



SCHOOL OF COMPUTING

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TITLE: AUDIBLE SENSE: TURNING EMOTIONALLY ADAPTIVE SUBTITLES INTO HUMAN-LIKE SPEECH

DOMAIN: AI

BATCH NO: CSE-536

TEAM

1. NAME & REGNO: SANGITHA G S N SATYANARAYANA - 42111132

2. NAME & REGNO: S SAI GOWTHAM - 42111133

ABSTRACT

This project presents a web-based system that automates the process of subtitle generation, language translation, and speech synthesis from video content. By leveraging Whisper's speech recognition model, the platform accurately transcribes spoken audio into subtitles formatted in the WebVTT standard. These subtitles are then translated into various languages using the Google Translate API to support a global audience. The translated text is further converted into natural-sounding speech using Google Text-to-Speech (gTTS), producing multilingual audio output. The system supports popular video formats such as MP4, AVI, MOV, and MKV. With a user-friendly interface, it simplifies uploading, processing, and downloading tasks. This platform is ideal for educational content, international media broadcasting, and digital accessibility. It offers an end-to-end solution for enhancing communication across language barriers. The integration of transcription, translation, and TTS fosters inclusive and multilingual digital experiences.

KEYWORDS: Speech Recognition, Subtitle Generation, Whisper, WebVTT, Google Translate API, Google Text-to-Speech (gTTS), Multilingual Video, Accessibility, Transcription, Language Translation

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