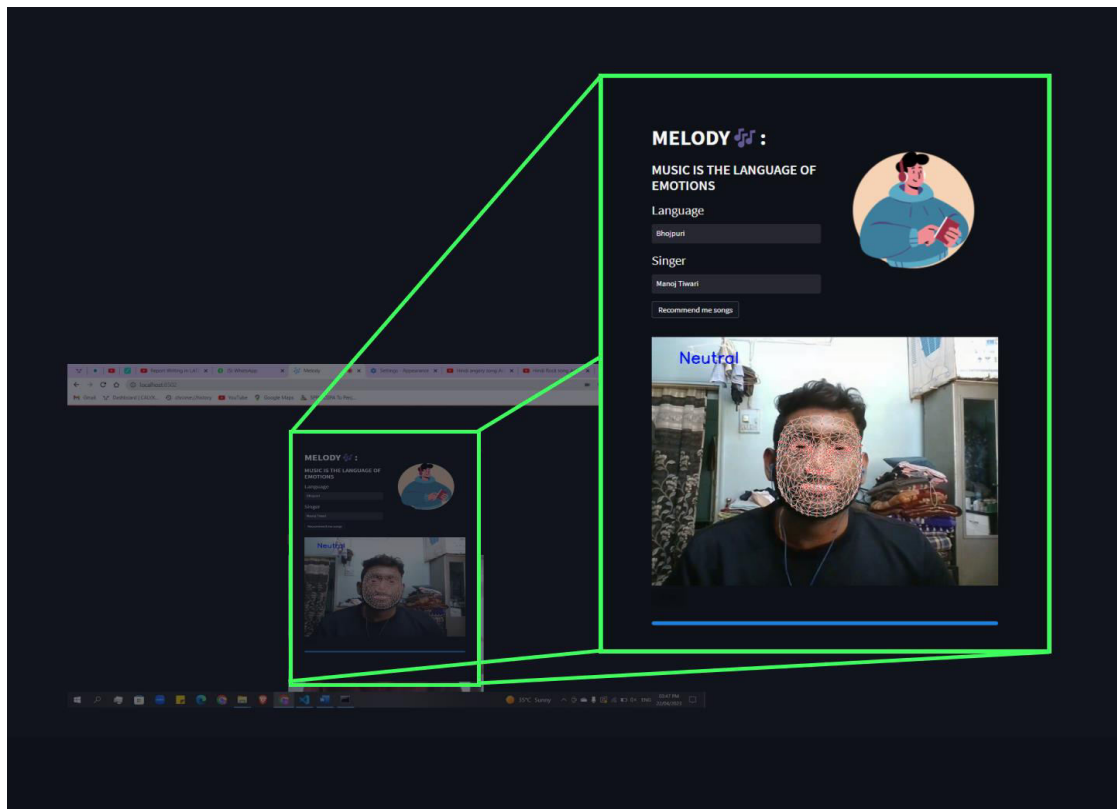

Figure 4–Neutral Emotion
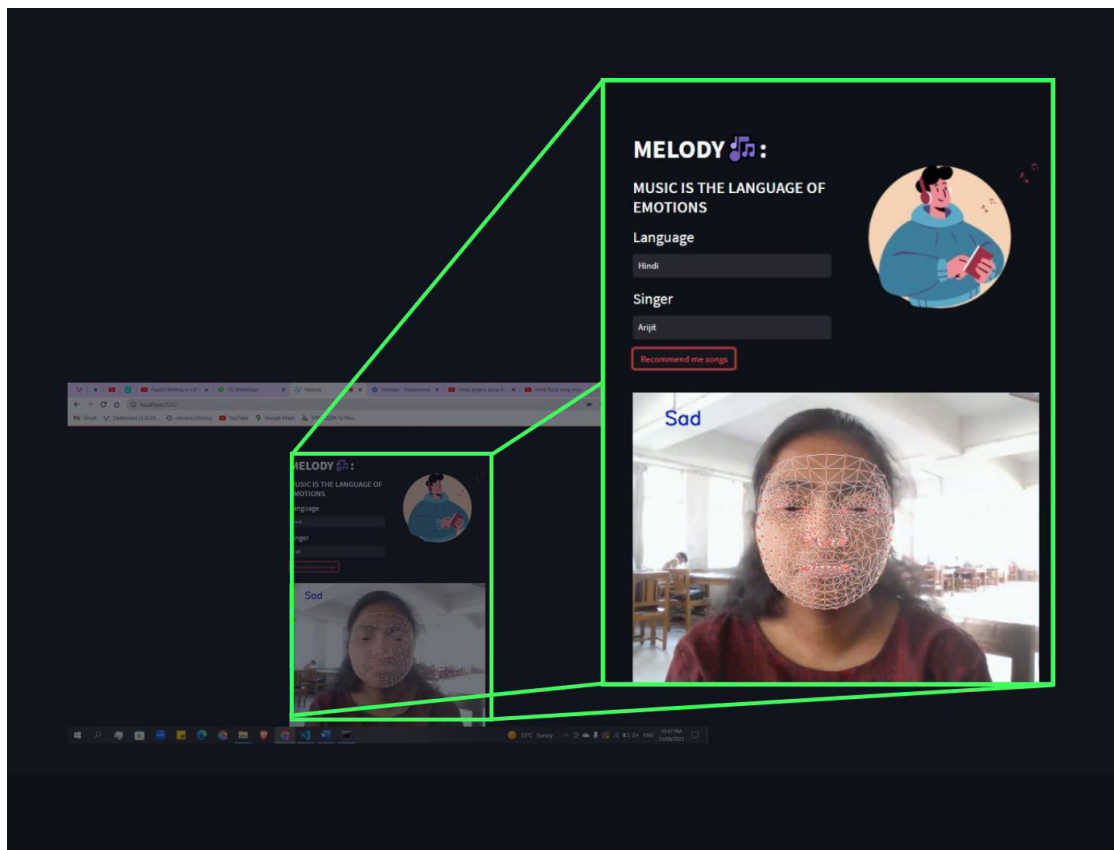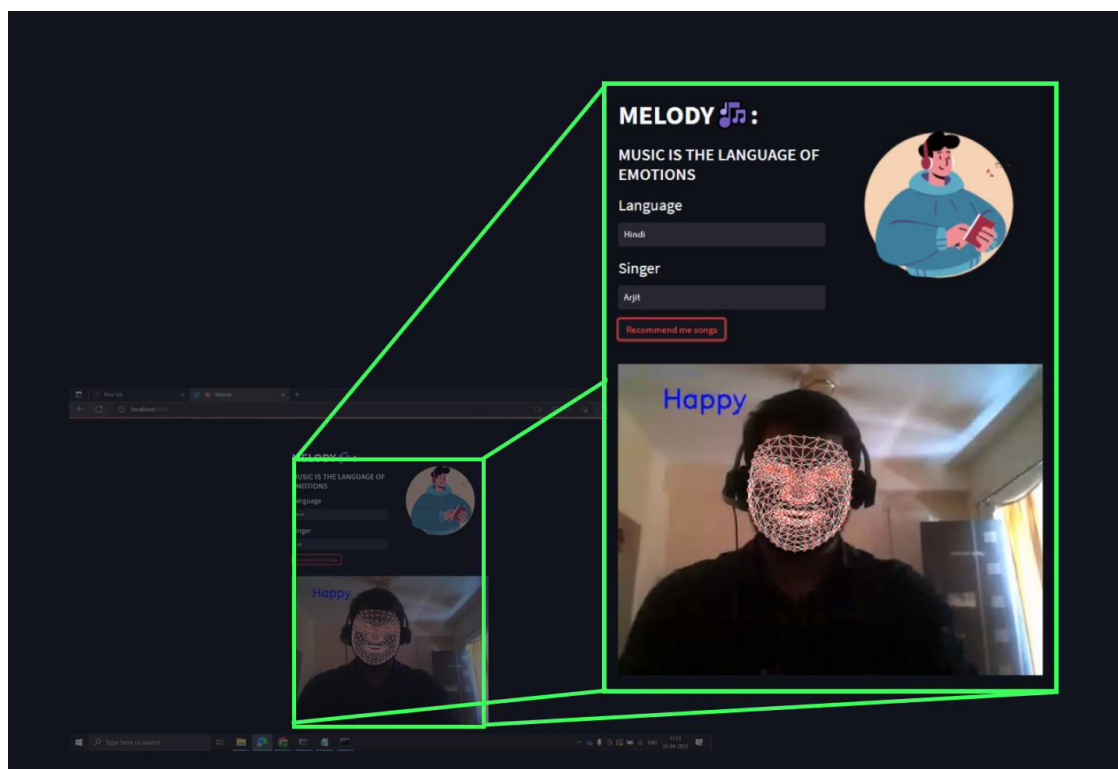
Figure 5 – Sad Emotion
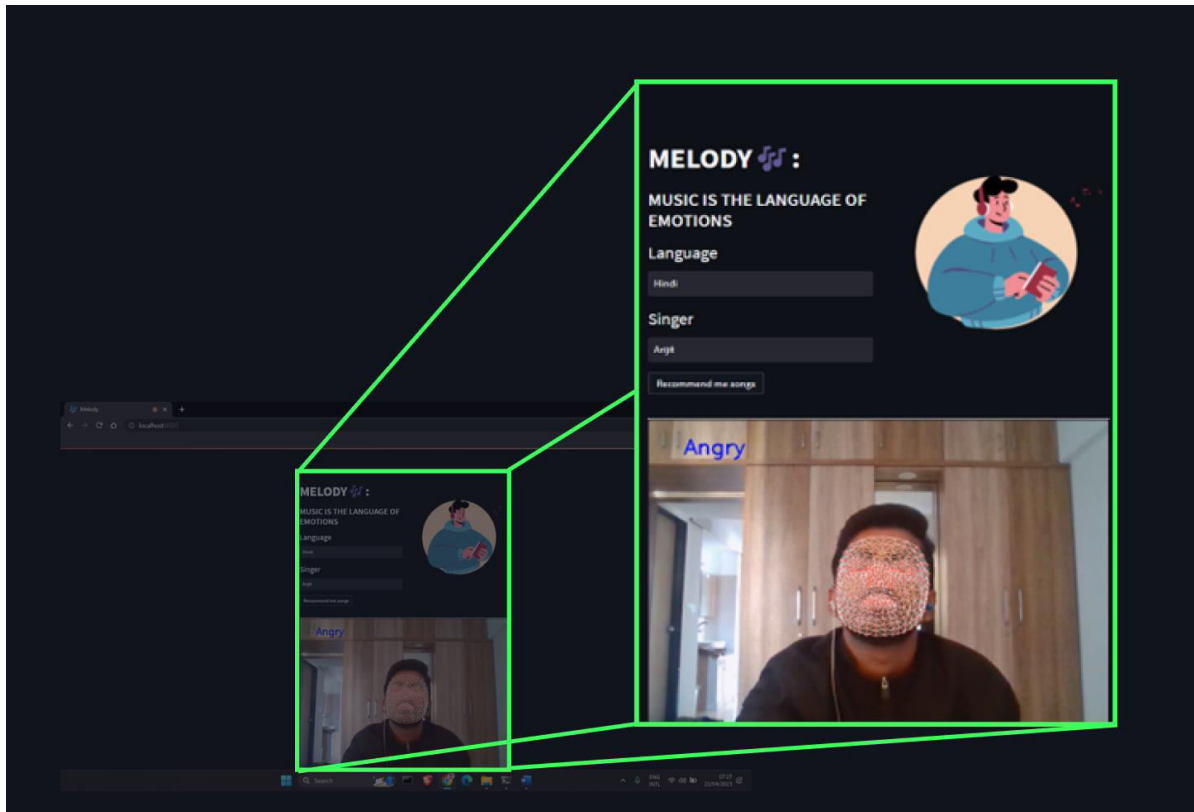

Figure 6 - Happy Emotion
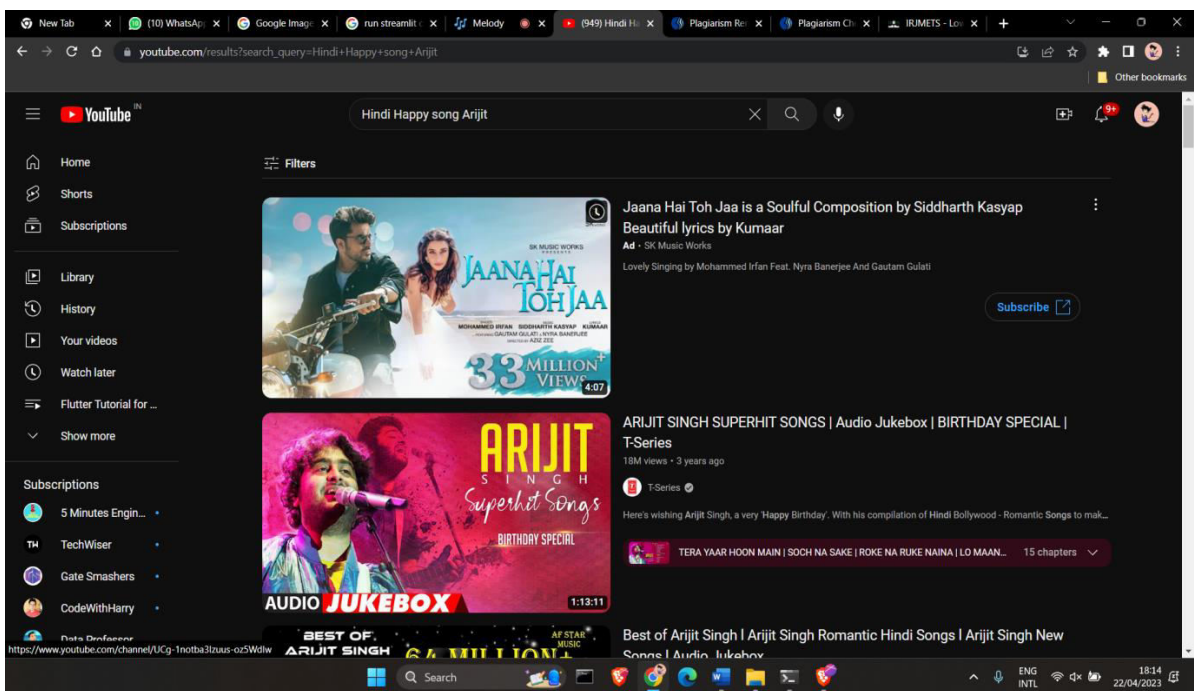
Figure 7 – Angry Emotion

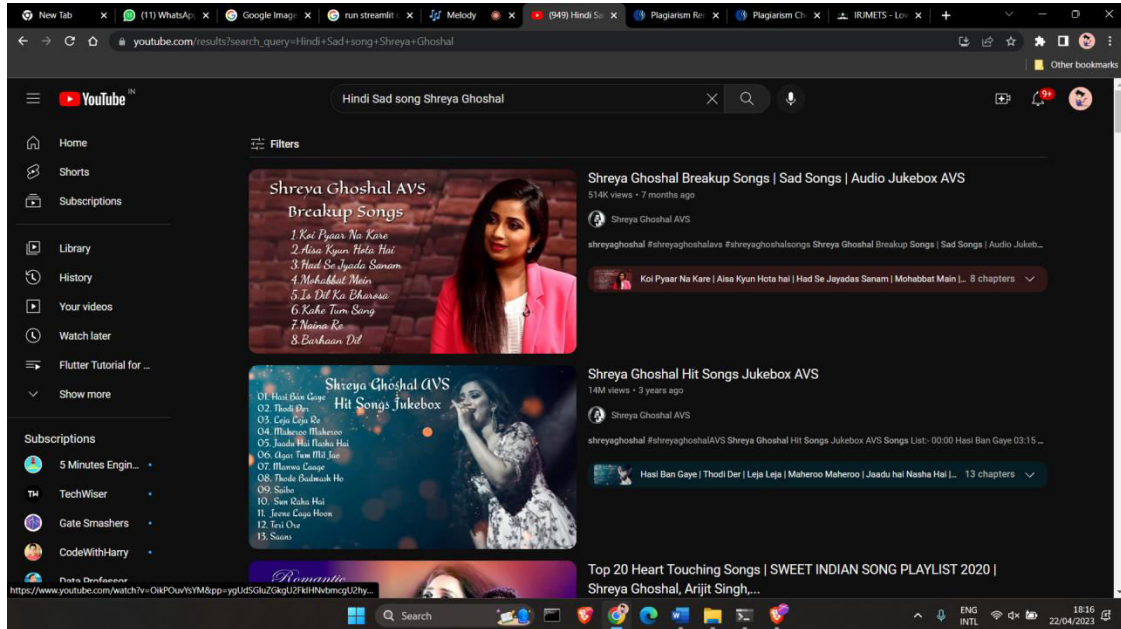

Figure 8 – Output for Happy Emotion

Figure 9 – Output for Sad Emotion

VII. CONCLUSION

In this project, the music recommendation model is based on the user's emotions captured in real time.

This project aims to improve the relationship between music and users. This is because music can help lift people's spirits and reduce stress for some.

Recent developments hold great promise for an emotional music experience.

, that is, this system shows the knowledge of facial (idol) emotions and makes music accordingly.

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