

# Documentation for building Speech recognition

Sunday, 5 November 2023 3:42 pm

Tech stack: Streamlit  
Huggingface pipeline

IDE: Visual Studio Code

Model used: "distil-Whisper/distil-large-V2"

Script location: [GitHub link](#)

Hosting: [huggingface link](#)

# Challenges

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## **How to implement caching:**

Initially implemented using `st.cache` but was deprecated

The solution was found at streamlit docs caching resources using `st.cache_resource` to cache the model, this is to prevent the model from loading on every run, thus reducing run time.

## **How to include file upload:**

Use streamlit file upload however the returned class cannot be processed by the huggingface pipeline

The solution was found in the streamlit forum. The solution was to use `tempfile` library `Namedtempfile` to store the recorded audio as a file temporarily before passing it to the speech recognition model. Makes processing slow

## **How to catch errors.**

The solution was to use `try` and `except`

## **How do I get users to record audio:**

The solution was found using the streamlit component(`streamlit-audiorec`)

## **The app is still slow:**

After implementing streamlit caching and other techniques to reduce run time the app is still slow because it's running on a slow compute unit (16 vCPU)