



CSE496 Graduation Project – 2

Speech Emotion Detection using Deep Learning

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Motivation

Human emotions are essential to recognize behavior and state of mind. Emotion detection through digital signals eases the process of predicting emotions so that we can understand the needs of a human.

Today, people use many types of computers in their daily life and give their voices as input. So if these systems can detect human emotion, we can use them to help people with their needs.

In call centers, agents can use computers to detect their clients' emotions and behave accordingly. In hospitals, emotion detection can be used to care for patients with more empathy. Emotion recognition also has positive contributions in the field of marketing.

One other thing is data prepared for emotion detection are usually in English. Turkish emotion data should be collected and applied to different emotion detection models. This research will lead to finding an appropriate model for Turkish emotion detection. Also, possible innovative findings can be used to publish academic papers and also can be used in commercial applications.

Possible Outputs

1. Turkish emotional speech data
2. Speech emotion detection model for Turkish (Possible innovation)
3. Interface for presenting emotion detection results
4. Back-end service for handling emotion detection
5. Real-time emotion detection using an IoT device

Success Criteria

1. Turkish emotion detection with at least 90% accuracy rate
2. Emotion detection in real-time (less than 1 second)
3. At least ten thousand data will be used.
4. The model is capable of detecting seven different emotions (calm, happy, sad, angry, fearful, surprised, and disgusted)

References

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