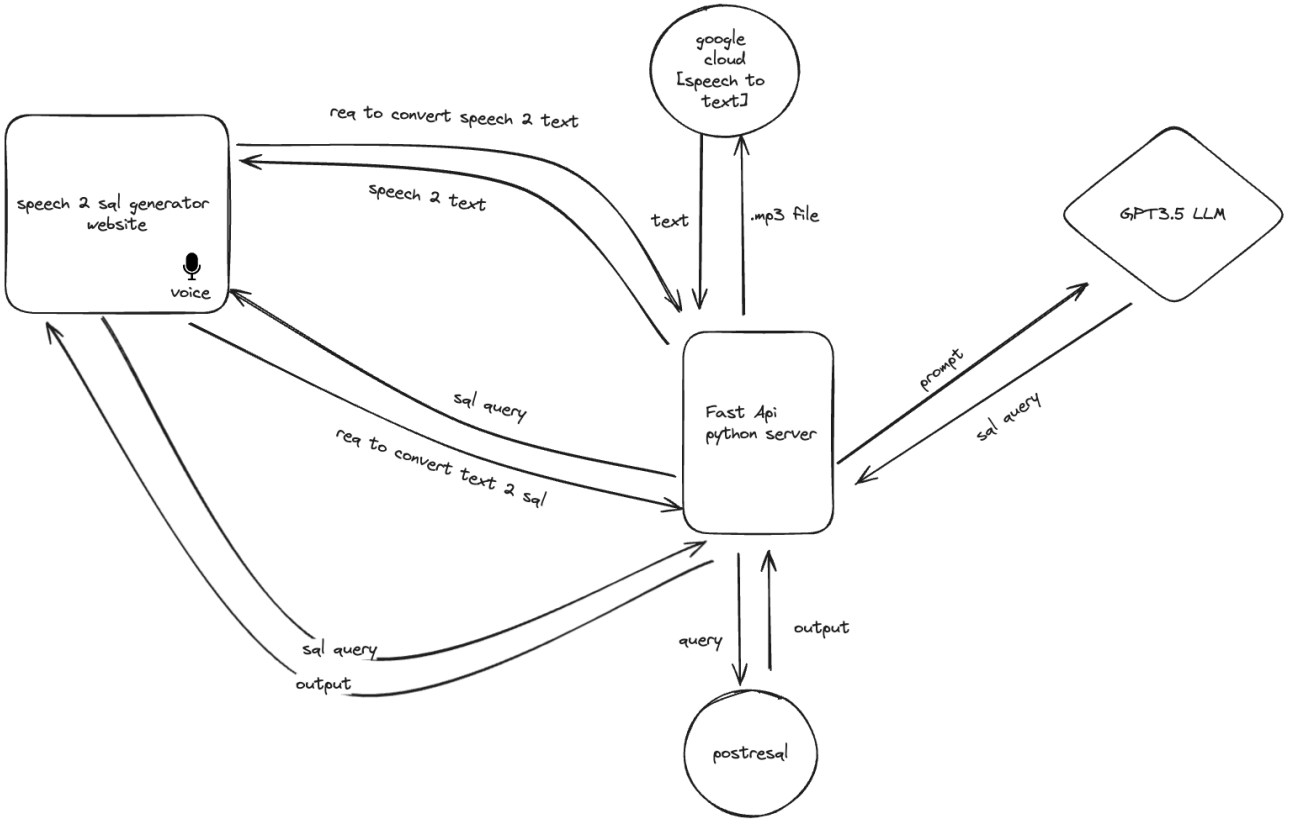
Voice Query System

Report : April 23 2024

Data Flow Chart



step-by-step explanation:

Speech to SQL Generator Website:
This is where the process begins with a user providing voice input.

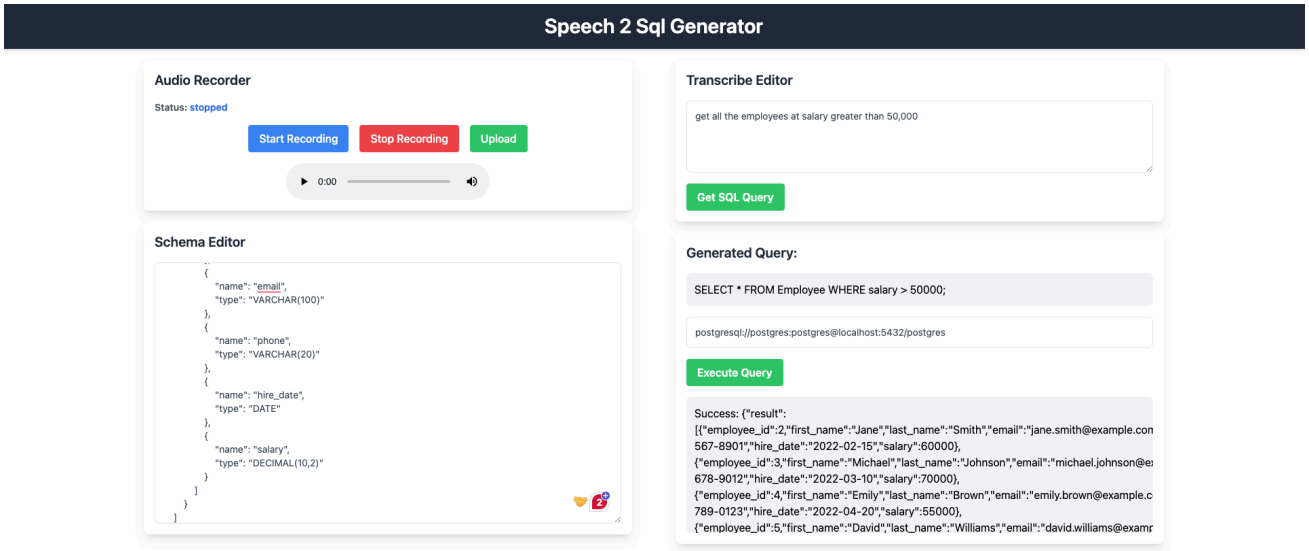
Google Cloud [Speech to Text]:
The voice input is sent to the Google Cloud [Speech to Text]: service which converts the spoken words into text form. This service likely receives an `.mp3` file and processes it.

Fast API Python server:
The central server which communicates with various modules LLM and google Speech2Text

PostgreSQL Connection:
It can send queries to a database and receive output.

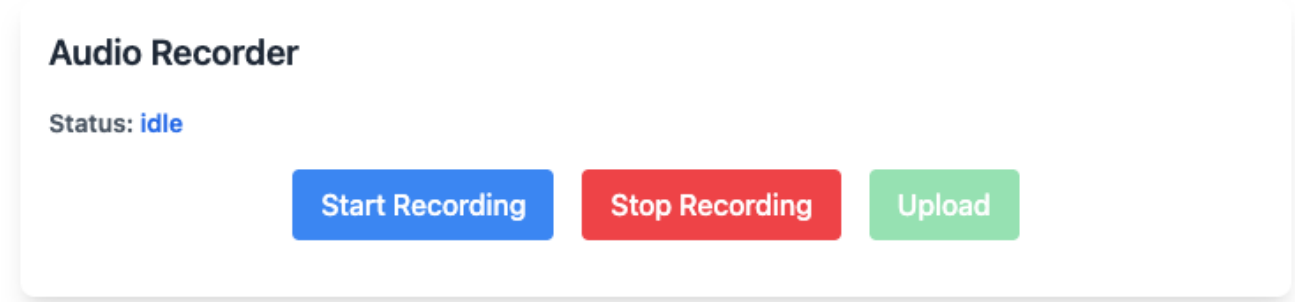
GPT-3.5 LLM:
Sends user natural language text as prompt and receives SQL queries.
Thus GPT-3.5 is used for generating or augmenting the SQL queries based on the input text.

Here is the step by step procedure to use the interface:

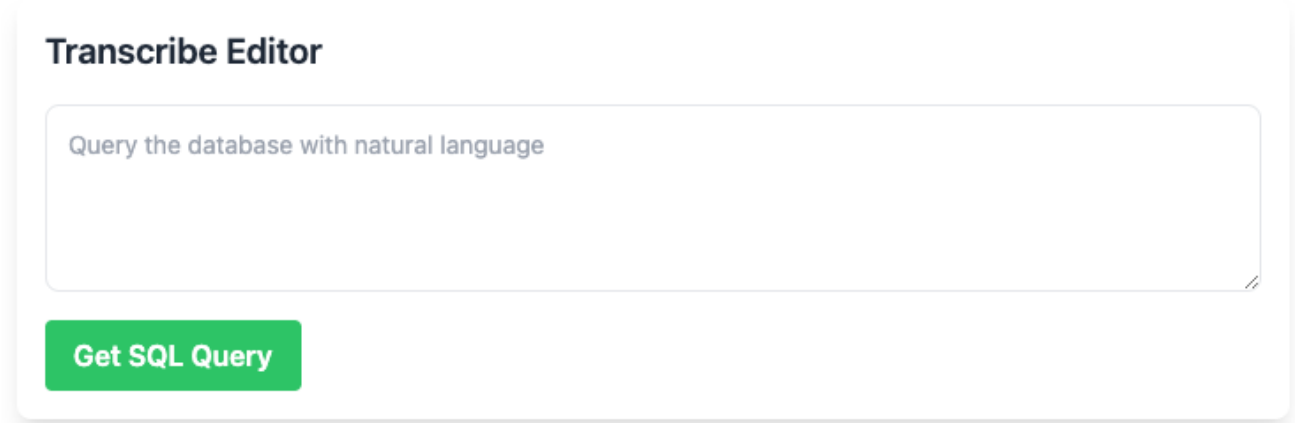


The interface has various blocks

1) Audio recorder - We click on the Start recording and speak our natural language question.Then click on Stop recording and click upload.

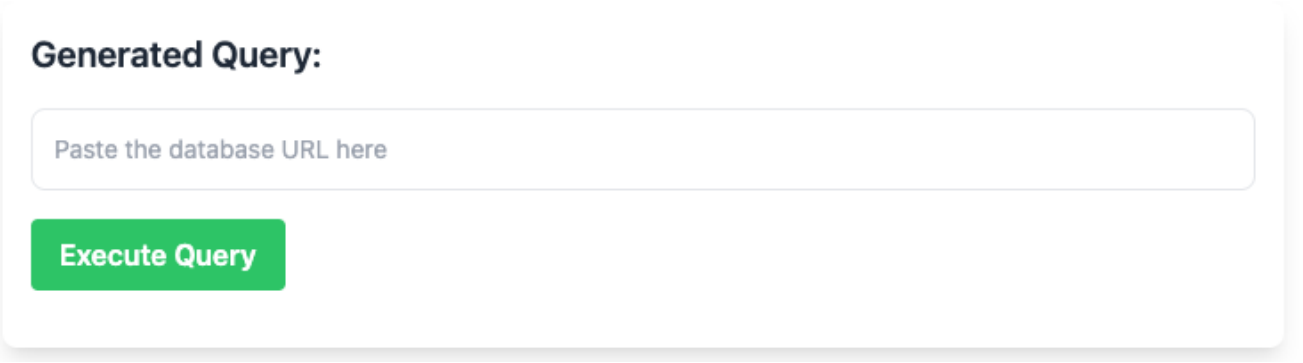


2) The transcribe editor offers an interface to change the text which we get after conversion.

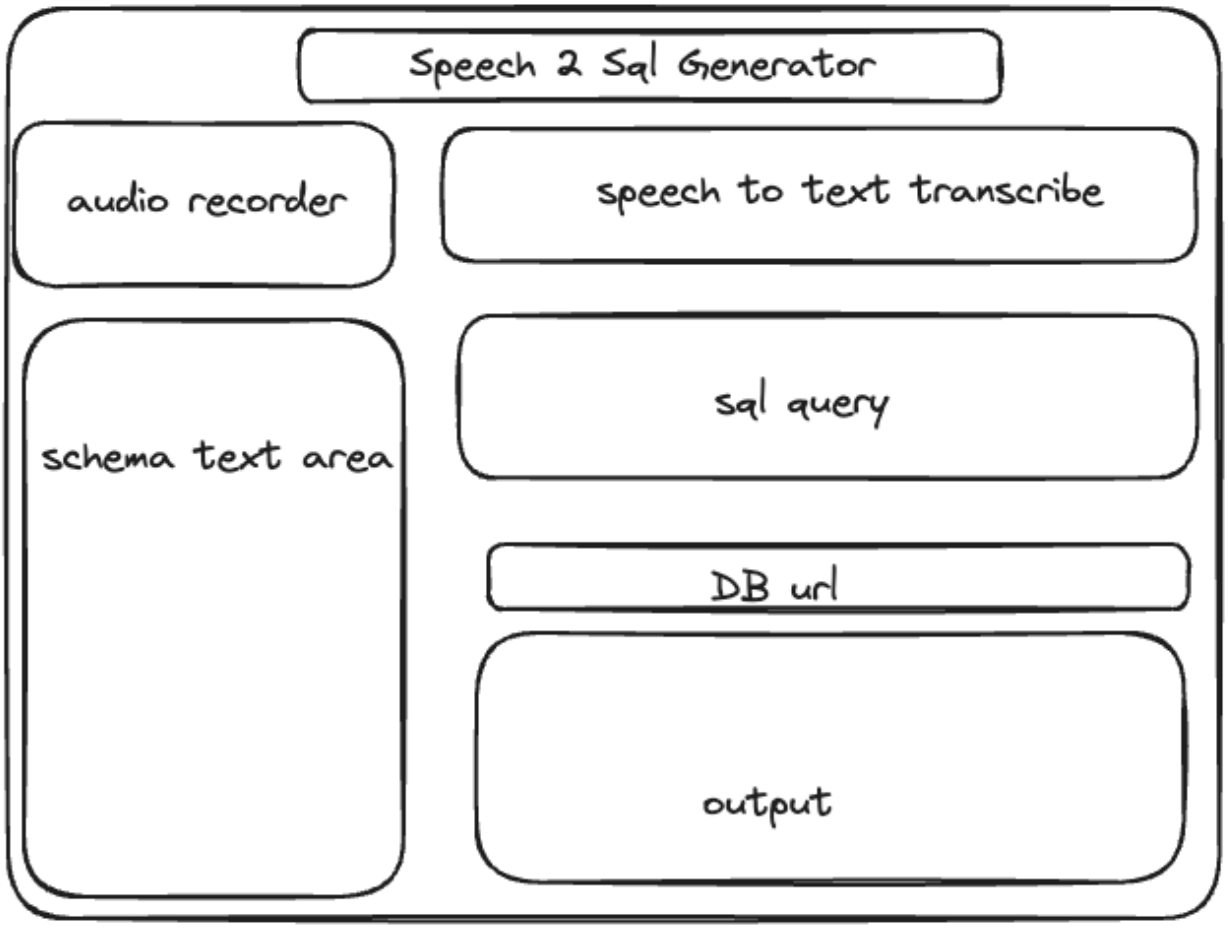


3) Schema editor - We need to give the schema of the database to our model using this section.

4) Once schema is given we click on generate query and our LLm shall give out the SQL query based on the transcribed schema.



Future Works:
To test the model


Speech 2 Sql Generator
audio recorder
speech to text transcribe
schema text area
sql query
DB url
output