SPEECH EMOTION RECOGNITION

OUR TEAM

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CONTENT

INTRODUCTION

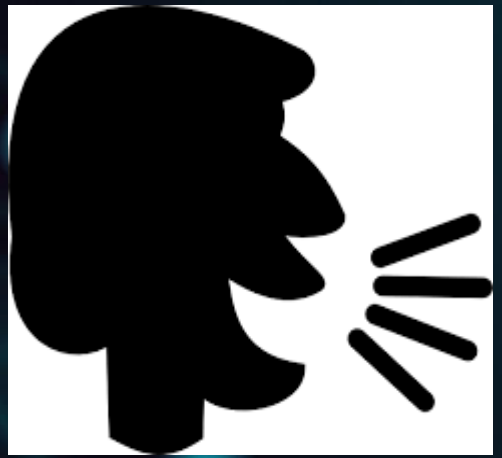
CALL CENTER

VIRTUAL ASSISTANT

CUSTOMER SERVICES

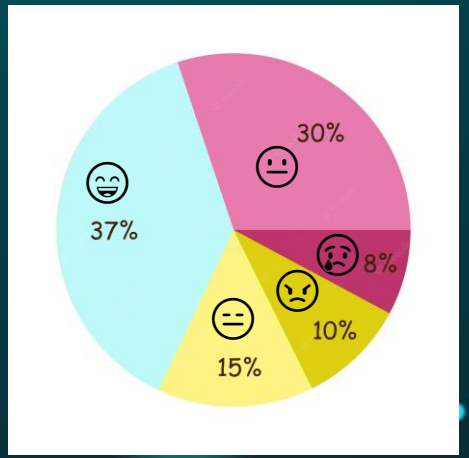
PROBLEM

What brought us here?



Speech Analysis

Evaluate of Emotional Data



Analysis Result

ANALYSIS

What we learned and designed as a result of our researches?

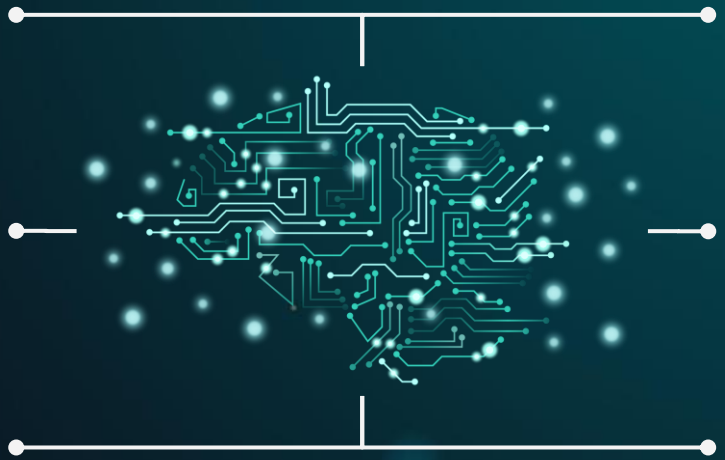
Speech is the most important and effective main way of human interaction.

There is a transfer of emotion in every person's speech.

Analyzing speech signals.

SYSTEM PURPOSE

Upload File



Machines' understanding of human emotions

SYSTEM PURPOSE

The aim of this system is to analyze the emotional state of these people as a result of taking the texts that people have spoken or written.

SIMILAR PROJECTS

Papers	Dataset	Emotions	Technique	Accuracy(%)
An Urdu Speech Corpus For Emotion Recognition (2022) [2]	Urdu Emotional Speech Dataset	Angry, Happy, Sad, Neutral	k-NN (with disgust) k-NN (without disgust)	72.5 82.5
Clustering-Based Speech Emotion Recognition (2020) [3]	IEMOCAP EMO-DB RAVDEES	Angry, Happy, Sad, Fear, Surprise, Neutral	CNN + LSTM	72.25 85.57 77.02
Speech Emotion Recognition with Deep Learning (2020) [4]	RML Dataset	Angry, Disgust, Fear, Happy, Sad, Surprise	Basic AE with SVM Stacked AE with SVM	72.83 74.07
Speech emotion recognition with deep convolutional neural networks (2020) [5]	IEMOCAP EMO-DB RAVDEES	Angry, Disgust, Fear, Happy, Sad, Surprise	CNN LSTM	64.30 71.61 86.1

When the projects done in the past are examined, it has been observed that Angry, Disgusted, Fear, Happy, Sad and Surprised emotions intensified.

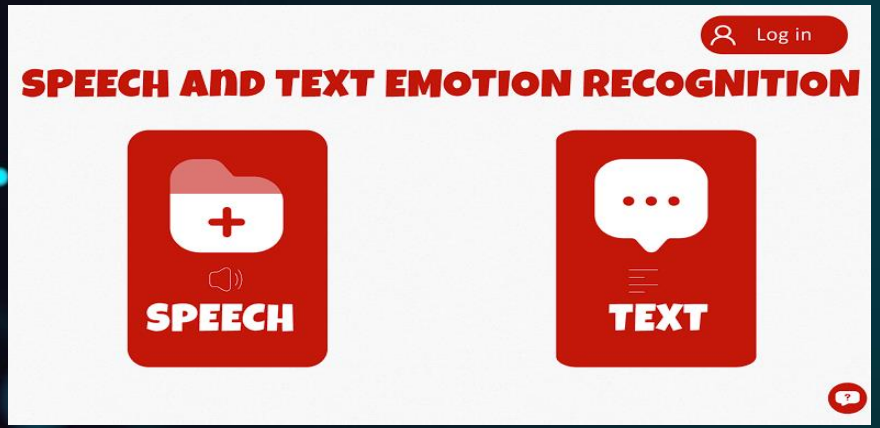
DIFFERENCE

What is our difference?

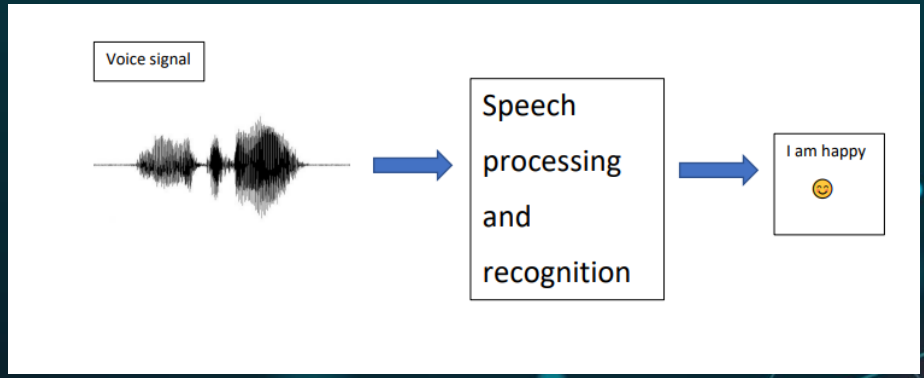
WHAT SETS US APART

Emotion analysis from text and audio files.

CONTRIBUTIONS



We work from both audio and text files.



The mood result can be seen from the recorded audio file.

ADVANTAGES

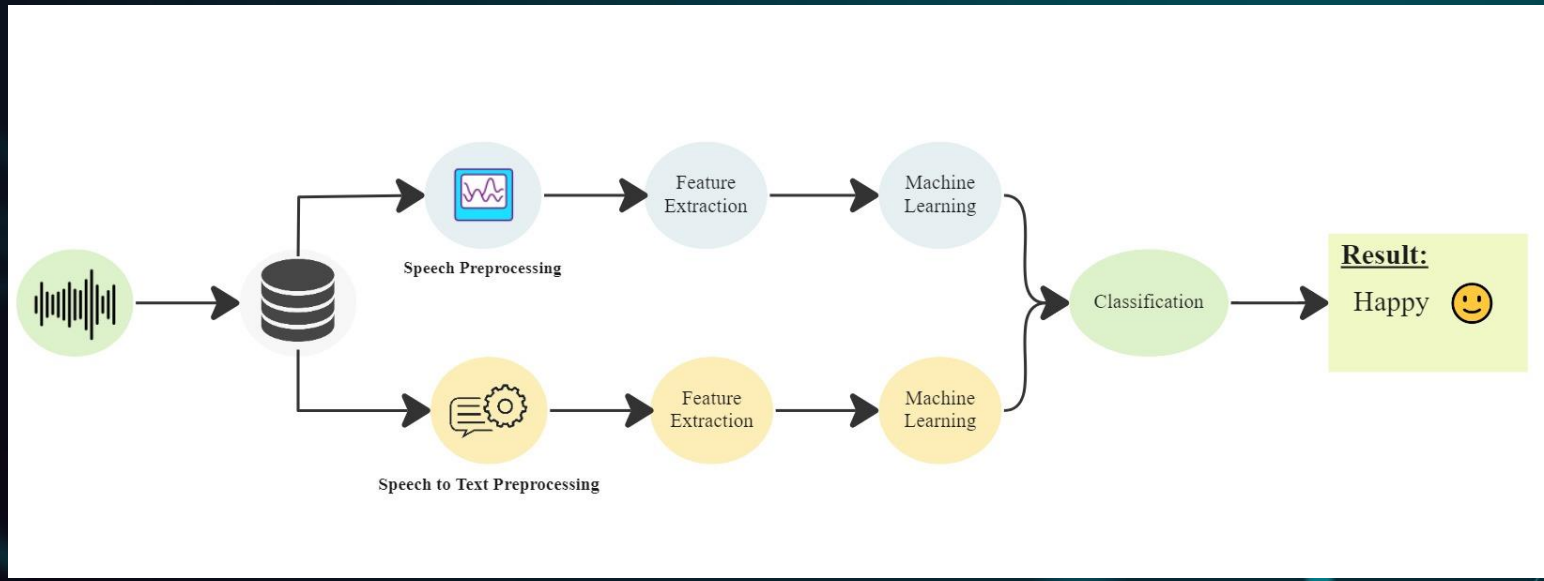
1-EASE OF USE

4- SAVING ON TIME

2- FEWER ERRORS

3-NO REQUIREMENT OTHER THAN PC

FLOWCHART

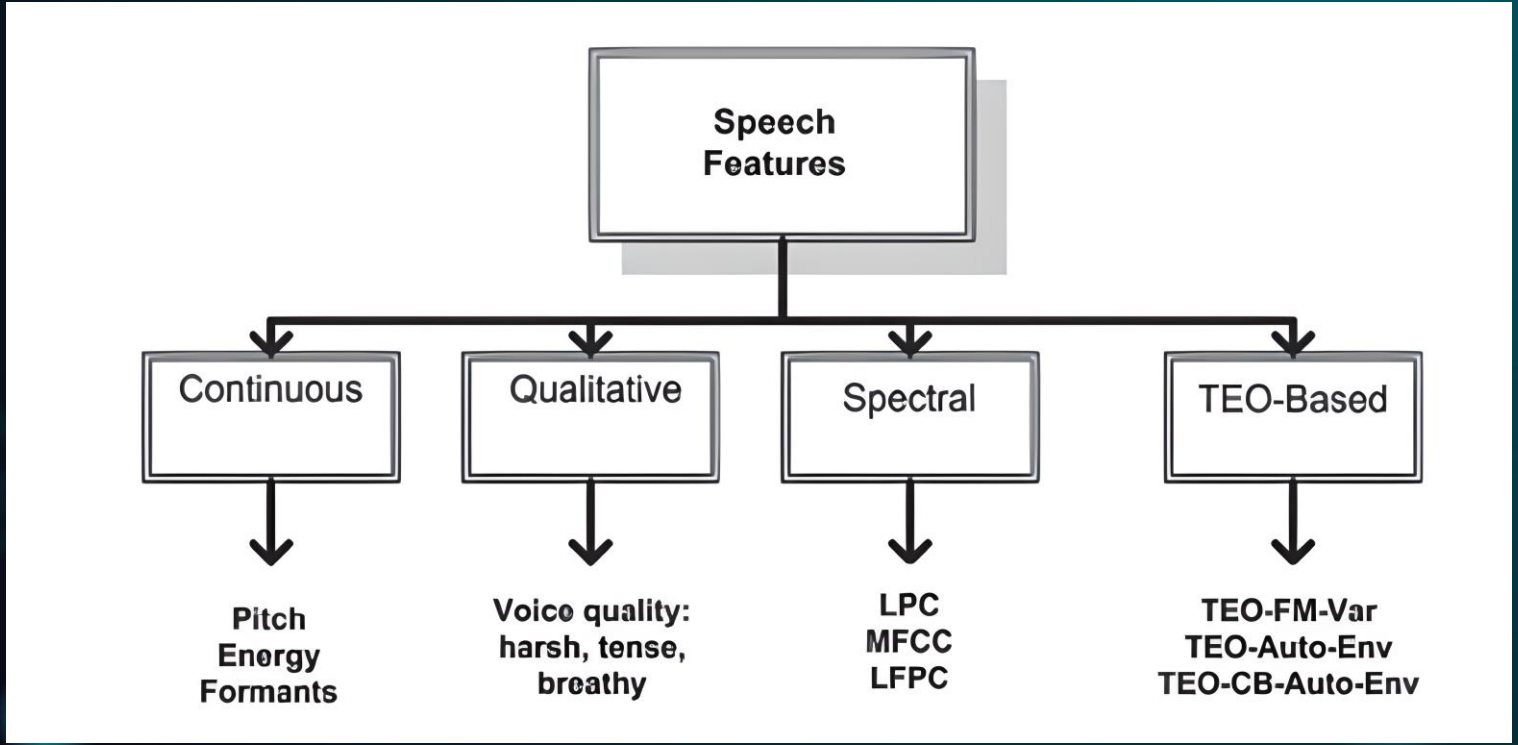

Speech Preprocessing
Feature Extraction
Machine Learning
Speech to Text Preprocessing
Feature Extraction
Machine Learning
Classification
Result:
Happy

FEATURE EXTRACTIONS

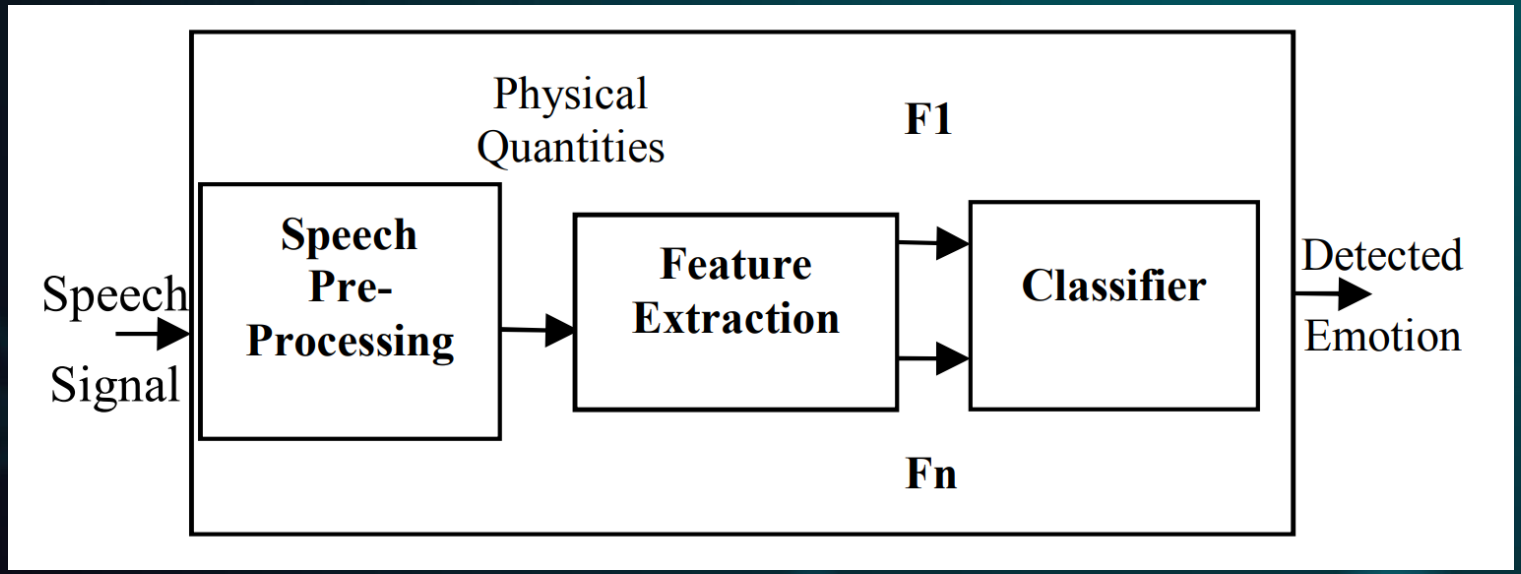
The speech features can be divided into 4 main categories:

- - Continuous Speech Features
- - Voice Quality Features
- - Spectral-Based Speech Features
- - Nonlinear TEO-Based Features

FEATURE EXTRACTIONS



FEATURE EXTRACTIONS



FEATURE EXTRACTIONS

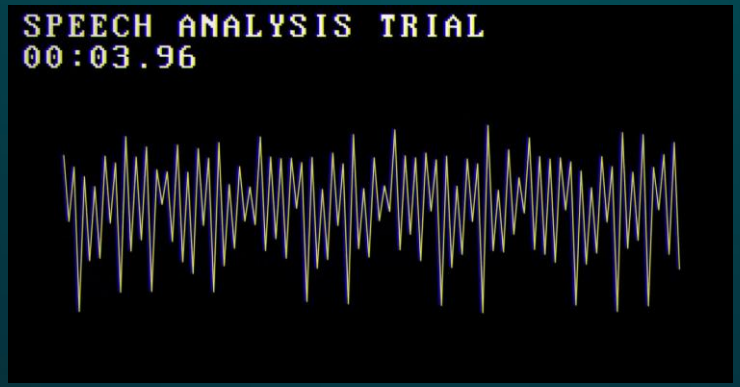
Continuous Speech Features:

- - Pitch-Related Features
- - Formants Features
- - Energy-Related Features
- - Timing Features

FEATURE EXTRACTIONS

Voice Quality Features:

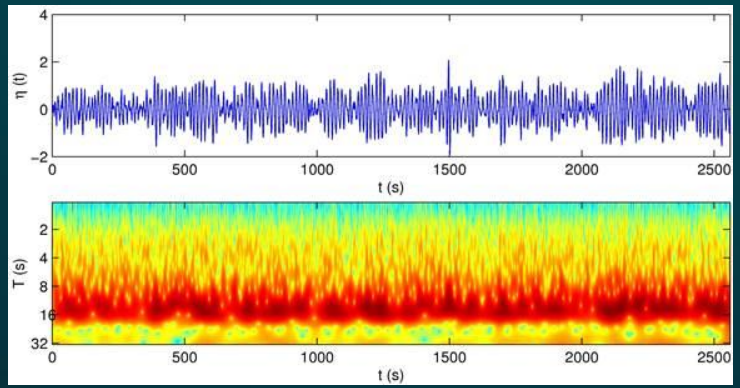
- - Voice Level
- - Voice Pitch
- - Phrase, Phoneme, Word and Feature Boundaries
- - Temporal Structures



FEATURE EXTRACTIONS

Spectral-Based Speech Features:

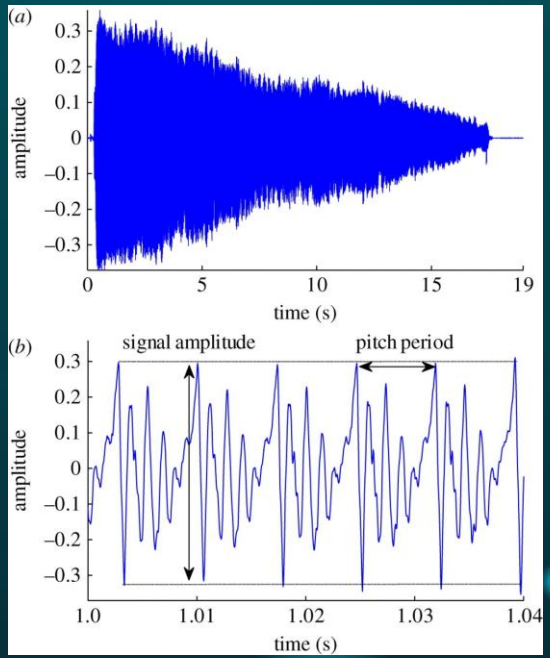
- - Linear Predictor Coefficient (LPC)
- - Mel Frequency Cepstral Coefficient (MFCC)
- - Log Frequency Power Coefficient (LFPC)



FEATURE EXTRACTIONS

Nonlinear TEO-Based Features

- - TEO Decomposed FM Variation
- - Normalized TEO Autocorrelation Envelope Area
- - Critical Bandbased TEO Autocorrelation Envelope Area



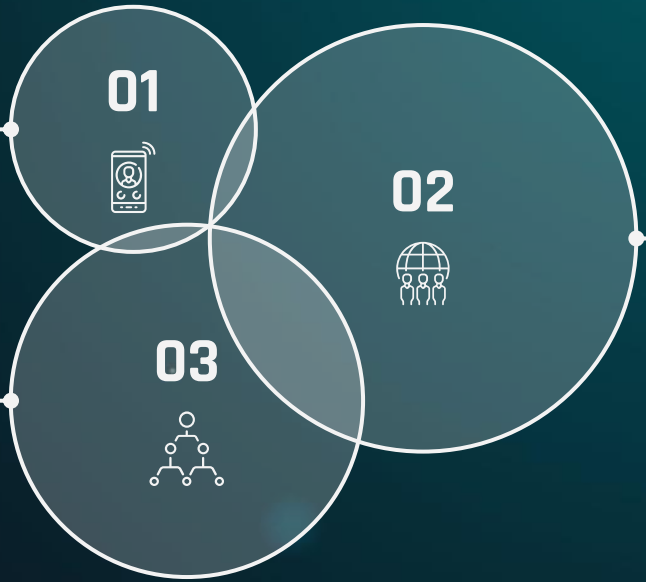
TECHNOLOGIES

What were the technologies and diagrams used?

FUTURE WORKS

CALL CENTER

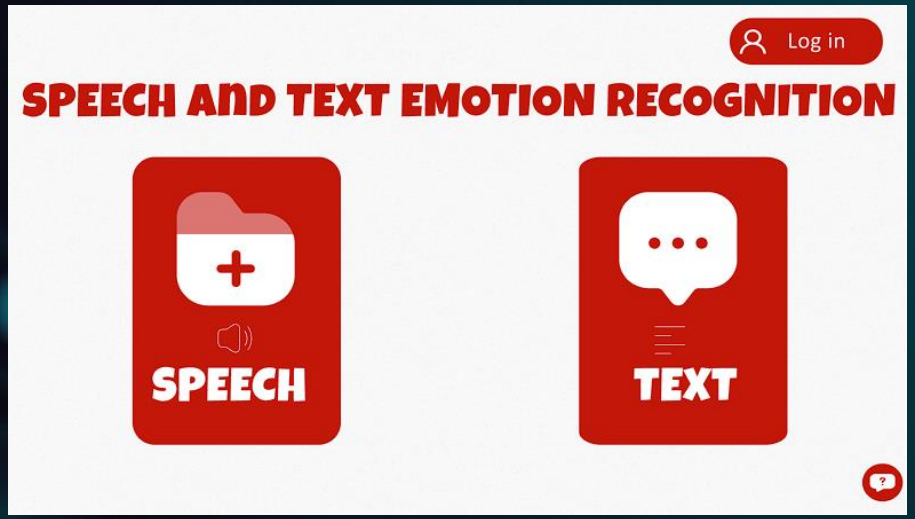
HEART RATE



FACIAL EXPRESSION

PROTOTYPE

Prototype of the SER web-site



HOME PAGE

LOGIN PAGE

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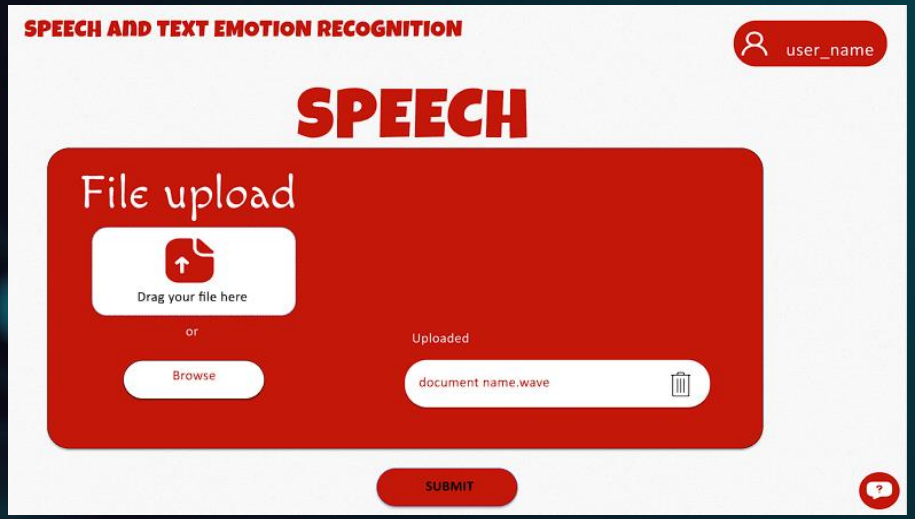
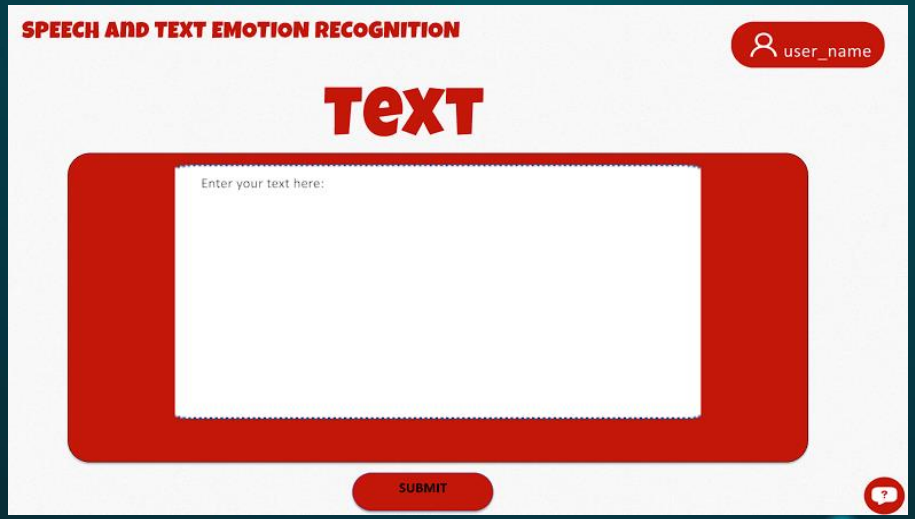
Prototype of the SER web-site



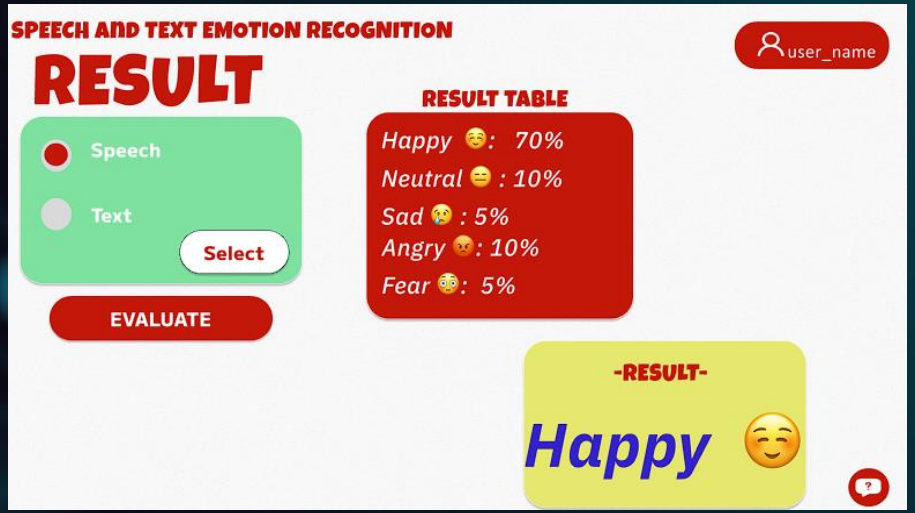
UPLOAD SPEECH FILE PAGE



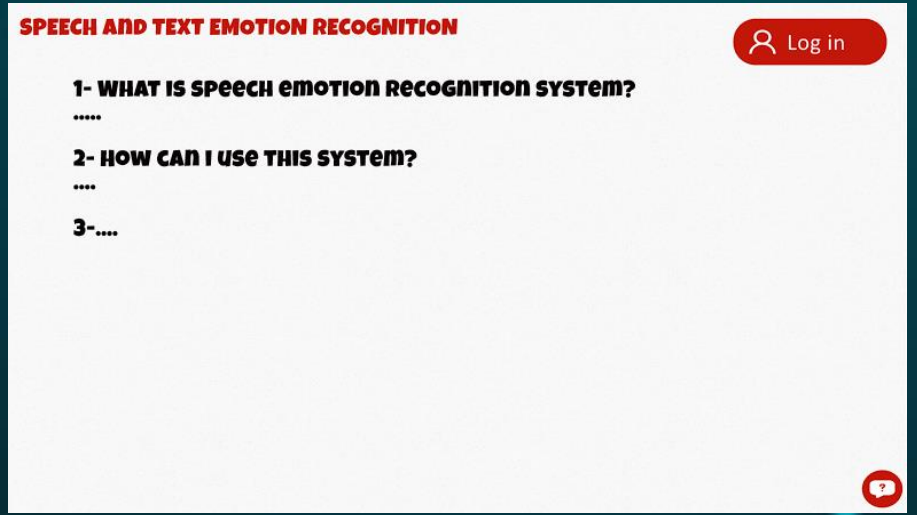
UPLOAD TEXT PAGE

PROTOTYPE

Prototype of the SER web-site



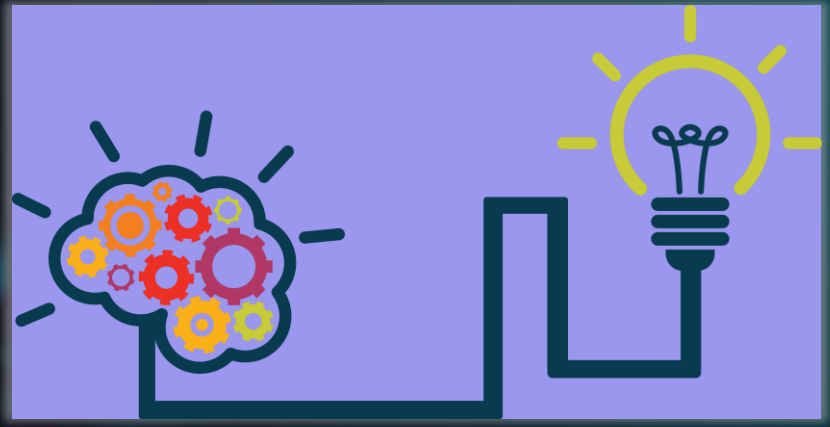
RESULT PAGE



FAQ PAGE

CONCLUSION

To sum up



THANK YOU FOR LISTENING!!