





PLAGIARISM SCAN REPORT

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Real time behavior analysis is an Emotion Detection system. In Which we are going to build a model to detect human face and categorize the Emotional State in different Parts like angry, depressed, happy, excited, sad, fear, disgust etc. here we are Considering human Facial Points (Landmark) which will give an accurate description of the Data Points for Emotion Classification. These Emotions will help in generating an automatic Music playlist using APIs which will be the output of our project. User does not need to have any other Application for this as everything is incorporated in our system only. The purpose of this project is to help the people who wants to listen the song and who are mentally depressed or mentally unhealthy. Our web app will also help the psychology doctor to heal a patients. The modern technology will act as a bridge between the doctor and patient as well as sad to happiness.

Our web application "semotions" will help all human. The app helps front line worker to who are lonely at home. They can go online and check their mood and listen the songs as per moods. Emotions are essential aspect of human life and basic research on emotions of the past few decades has produced several discoveries that have led to important real-world applications and emotion detection is one of them. Often Emotions and Music are correlated with Each Other. It is said that Music has the power to heal any stress, anxiety or any kind of emotions and is often associated with a therapeutic role. Our Project is about Real Time Human Behavior analysis by predicting the current emotional state of user based on which the music recommendation system which it plays songs.

The face of the person is captured using built-in System's Camera. After performing preprocessing, the Feature Extraction is done and based on that the Emotions are classified as Happy, Angry, Sad, Disgust, Fear and Surprise. The emotions are used as input for recommender system and the music is played for the emotions detected. The web application has been made keeping mind of the how we can use the latest technology in the real world and spread some happiness around the world. Music is not just lyrics but it also effects on the human as well as animals also and they can connect with the music bit and they will happy. The web application provide the facility to detect the mood. It will enhance the human mental strength and try to motivate to do extra ordinary things. Web Application "SEMOTIONS" will help the people. The app also helps hotel and restaurants. In hotels and restaurants they make activity for this also to attract more customers. Scope of our model is very fast in the future we also updated in mobile application as well as software. And we will also update our application as per user feedback.

One's Facial Expression can describe their mental state. Using these Facial Expression Our System will tell the current Emotional state of the User. The Input taken in form of image using camera. This input is used for extracting the information to deduce the mood of an individual. Humans respond and react to music and that music has a high impact on person's brain activity People tend to listen to music based on their mood. Music is also proven to be a way to overcome depression. Thus, we will be using that as second part of system where system will recommend music based on emotion detected. We will be using Computer vision for the image generation and Machine Learning for Emotion Detection and Recommender System.

The goal is to develop solutions to implement automatic methods to make our System capable of evolving by itself. The Image input from Camera are taken in Frames and can have lots of noise which can degrade the quality input. Thus the objective of Face detection is to reduce the external noise and other effects in image. Image undergoes feature enhancement, where tone mapping is applied to images with low contrast to restore the original contrast of the image. We will be using Deep learning Multi-Task Cascaded Convolutional Neural Network (MTCNN) for face detection. The proposed

CNNs consist of three stages. In the first stage, it produces candidate windows quickly through a shallow CNN. Then, it refines the windows to reject a large number of non-faces windows through a more complex CNN. Finally, it uses a more powerful CNN to refine the result and output facial landmarks positions. These facial Landmark positions will help us further in emotion Detection The Image input from Camera are taken in Frames and can have lots of noise which can degrade the quality input. Thus the objective of Face detection is to reduce the external noise and other effects in image. Image undergoes feature enhancement, where tone mapping is applied to images with low contrast to restore the original contrast of the image.

Facial landmark points from previous step are saved in an array. Next, the data stored in the features array will be put in as an input into a reduction code that will reduce the size of data and eliminate any correlated coordinates leaving only the necessary points as principal components. That will be an input into a predictor which is already trained for recognizing 7 different set of Emotions. The output will be a value which is defined for that particular emotion. The value from Emotion Detector is fed on to our Music API (Spotify). The song are played from the emotion detected. The emotions are assigned for every song. When the emotion is transferred the respective song will be Emotion Classification Stop When the happy emotion is recognized the songs that are assigned for that particular emotion are played and the same happens with the other emotions as well that is it the songs are played for the emotions detected respectively.

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The proposed CNNs consist of three stages. In the first stage, it produces candidate windows quickly through a shallow CNN. Then, it refines the windows by rejecting a large number of non-faces windows through a more complex CNN. Finally, it uses a more powerful CNN to refine the result again and output five facial landmarks positions.

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Then, it refines the windows to reject a large number of non-faces windows through a more complex CNN. Finally, it uses a more powerful CNN to refine the result and output facial landmarks positions. Thanks to this multi-task learning framework, the performance of the algorithm can be notably improved.

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