

Human Emotion based Music Player using ML

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Abstract— Recent studies ensure that humans respond and react to music which music incorporates a high impact on person brain activity. The common yank listens up to four hours of music daily. Individuals tend to concentrate on music that supported their mood and interests. This project focuses on making Associate in Nursing application to counsel songs for user-supported their mood by capturing facial expressions. Facial features could be a type of nonverbal communication.

Pc vision is Associate in Nursing knowledge domain field that helps convey a high-level understanding of digital pictures or videos to computers. In this system, PC vision elements square measure accustomed to verify the user's feeling through facial expressions. Once the feeling is recognized, the system suggests a play-list for that feeling, saving a great deal of your time for a user over choosing and taking part in songs manually.

Emotion-Based Music Player additionally keeps track of user's details like the number of plays for every song, types of songs supported class and interest level, and reorganizes the play-list on every occasion. The system additionally notifies user concerning the songs that square measure so that they will be deleted or changed. Listening to music affects the human brain activities. Feeling based mostly music player with the machine-driven listing will facilitate users to take care of a selected emotional state. This analysis proposes Associate in Nursing feeling based mostly music player that creates playlists supported captured photos of the user.

This enhances the system's potency, faster and automatic. The most goal is to cut back the general machine time and also the cost of the designed system. It additionally aims at increasing the accuracy of the system. The foremost vital goal is to create an amendment to the mood of a person if it's a negative one like unhappy, depressed. This model is valid by testing the system against user-dependent and user freelance dataset.

The methodology of finding this downside is to make a completely useful app (Front End and Back finish) that solves this downside, ranging from the face there a straightforward and understandable interface anyone will use, this interface is connected to the rear finish. On the back finish, the most rule during this project is to make a Convolutional Neural Network help within the goal of achieving high accuracy rate, as a result of the Convolutional Neural Network is the best within the science of building any network that works with pictures, and conjointly their area unit plenty of similar analysis papers that achieved o.k. seen success during this field of analysis.

A completely useful app that engineered to unravel this downside (Desktop Only) and conjointly trained nearly 28000 pictures with totally different states of emotions (Happy, Sad, Angry, and Normal) with an high accuracy rate that is, "85%" for coaching and "83%" for testing rate, the application is with success suggesting music by suggesting single songs that match any user's feeling.

Keywords—Emotion recognition, Computer vision, Camera, Music ,Categorization , recommendations, Data Science, Emotion/Mood & activity recognition, Music analysis, Music playlist generator, classification, Audio Emotion Recognition, Music Information Retrieval, Emotion Extraction Module, Audio Feature Extraction Module, Artificial Neural Networks, Confusion Matrix, Viola and Jones Face Detection, Music player, Face Detection, Facial Expression Recognition, Audio Feature Recognition, Viola Jones Algorithm, Convolution neural network, Long Short term memory, Emotion detection, audio classification, hidden layers, Max-pooling, Emotion Recognition, Face Detection, Emotion Extraction Module.

I. INTRODUCTION

Music is a vital recreation medium. With the advancement of technology, the optimisation of manual work has gained a great deal of attention. Currently, several ancient music players need songs to be manually elect and organized. User, ought to produce and update play-list for every mood, that is time-consuming. Several music players have advanced options like providing lyrics and recommending similar songs supported the singer or genre. though a number of these features area unit gratifying for the user, there's an area to enhance within the field of automation when it involves music players.

Choosing songs mechanically and organizing these based on the user's mood provides the user's improved expertise. This may be accomplished through the system reacting to the user's feeling, saving time that may be spent coming into data manually. Emotions may be expressed through gestures, speech, facial expressions, etc. For the system to grasp a user's mood, we tend to use countenance. Victimization the mobile device's camera, we will capture the user's countenance.

There are a unit several feeling recognition systems that take captured image as input and confirm the feeling. For this application, we tend area unit victimisation Affective SDK for recognition of feeling. The system includes a unique algorithmic rule [EMO-algorithm] that organizes songs supported the user's emotions and preferences. This algorithmic rule suggests the user's songs to play primarily based on their feeling. This project develops a Convolutional Neural Network. The CNN was elect as a result of this project picture primarily based answer, their area unit many ways to resolve these issues through them, like visual communication, voices techniques.

Facial Expressions could be thanks to sight emotions and that's the methodology enforced through the Convolutional Neural Network and the science itself. This project could be a trial to implement and solve one in every of the foremost vital issues that no one around notice, music is taking a really large a part of our everyday routine and that we select what to concentrate to base on several things on them is Emotions.

Emotions and music area unit nearly close in their structure and therefore the approach they designed with area unit nearly close to. In this project could be a straightforward implementation that applies enjoying music supported any user's feeling, perhaps he/she is happy, sad, nervous, neutral, etc. this is often one in every of the toughest problem that not several researchers around solved, therefore this project could be real labour to resolve this downside terribly} very effective approach.

Also, during this project, we tend to area unit learning Emotions in most of the elements, what's Emotions? How it may be constructed? And additionally, a way to sight them? as a result of knowing these items can me it simple develop the app and additionally facilitate the algorithms apprehend what to find out and why from the beginning.

Among the history the constructions of the emotions area unit different from history to another and from a cluster of individuals to a different, that's what makes it difficult to resolve, and at the beginning, it'll begin learning tiny cluster of individuals and increasing to the others by the time. Smart gadgets folks carry every day with them will acquire a ton of knowledge.

Information from a fitness band, feeling detection from face captured by smartphone, activities detected by the sensors, more may be used for numerous applications. one in every of the precise and straight approach to sight mood is victimisation human facial expressions. Most of the time, emotion is unconcealed by facing itself. Industries have their trained model for the feeling extraction and area unit currently delivering client services as frameworks providing API with help of cloud-primarily based services.

We tend to be used Microsoft's psychological feature services & Google's activity recognition API in our approach for quicker implementation. Machine learning can be used for classifying music into a set of specific emotions. Once, all this information is present, the user may be studied concerning his/her preferences and habits of listening by time, mood, activity, etc. coaching on this information will generate higher play list for future listening.

The objective behind this work is to let daily factors get thought-about for higher music recommendation. The field of science is as massive because of the universe itself. Every passing day their area unit new developments; if not massive or ground-breaking, however constructive and leading towards a better tomorrow. Sound and Graphics area unit 2 immense fields of Science and Engineering that not solely intrigue however additionally attract learners to review them intimately to explore into their depths.

Since then several such inventions have propelled the United States to this time wherever thinking of assorted concepts which could not are potential several decades back and additional over implementing them is currently potential. Now within the present, wherever clicking a photograph and listening to music „on the go“ is simply a region daily life, providing any enhancements within the operating of such technologies that successively build the user expertise better area unit continually appreciated.

With the enhancements in technology, the extent of sophistication in computer code has additionally increased. additionally, with the concept of 'keeping it simple', developing refined applications could be a challenge. Facial Expression primarily based Music Player is an interactive, sophisticated and innovative mobile (Android) primarily based

application to be used as a music player in a very different manner. the appliance works in a very different manner from the traditional computer code because it scans and classifies the audio files gift on the device and consistent with the predefined parameters (Audio Features) gift on the appliance to supply a collection of mood primarily based playlists.

The real-time graphical input provided to the appliance is classified (Facial expression recognition) to supply a „mood“ which can then be accustomed choose the desired playlist from the sooner set. Using the mobile device’s camera, we can capture the user’s facial expression.

II. LITERATURE SURVEY

Currently, there aren't any dedicated applications to recommend songs supported feeling of music listeners. There also are only a few applications that specialize in user preferences and proposals, and this doesn't seem to be customizable, like AllMusic. Other applications suggest predefined (not user-specific) song play-lists. An application like mood fuse embodies options like manual choice of songs, part shuffle, playlist. Some genre applications like Saavn, Spotify offer users outlined play-lists that must be created and updated manually. All those applications focus on general categorization instead of specificity to each user.

A zealous application that focuses a lot on user preferences, priorities and therefore, the creation of dynamic play-list is needed to optimize the user expertise. It ought to contain user-specific play-list generated supported the usage and will be economical in categorization. Many wide used face expression categorization techniques like Viola and Jones, etc., are used for the initial part to capture and verify the user’s emotion, however, these techniques have high procedure demand. The choice is to use a cloud-based internet service that method computation within the cloud.

The current system uses, Affective SDK for feeling recognition, a system that has already analysed emotions from over 5 million faces. This SDK helps the appliance capture and verify feeling from an image. Later, this feeling is an accustomed organization of user’s play-list. Various techniques and approaches are planned and developed to classify human spirit of behaviour.

The planned approaches have targeted solely on the number of essential emotions. For the aim of feature recognition, the facial expression is categorized into two major classes like Appearance-based feature extraction, and Geometric based mostly feature extraction by Zheng et al. Geometric based mostly feature extraction technique thought of solely the form or major distinguished points of some necessary facial features like mouth and eyes.

Within the system planned by Changbo et al, around a complete of fifty-eight major landmark points was considered in crafting Associate in Nursing ASM. The appearance-based mostly extraction feature like texture, have conjointly been thought of in numerous areas of work and development. Associate in Nursing economical methodology for cryptography and implementing extracted face expression along with multi-orientation and multi-resolution set of Dennis Gabor filters was planned by archangel Lyons et. al. Various approaches are designed to extract facial expressions.

Associate in Nursing audio features from an audio signal and extremely few of the systems designed have the aptitude to get Associate in Nursing feeling based mostly music playlist mistreatment human emotions and therefore the existing styles of the systems are capable to get an automatic play list mistreatment extra hardware like Sensors or encephalogram systems thereby increasing the value of the look planned. several the drawbacks of the prevailing system are as follows:

- i. Existing systems are advanced in terms of your time and memory needs for extracting face expression in real-time.
- ii. supported the present spirit and behaviour of a user, existing systems possess a lesser accuracy in the generation of a playlist.
- iii. Some existing systems tend to use the employment of human speech or generally even the employment of further hardware for the generation of an automatic playlist, thereby increasing the overall value incurred.

This paper primarily aims and focuses on the resolution the drawbacks concerned within the existing system by planning an automatic feeling-based music player for the generation of bespoke playlist supported user extracted face expression and therefore avoiding the utilization of any further hardware.

It conjointly includes a mood randomised and starter operate that shifts the mood generated playlist to another same level of the randomised mood generated playlist once some length.

The potential talents of humans to be ready to offer inputs to any system in numerous ways in which it has caught the attention of assorted learners, scientists, engineers, etc from everywhere the globe.

The paper by Hafeez Kabini et al addressed the matter of the prevailing ways typically handle solely deliberately displayed and exaggerated expressions of archetypical emotions although deliberate behaviour differs in visual appearance, audio profile, and temporal order from ad libitum occurring behaviour, by taking efforts to develop algorithms that may method present human affective behaviour have recently emerged. They introduced and surveyed these recent advances and mentioned human emotion perception from a psychological perspective.

They examined the market approaches to resolve the problem of machine understanding of human emotive behaviour and discuss necessary problems just like the assortment and availableness of coaching and check knowledge. The mind may be a term that has continuously attracted scientists towards understanding it in a very wholesome manner.

The most natural thanks to categorical emotions are mistreatment facial expressions. We humans typically use nonverbal cues like hand gestures, facial expressions, and tone of the voice to express feelings in social communications.

The mood is statistically inferred from numerous knowledge sources primarily: audio, image, text and sensors. In paper author used boosted tree classifier for feeling extraction from short video sequence mistreatment audio and video, classify them into seven feeling classes. For audio feature extraction, open smile toolkit is employed. This model provides higher accuracy for 3 emotions viz. angry, happy and neutral.

In Author et. al. proposed an approach for Associate in Nursingalyzing the extracted face expression, with artificial neural network (ANN) accustomed classify those into six emotions viz. anger, happy, sad, disgust, surprise & fear. Thus, it yields higher performance, in terms of computational time, as compared to the algorithms within the existing literature.

III. EXISTING SYSTEM

Currently, there are several existing music player applications. A few of the attention-grabbing applications among them are:

1. Saavan and Spotify – These application offers sensible user accessibility options to play songs and recommends user with alternative songs of the comparable genre.
2. Moodfuse - during this application, the user ought to manually enter mood and genre that wants to be detected and moodfuse recommends the songs-list.
3. Steromood - User ought to choose his mood manually by choosing the moods from the list and also the application plays music from YouTube.
4. Musiccovery - This application has prime quality songs and comprehensive music recommendations. It conjointly counsels predefined play-list for the user. The previous music players consist of assorted options associate degree.

The options that area unit obtainable within the antecedent developed Music players area unit as follows:

- a) Manual choice of songs.
- b) Party Shuffle.
- c) Playlist

The problems being solved are :

- 1) the present offered systems need the user for doing the manual choice of the songs, however, the planned system can use a facial scanning and the face feature pursuit to see the mood supported it can give the user with the customized listing, so creating the method easy for the user.
- 2) it'll give much better expertise to the music connoisseurs and enthusiasts.

IV. PROPOSED SYTEM

The projected system tries to supply AN interactive approach for the user to hold out the task of making a list. The working relies on totally different mechanisms winding up there operate in a very pre-defined order to urge the specified output. The operating will be declared as follows:

1. The projected System works by initial providing an easy enough interface that prompts the user to scan the memory for audio files once the appliance is opened.
2. Then once the files are detected, they're scanned for audio options and these option's area unit extracted.
3. Then the extracted feature values area unit subjected to classification per the parameters provided.
4. These parameters embrace a restricted set of genre varieties based on that the audio feature values are going to be processed.
5. After this, the song's area unit integrated into totally different playlists supported the feature extraction method. Hence, lists of comparable sounding songs or songs happiness to similar genres' area unit generated.
6. In the next step, the user camera is invoked with correct permissions, and a true time graphical input (image) is provided to the system.
7. The system initial checks for the presence of a face within the input victimization the face detection method, then classifies the input And generates AN output that is a feeling (mood) supported the expression extracted from the \$ 64000-time graphical input.
8. Once this the classified expression acts as AN input and is used to pick AN acceptable list from the at first generated playlists, and also the songs from the playlists are played.

V. ALGORITHM

Algorithm for Proposed System:

Step.1: START.

Step.2: Capture image exploitation digital camera and save.

Step.3: Input image to the applying.

Step.4: Face detection.

Step.5: Extract interest points on the mouth and eye exploitation HAAR Cascade technique of face detection. Step.6: Apply the Bezier curve equation on the mouth and eye.

Step.7: Apply threshold.

Step.8: Device can acknowledge the emotions and can play music.

Step 9: If not detected then head to Step.2 else head to Step.10.

Step 10: per emotions songs list are open and music are contend.

Step 11: STOP

Algorithm of Emusic's classifier:

START

1. Fetch the dataset.

2. Remove duplicate entries if present.

3. If same set of independent variable has multiple dependent class then categorise them in one class.

4. Divide the dataset into test set and training set

5. Apply Random forest classifier to train the dataset.

6. Take the inputs from data frame

7. Predict the result as song by giving input to 5.

STOP

VI. SYSTEM ARCHITECTURE

The application is made mistreatment the subject field pattern of Model-View-Controller. It is also a widely used design. Here, the applying is split into 3 main logical components: the model, the read and the controller.

View: the highest layer is wherever the end-user communicates with the applying through clicking buttons, writing details, accessing the camera, choosing a radio button, uploading songs, etc. This layer is accountable for displaying all

knowledge or a little knowledge to a user-supported the necessity of the applying. This layer also acts as a bridge between the user and the application itself. Angular four is used in this application for displaying the output or response of the system to the user.

Controller: This middle layer of the applying contains the business logic and the main practicality of the applying. As before long because the user interacts with the applying, the response is processed during this layer. From log-in to displaying play-list, all the functions that run in the background belong to the presentation layer. This in the main consists of all the functions and EMO-algorithm that help in segregating songs and causing the output to look at layer.

Model: This layer is accountable for maintaining the user’s knowledge. Emotion-Based Music Player uses Google base of operations for storing user knowledge. The base of operations is incredibly useful to take care of user’s profiles and preferences. The applying additionally stores some temporary knowledge on the device.

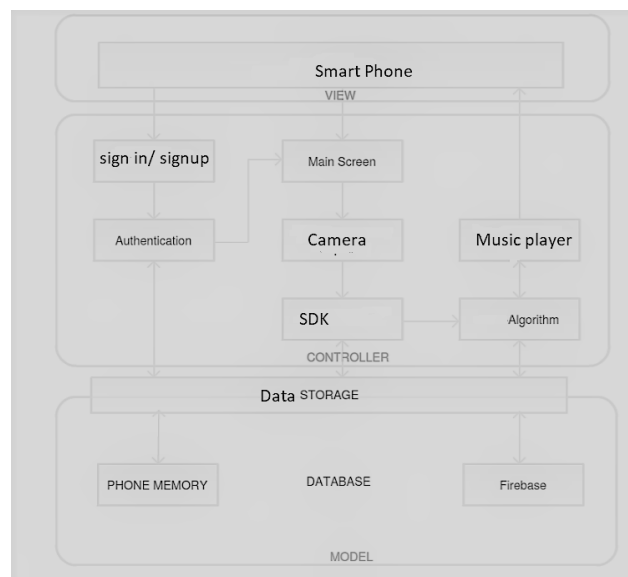


Fig. System Architecture

Modules of the system square measure explained below:

Getting session - This is easy operate that detects if it's morning, afternoon, evening or night primarily based on time and stores it into 'session' variable.

Module - 1: Mobile Activity Detection This module appearance into application usage statistics of automaton and gets the present foreground app getting used by user aside from music player itself. Since we've got thought-about few predefined classes as Social media, browsing, chatting, gaming, reading and if none of those, then nothing.

Module -2: a pair of Physical Activity Detection This module detects physical activity from the info collected from smartphone sensors. Google has already trained its model and supply service in the style of API. These activities square measure classified like Driving, Walking, Running, Still, Bicycling. It stores them into 'Pact' variable.

Module -3: Feeling Recognition System This module takes input as user's selfie and pass it to psychological feature services API provides by Microsoft for emotional analysis. We tend to use this API to make our project in a brief time, however, one will implement his model for facial feeling recognition and use it as a module. This API classifies feelings into eight emotion classes viz. Happy, Sad, Angry, Surprised, Neutral, Contempt, Disgust, Fear.

EmotionBased Music Player is put in on a mobile device, wherever the user will access their customized playlists and play songs supported their emotions.

1. Login/sign-up phase: Users have to be compelled to produce a profile to store personal data. If the user already has associate degree account, they'll log-in to their account to access bespoke play-lists additionally as songs. Once user

logs-in, their profile is saved on the applying, till they are manually log-out. Whereas the user adds songs, their input is taken by the system.

2. Feeling Capture section: As before long because the authentication phase is completed, the applying can raise user's permission to access media and photos, and can access camera to capture the user's image.

3. Affdex API: when the image is captured, the applying sends image captured to Affdex SDK. There, the captured image is processed and also the image feedback is shipped to the applying.

4. Emo-phase: during this section, the applying receives the image info and recognizes the feeling supported the outlined threshold. This feeling is shipped to the information to fetch the feeling play-list.

5. Show phase: Here, the songs square measure organized supported EMO-algorithm and also the user will play any song from the list displayed. The user has the choice to feature, remove, modify the songs and can also amendment class, and interest level of a song at any time within the application. The applying additionally incorporates a recommendation tab wherever the system notifies the user of songs that square measure seldom contends.

VII. METHODOLOGY

The planned rule during this involves Associate in Nursing feeling music recommendation system that gives the generation of a custom-made playlist by the user's emotion. The planned system involves 3 major modules: feeling extraction module, Audio feature extraction module Associate in Nursing an Emotion-Audio recognition module. Feeling extraction module and Audio feature extraction module square measure two separate modules and Emotion-Audio recognition module performs the mapping of modules by querying the audio meta-data file.

1. EMOTION EXTRACTION MODULE: Image of a user is captured employing a digital camera or it will be accessed from the hold on the image within the magnetic disc. This nonheritable image undergoes image improvement within the variety of tone mapping to revive the first distinction of the image. Afterimage enhancement all pictures square measure reborn into binary image format and also the face is detected victimization Viola and Jones rule wherever the frontal Cart property' of the rule is employed that solely detects upright and face forwarding options with the most threshold worth set within the vary of 16-20.

The output of Viola Associate in Nursing Jones Face detection block forms an input to the facial feature extraction block. To increase the accuracy Associate in Nursing an aim to get real-time performance solely options of eyes and mouth square measure acceptable enough to depict the emotions accurately. For extracting the options of mouth and eyes sure calculations and measurements square measure taken into consideration. Equations (1), (2), (3) and (4) illustrate the bounding box calculations for extracting options of a mouth.

$$X(\text{start Pt of mouth}) = X(\text{mid-Pt of nose}) - (X(\text{end Pt of nose}) - (X\text{start Pt of nose})) \dots\dots\dots (1)$$

$$X(\text{end Pt of mouth}) = X(\text{mid Pt of nose}) + ((X\text{end Pt of nose}) - (X\text{start Pt of nose})) \dots\dots\dots (2)$$

$$Y(\text{start Pt of mouth}) = Y(\text{mid Pt of nose}) + 15 \dots\dots\dots (3)$$

$$Y(\text{end Pt of mouth}) = Y(\text{start Pt of mouth}) + 103 \dots\dots\dots (4)$$

Where $(X(\text{start Pt of mouth}), Y(\text{start Pt of mouth}))$ and $(X(\text{end Pt of mouth}), Y(\text{end Pt of mouth}))$ illustrates begin and finish points of the bounding box for mouth severally, $(X(\text{mid Pt of nose}), Y(\text{mid Pt of nose}))$ illustrates center of noise and $((X\text{end Pt of nose}), (X\text{start Pt of nose}))$ illustrates finish and begin purpose of noise. Classification is performed victimization Support Vector Machine (SVM) that classifies it into seven categories of emotions.

2. AUDIO FEATURE EXTRACTION MODULE: In this module, an inventory of songs forms the input. As songs square measure audio files, they need a definite quantity of pre-processing Stereo signals obtained from the web square measure reborn to sixteen-bit PCM mono signal around a variable rate of forty-eight.6 kHz. The conversion process is finished victimization Audacity technique. The pre-processed signal obtained undergoes Associate in Nursing audio feature extraction, wherever options like rhythm toning are extracted victimization MIR one.

1. Songs that check cheerfulness, energetic and playfulness square measure classified below joy.
2. Songs that check depressing square measure classified below the unhappy.
3. Songs that replicate mere perspective, revenge square measure classified below anger.
4. Songs with anger in rascally is classed below Joy-anger class.
5. Songs with terribly depressing mode and anger mood square measure classified below Sad-Anger class.

- 6. Songs that replicate the excitement of joy is classed below Joy-Excitement class.
- 7. Songs that replicate surprise of joy is classed below Joy-surprise class.
- 8. All alternative songs fall into.

3. EMOTION-AUDIO INTEGRATION MODULE: Emotions extracted for the songs square measure hold on as a meta-data within the information. Mapping is performed by querying the meta-data information. The feeling extraction module Associate in Nursing audio feature extraction module is finally mapped and combined victimization an Emotion-Audio integration module. Fig two illustrates mapping of facial expression and Audio features.

1. OpenCV Open CV could be a library of programming functions chiefly aim at the real-time PC vision. It's a C++ implementation library. There's a Java library that is derived from OpenCV victimization this we are going to implement viola and Jones face detection rule.

2. Humanoid Studio Android Studio is the official IDE for humanoid application development, supported IntelliJ plan.

3. Viola-Jones rule The Viola-Jones object detection framework is the first object detection framework to produce competitive object detection rates in period planned in 2001 by Paul Viola and Michael Jones.

4. countenance Recognition The output of Viola and Jones Face detection block forms an input to the facial feature extraction block.

5. Audio Feature Extraction In this module an inventory of songs forms the input. As songs square measure audio files, they need a definite quantity of pre-processing Stereo signals that squares measure obtained from the web.

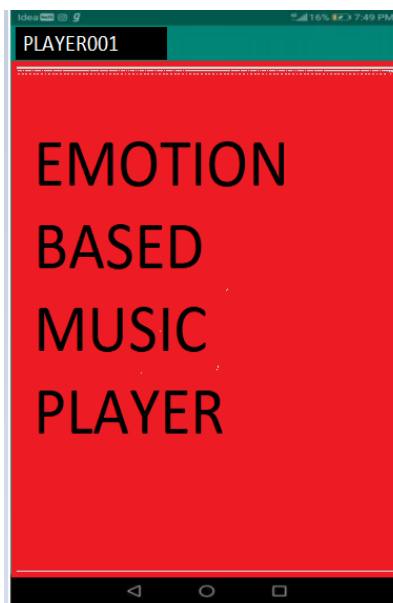


Fig. Welcome Page

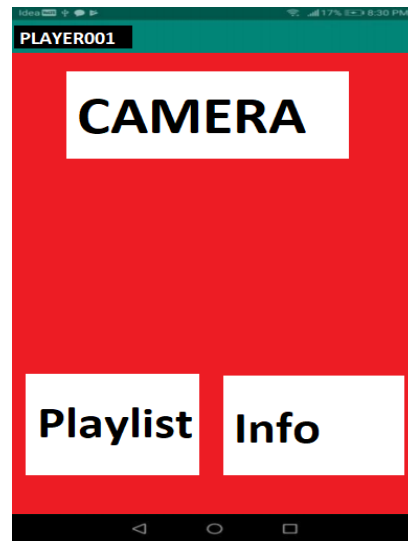


Fig. Options Page

VIII. CONCLUSIONS

The Emotion-Based Music Player is employed to automatize and provides a far better music player expertise for the top user. Applying solves the fundamental desires of music listeners while not perturbing them as existing applications do: it uses technology to increase the interaction of the system with the user in some ways.

It eases the work of the end-user by capturing the image employing a camera, determinate their feeling, and suggesting a custom-built play-list through an additional advanced and interactive system.

The user also will be notified of songs that don't seem to be vying, to assist them free Up space for storing. The objective of this project is to make feeling detection from the live camera app to use in building feeling primarily based music player. Once doing a look, deep learning is the most powerful science in operating with pictures by doing feature extractions to classify from it what this image contains. connected work surveys are done by reading several papers of previous scientists and developers World Health Organization tried to unravel constant drawback with totally different techniques a number of them done it victimization CNN and Deep learning, a number of them have done it victimization PCA and Euclidean.

Distance, and therefore, the last paper has done victimization 2 Level Support Vector Machines. Solution the methodology of this thesis is face detection victimization OpenCV to try and do the step within the method, and then Convolutional Neural Network algorithmic program, it's used heaps in object and have detection from pictures, it helps to try detection from the captured image through the live camera. Implementing this project is completed victimization Python and Kivy style framework, because.

Python the foremost used language once, it involves computing and Deep learning. There are 2 limitations are facing this project the primary one is developing mobile app and the second is to write and create user's information safe from being purloined. Developing mobile the app is the neatest means in determination this drawback as a result of its straightforward use and might be in any user's pocket all time.

Then developing a secure app is additionally necessary as a future work as a result of there's a risk once it involves user's information, this will be done by encrypting the image itself once receiving it as input from the user.

The feeling primarily based Music Player is employed to automatize and provides the best music player experience for the user. Application solves all the fundamental desires of music listeners while not perturbing them as existing applications do. It uses technology to increase the interaction of the system with the user in various ways that.

It eases the work of user by capturing the image victimization phone's camera, police investigation their feeling and suggesting a custom-built list with advanced options. The user's negative or bad thoughts ar slowly born-again to positive thoughts by dynamical the song from low tone to excited tone.

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