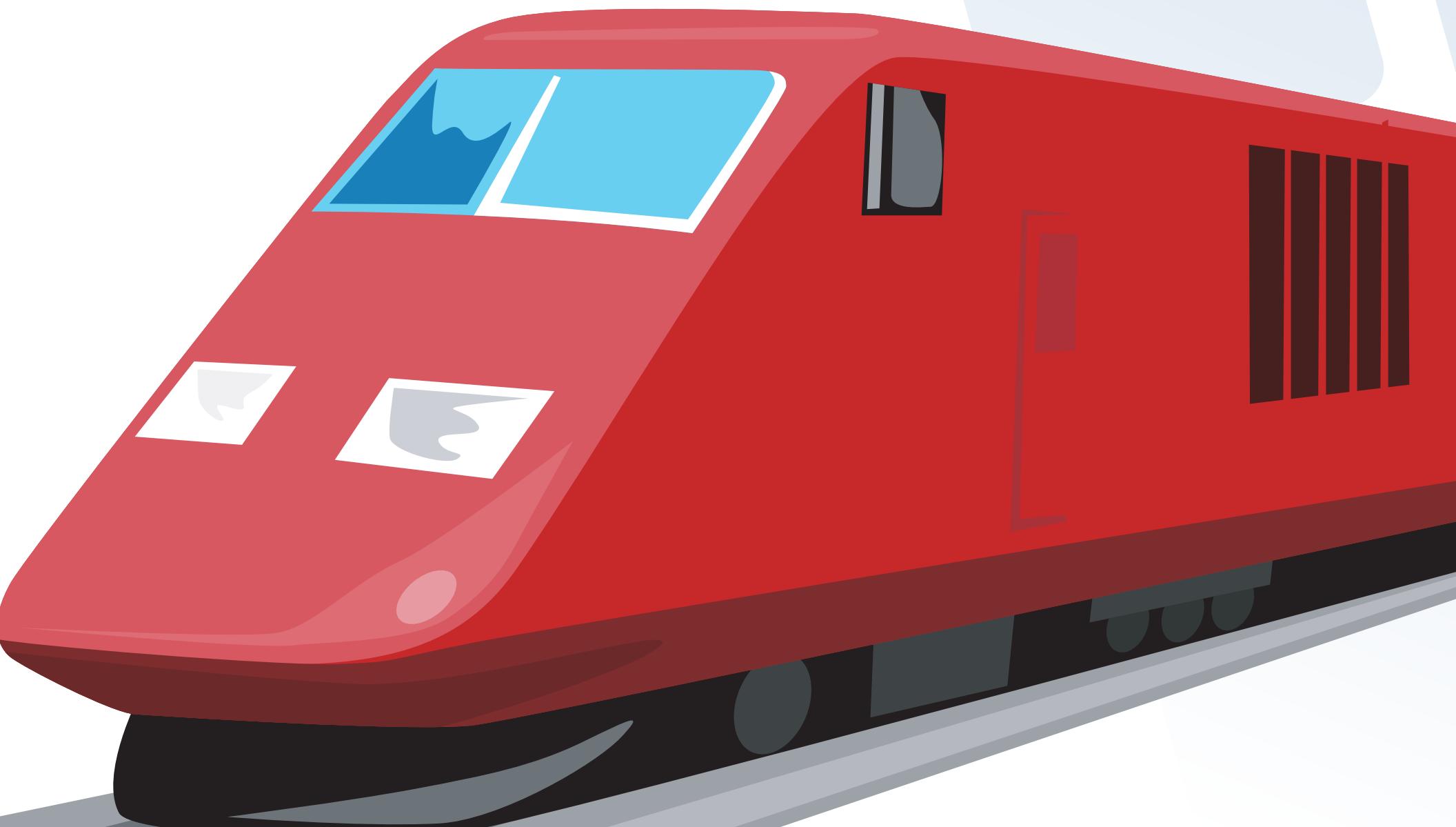


MY TRAIN CHATBOT



AGENDA



- *Introduction*
- *Problem Statement*
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Introduction

*This project "**My Train ChatBot**" is an innovative prototype application that harnesses advanced technology to offer a convenient and user-friendly "chatbot for accessing Indian Railways train information.*



*This Project is inspired from **IRCTC ChatBot** named **DISHA 2.0**.*



Problem Statement

- Many people in India rely on trains for travel.
- Finding **train schedules** and details on the Indian Railways website can be **time-consuming and frustrating**.
- The website can be **complex** and **difficult** to navigate.
- It can be challenging to find specific information, such as **train availabilities, seat availabilities, train times** and **travel duration** and also **distance between the stations**.



Solution Overview

- **My Train ChatBot** provides a much easier and more efficient way to find train informations.
- Users can simply chat with the bot in a **natural language conversation**, and the bot will response as per the user queries.
- Furthermore, users have the capability to utilize **voice commands** to access train availabilities.



Technologies Used

This ChatBot utilizes **4 different technologies** that are incorporated together.

1. **LangChain** (*Framework for developing application using LLM*)
2. **Gemini Pro** (*Text based large language model*)
3. **OpenAI Whisper** (*Voice to Text conversion model*)
4. **MySQL** (*Relational Database*)



LangChain

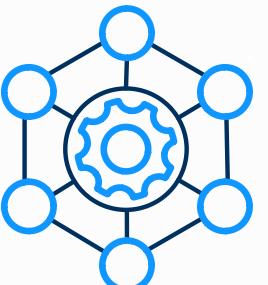
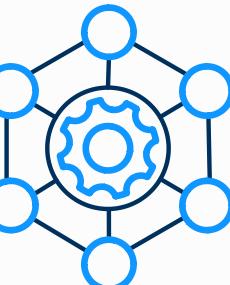
Gemini

 **OpenAI**
Whisper {{ }}

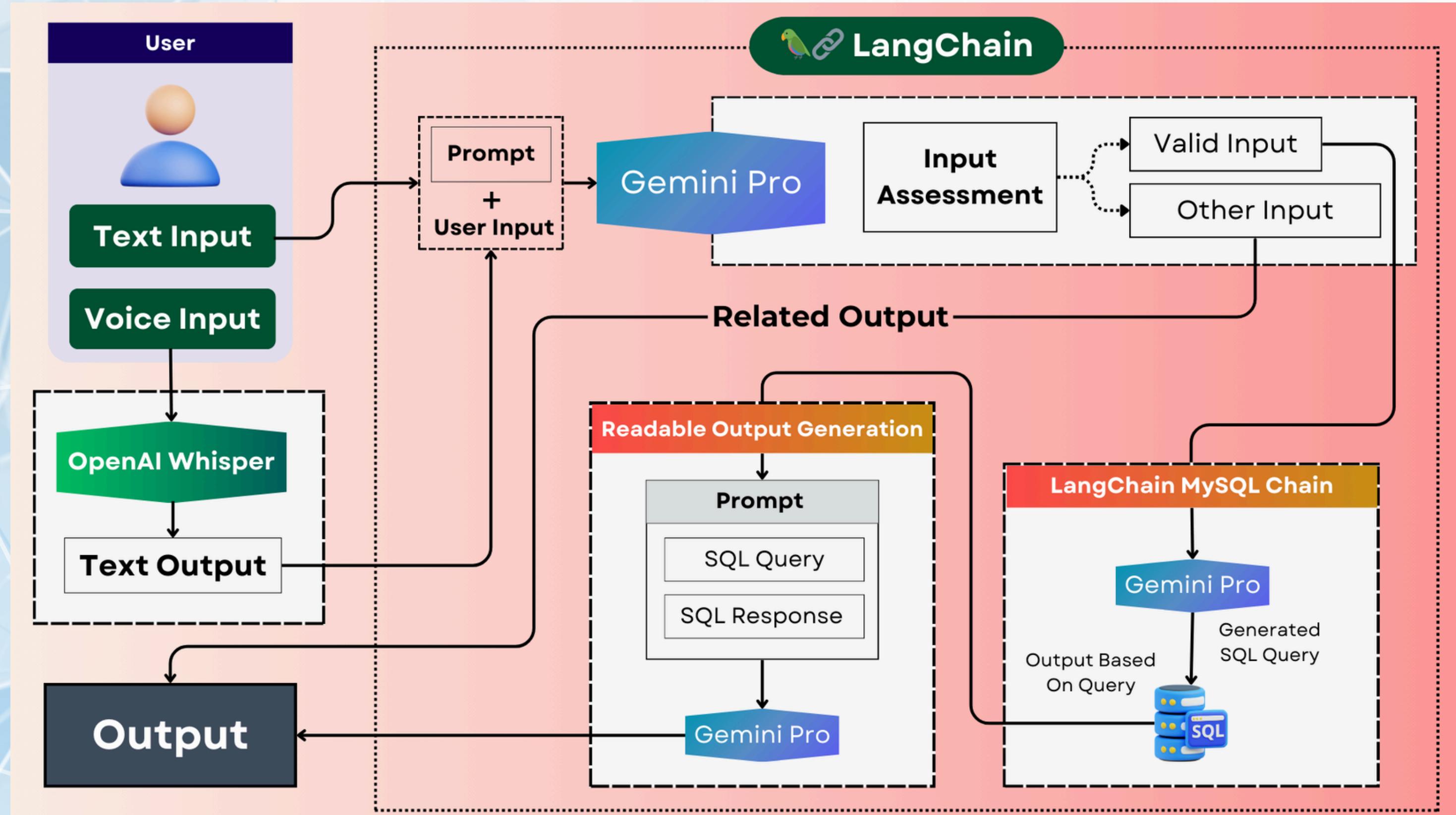

MySQL

Tools / Frameworks Used

- **Python**
- **Pandas**
- **LangChain**
- **Gemini Pro**
- **OpenAI Whisper**
- **MySQL**
- **Streamlit**



Architecture



*The entire architecture has been compiled into a Streamlit Web Application.

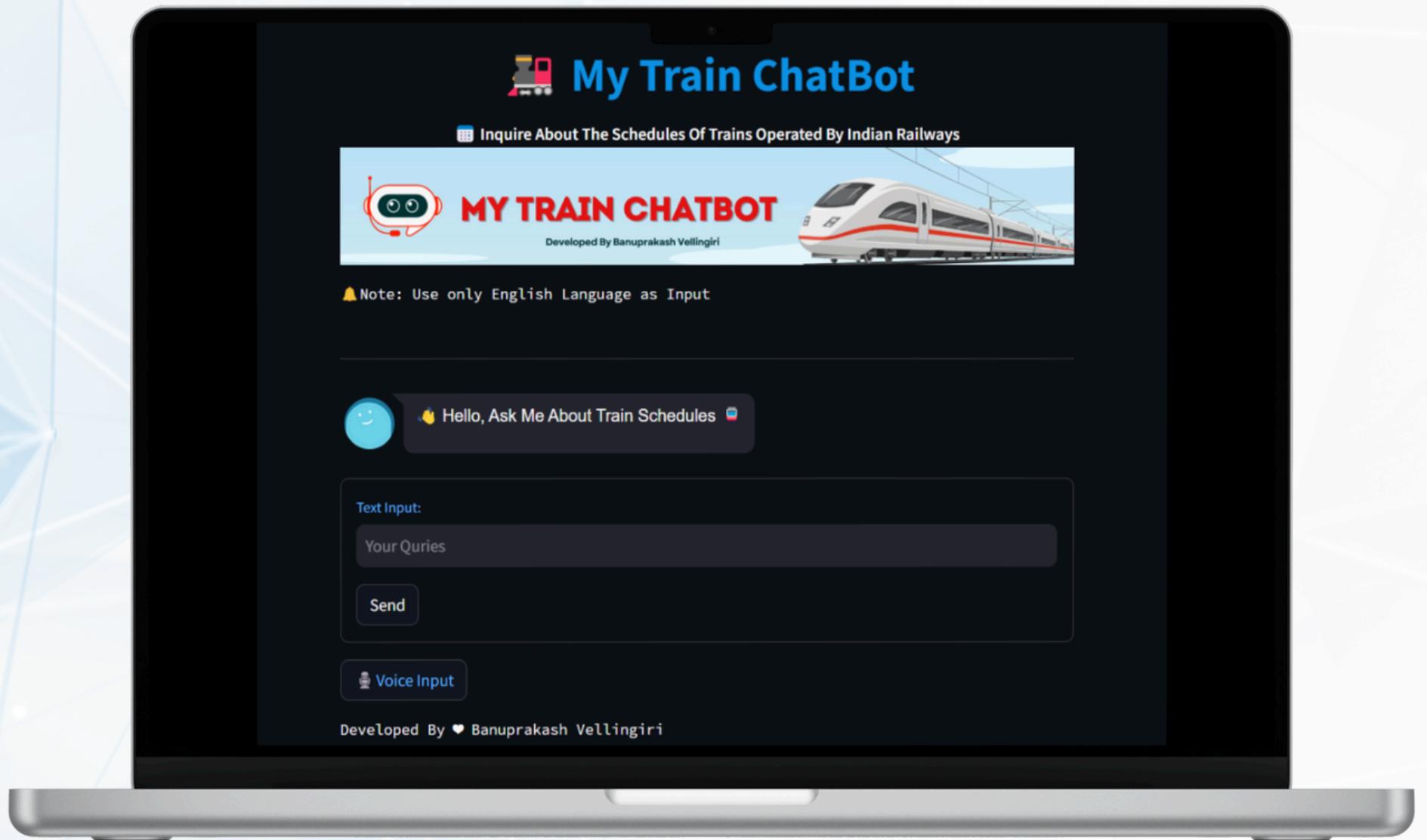
Chatbot Functionality

- Users interact with the chatbot through a **conversation interface** either by text or voice as input.
- Users can ask questions about **specific trains, routes and schedules**.
- The chatbot retrieves information from **SQL Database** using **LangChain and SQL chain**.
- Gemini LLM processes the retrieved data and presents it in a user-friendly format.

Sample Inputs:

- 1.What are the trains running between Chennai and Mumbai?
- 2.Tell me the travel duration from Thane to Ratanagiri.
3. What is distance between Udupi to Mangalore.

Demo



[Click Here For Demo Video](#)

ChatBot Limitations

1. *Users can interact with the chatbot in only **English language**.*
2. *User queries are limited to specific queries such as,*
 - **Train Name**
 - **Train Number**
 - **Travel Distance**
 - **Travel Duration**
 - **Arrival Time**
 - **Departure Time**
3. *Since this is a prototype chatbot, Users **cannot access real-time information**. Only the information stored in the database can be accessed.*



Future Enhancements

- **Multilingual support** for wider user accessibility.
- Enabling real-time information access (**seat availabilities, real-time tracking, PNR status tracking, booking options, train delays** and **notifications** etc.)
- Enhanced natural language understanding capabilities.
- More **user-friendly** UI and responses.
- **Recommendations** based on user query.

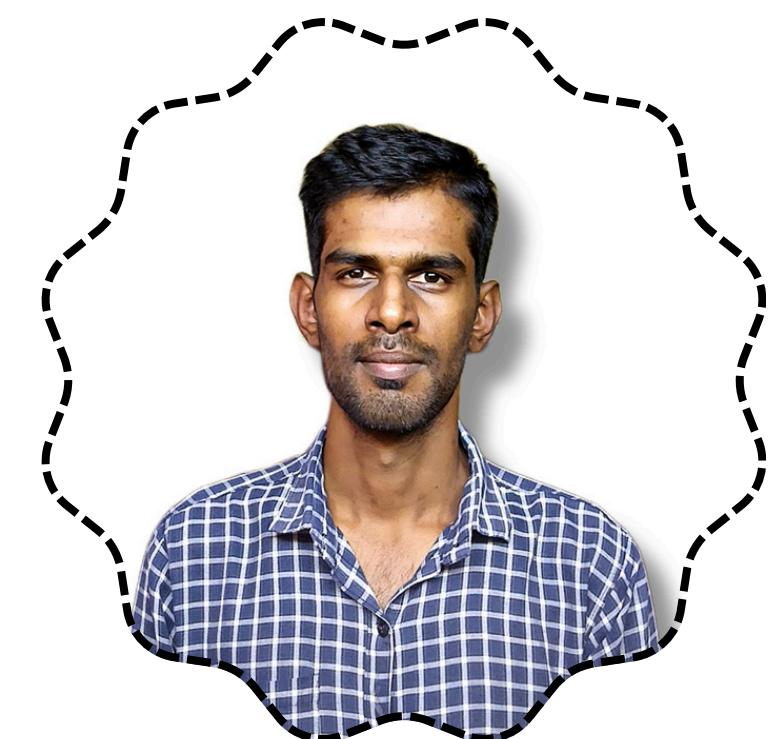


Conclusion

- "My Train Chatbot" presents a **promising solution** for simplifying Indian railway inquiries.
- By leveraging the strengths of LangChain and Gemini LLM, this chatbot offers a **basic conversational** and **user-friendly** way to access train schedules and details.
- As development progresses, "My Train Chatbot" has the potential to become an **invaluable tool for travelers** across India, streamlining their railway information access and enhancing their overall travel experience.

Thank You

Project Developed By



Banuprakash Vellingiri

