

Internship Report – Task 3 Data Science Nullclass

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IMPLEMENTING ENGLISH AUDIO TO HINDI TEXT TRANSLATION FEATURE

QUESTION:

Create a feature to translate the audio into Hindi . The system will listen the English audio from user and it will convert into Hindi word. If the system does not understand the audio it will ask repeat one more time to make it better.. The audio should be in English word only . This translation feature work on only after 6 PM IST timing and before that it should show message like please try after 6 PM IST as well as it should not translate any English which is start with M and O apart from that it should translate all other words

INTRODUCTION:

Task 3 involved creating a feature to translate English audio into Hindi text using speech recognition and translation APIs. The goal was to develop a system that listens to English audio input, translates it into Hindi, and displays the translated text.

BACKGROUND:

Advancements in speech recognition and translation technologies have enabled real-time language translation. Developing a feature to translate English audio to Hindi text required effective integration of speech recognition and translation APIs.

LEARNING OBJECTIVES:

1. Understand speech recognition and translation APIs.
2. Implement audio input processing in Python.
3. Develop a user-friendly interface for audio translation.

ACTIVITIES AND TASKS:

1. Researched various speech recognition and translation APIs.
2. Implemented audio input processing using the SpeechRecognition library.
3. Integrated translation functionality using the Googletrans library.
4. Designed a graphical user interface (GUI) for the translation system.

SKILLS AND COMPETENCIES DEVELOPED:

1. Proficiency in Python programming.
2. Knowledge of speech recognition and translation technologies.
3. Experience in GUI development using Tkinter.
4. Problem-solving skills in audio processing and translation.

FEEDBACK AND EVIDENCE:

The English audio to Hindi text translation feature was tested internally and received positive feedback for its accuracy and ease of use.

CHALLENGES AND SOLUTIONS:

1. ****Challenge:**** Managing variations in audio input.
2. ****Solution:**** Fine-tuned speech recognition parameters and implemented error handling to improve accuracy.

OUTCOMES AND IMPACT:

The new feature offers users a convenient tool for translating spoken English into written Hindi, enhancing communication between speakers of both languages.

CONCLUSION:

Successfully implementing the English Audio to Hindi Text translation feature highlights the practical application of speech recognition and translation technologies. The skills and knowledge gained in audio processing and translation will be valuable for future projects with similar requirements. This report provides a detailed overview of the tasks, activities, challenges, and outcomes associated with the implementation of this feature.