## SPEECH EMOTION RECOGNITION USING TAMIL CORPUS

##### A PROJECT REPORT

###### ***Submitted by***

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***in partial fulfillment for the award of the degree of***

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*in*

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**BONAFIDE CERTIFICATE**

Certified that this project report “SPEECH EMOTION RECOGNITION USING TAMIL CORPUS” is the bonafide work of “ARUN GOPAL G. (130071601012), CHRISTY XAVIER RAJ K. (130071601021)” who carried out the project work under my supervision. Certified further, that to the best of our knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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**VIVA-VOCE EXAMINATION**

The viva-voice examination of the project work titled **“SPEECH EMOTION RECOGNITION USING TAMIL CORPUS”**, submitted by **ARUN GOPAL G. (130071601012)** and **CHRISTY XAVIER RAJ K. (130071601021)** is held on \_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**ABSTRACT**

In human machine interaction, automatic speech emotion recognition is yet challenging but important task which paid close attention in current research area. Speech is attractive and effective medium due to its several features expressing attitude and emotions through speech is possible. It is carried out for identification of five basic emotional states of speaker’s as anger, happiness, sad, surprise and neutral. Finding the user’s emotion can be used for business development and psychological analysis. The motivation of the project is to build the Tamil emotional corpus and to make Tamil emotional corpus available in public domain. Tamil Movies will be used as main resource for building the emotional corpus. Basic emotions like happy, neutral, sad, fear and anger are taken for this analysis purpose. And also for the accuracy purpose from the play both Male and Female Speakers emotional speech have been considered. The observer's perception test result will be used to evaluate annotation of emotion. Tamil emotional speech corpus has been built and Emotion Recognition engine has been constructed using Support Vector Machine (SVM) classifier with the features like MFCC and Fourier Transform.

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**LIST OF ABBREVIATIONS**

|  |  |  |
| --- | --- | --- |
| SVM | - | Support Vector Machine |
| MFCC | - | Mel Frequency Cepstral Coefficient |
| FFT | - | Fast Fourier Transform |
| HMM | - | Hidden Markov Model |
| GMM | - | Gaussian Mixture Model |
| FP | - | Fourier Parameters |
| DSP | - | Digital Signal Processing |
| LPC | - | Linear Prediction Coding |
| DCT | - | Discrete Cosine Transform |
| EMODB | - | Emotional Database |
| CASIA | - | Chinese Language database |
| EESDB | - | Chinese Elderly Emotion Database |
| LPCC | - | Linear Predictive Cepstral Coefficients |
| MDT | - | Meta Decision Tree |
| MLP | - | Multilayer Perceptron |
| EAR | - | Emotion Association Rules |
| VQ | - | Vector Quantization |
| DTW | - | Dynamic Time Warping |
| DES | - | Danish Emotional Speech Database |
| BES | - | Berlin Emotional Speech Database |