EMOTION BASED MUSIC RECOMMENDATION

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Introduction

- Music plays an important role in our life. It's not just a source of entertainment in our life. It gives us relief and reduces our stress. It helps to improve our mental health.

- Emotion dectection based on facial expression is one of the current topics in the various fields which provide a solution to various challenges. It expresses the human perspective or feelings and also his/her mental situation.

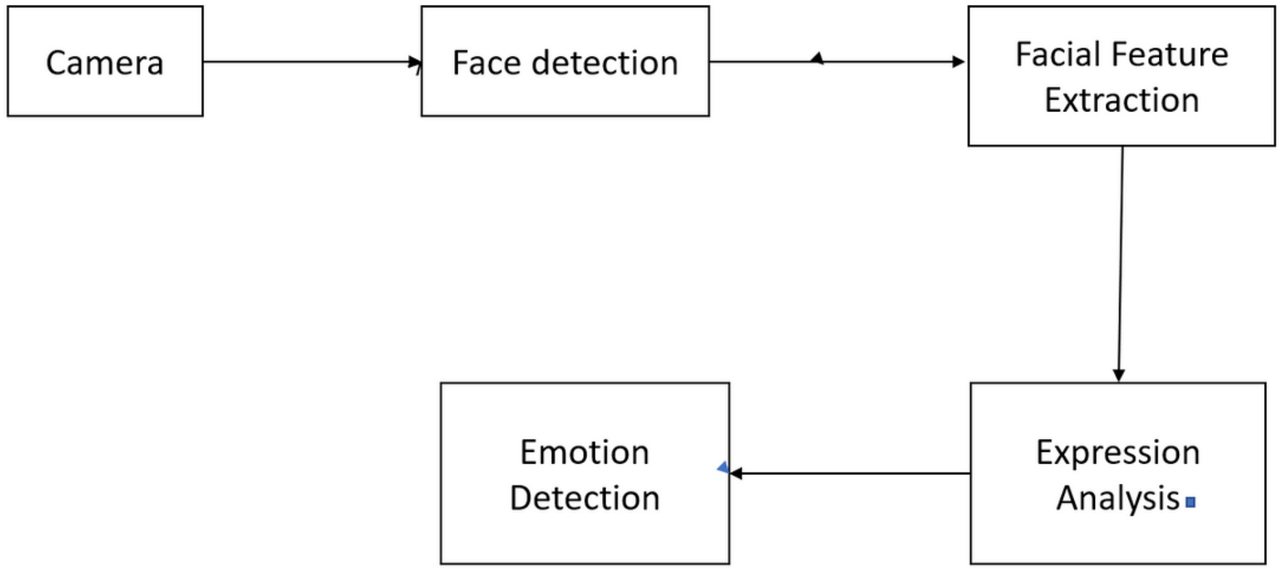
- This project recognizes the facial expressions of user and play songs according to emotion. Facial expressions are best way of expressing mood of a person. The facial expressions are captured using a webcam.

Emotion Basics

- The facial expressions categorize into 5 different of facial expressions like anger, joy, surprise, sad and excitement.

- An emotion model is proposed that classifies a song based on any of the 7 classes of emotions viz sad, joy-anger, joy-surprise, joy-excitement, joy, anger, anger sad-anger.

How it works ?


Camera
Face detection
Facial Feature Extraction
Expression Analysis
Emotion Detection

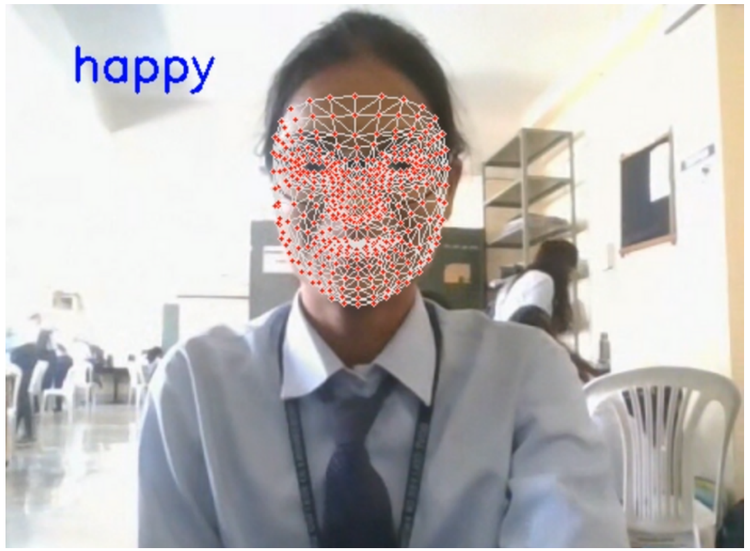
Problem Statement

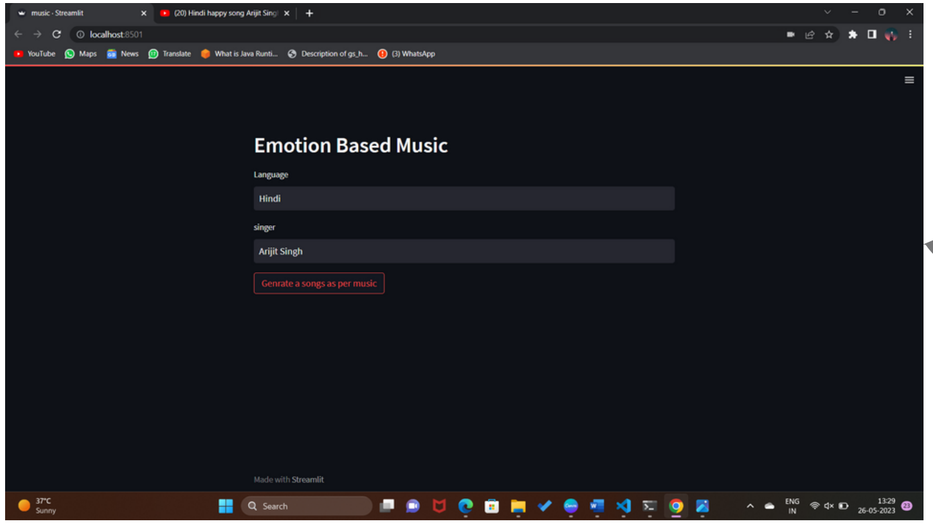
- In today‘s world, with ever increasing advancements in the field of multimedia and technology, various music players have been developed. These players may fulfill the user‘s basic requirements, but not satisfy their situation/ mood.

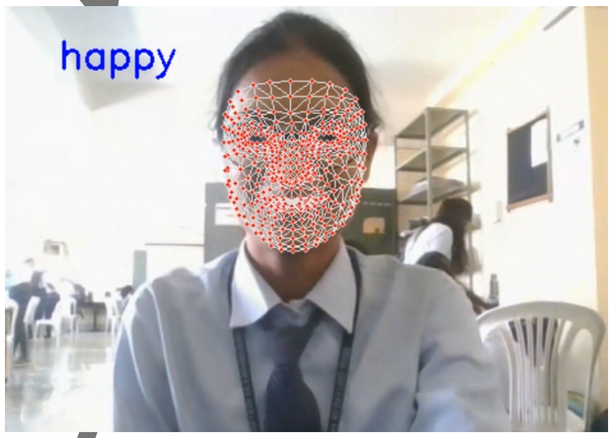
- The main moto of this project is to develop a Musical system which will generate a musical playlist for the user based on his/her mood, by capturing his/her facial expressions.

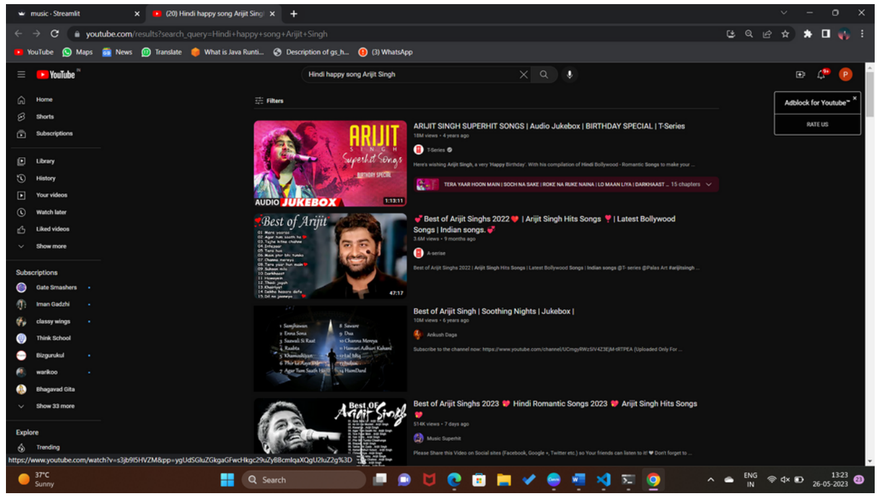
Face Detection

- In face detection we detect the face of user with the help of web cam.
- This detection can be real time from images or video frame.
- Once the face is detected, the system tells whether the detected face is happy , sad , angry or neutral.




music - Streamlit
(20) Hindi happy song Arijit Singh
localhost:8501
Emotion Based Music
Language
Hindi
singer
Arijit Singh
Genrate a songs as per music
Made with Streamlit


happy


music - Streamlit
(20) Hindi happy song Arijit Singh
youtube.com/results?search_query=Hindi+happy+song+Arijit+Singh
Hindi happy song Arijit Singh
ARIJIT SINGH SUPERHIT SONGS | Audio Jukebox | BIRTHDAY SPECIAL | T-Series
Best of Arijit Singh | Soothing Nights | Jukebox |
Best of Arijit Singhs 2023 Hindi Romantic Songs 2023 Arijit Singh Hits Songs

Benefits

- This music player itself selects songs according to the current mood of the user.
- Easy to Use.
- Improve Accuracy.
- Also Saves Time.

Limitations

- Emotion based music players in use are less accurate & do not cover all emotions.
- Manual selection of songs.
- Some users wanted happy songs in a sad mood to cheer them up. In that situation, the user has to select manually from the playlist.

Future Scope

- This system helpful in music therapy & help the music thrapist to treat the patients suffering from mental stress, anxiety, trauma and depression.
- This system allows machine to understand how people feel, which is the first step for them to fulfill our needs.

Conclusion

- In this project, we are generating the playlist according to the emotion of the user, we developed a program for predicting the emotion of the user and for generating the playlist we have used Youtube.

- Implementation of this project will help the user to automatically generate musical playlist using his facial expressions, saving his time and manual labour.

- We have tried it various times and achieved a very high accuracy of more than 99% for happy, anger, surprise and sad emotions.

References

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Thank You