RMIT Engineering Capstone Project B 2025

RMIT Career Service AI chatbot Assistant

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Description

Our project's aims is to provide RMIT students with AI-powered chatbot, providing 24/7 automated career guidance:

- Course-to-career mapping
- Internship and Career Mentoring Program inquiries
- CV feedback & interview tips
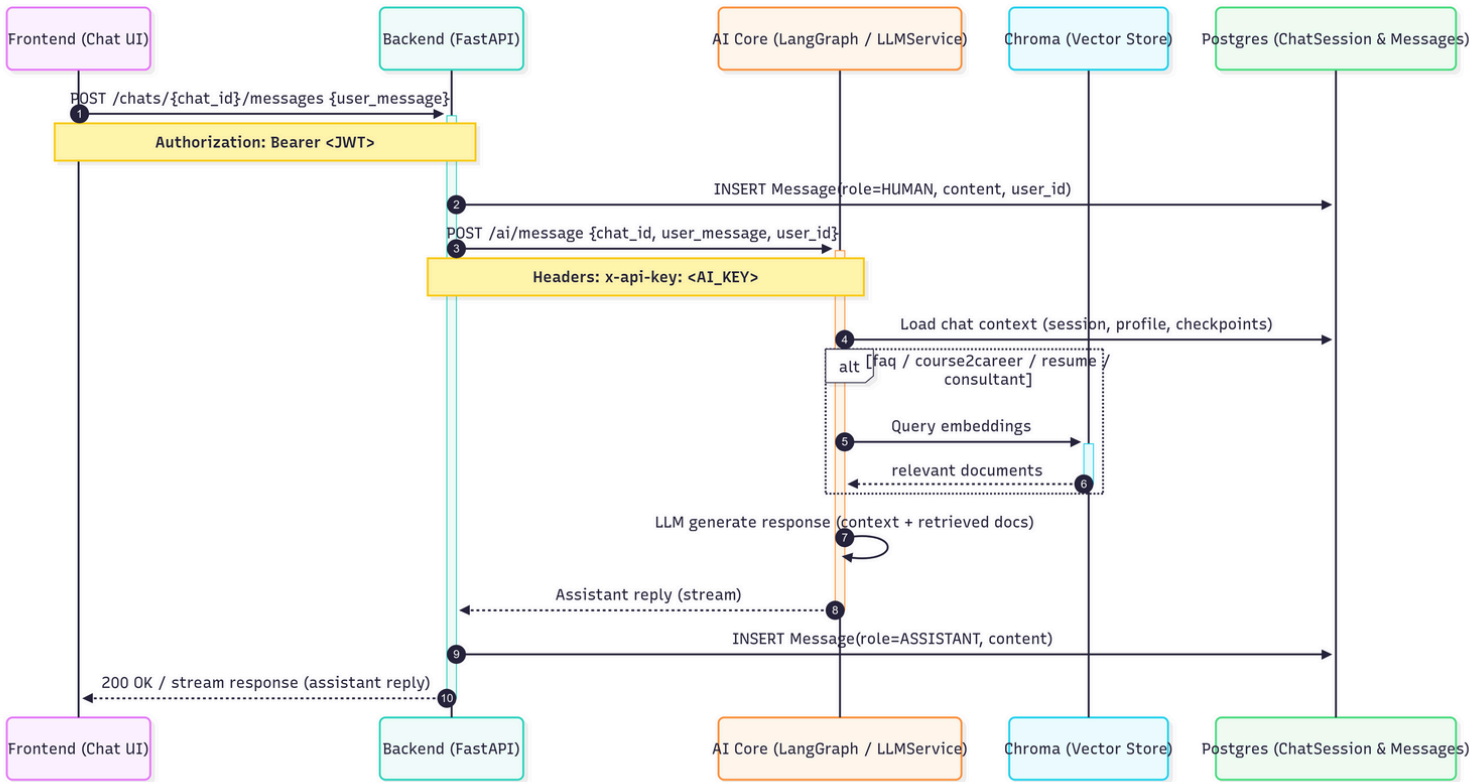- Appointment booking

It is integrated with RMIT's Careers Online Portal (COP) as its own student-asstisting tool.
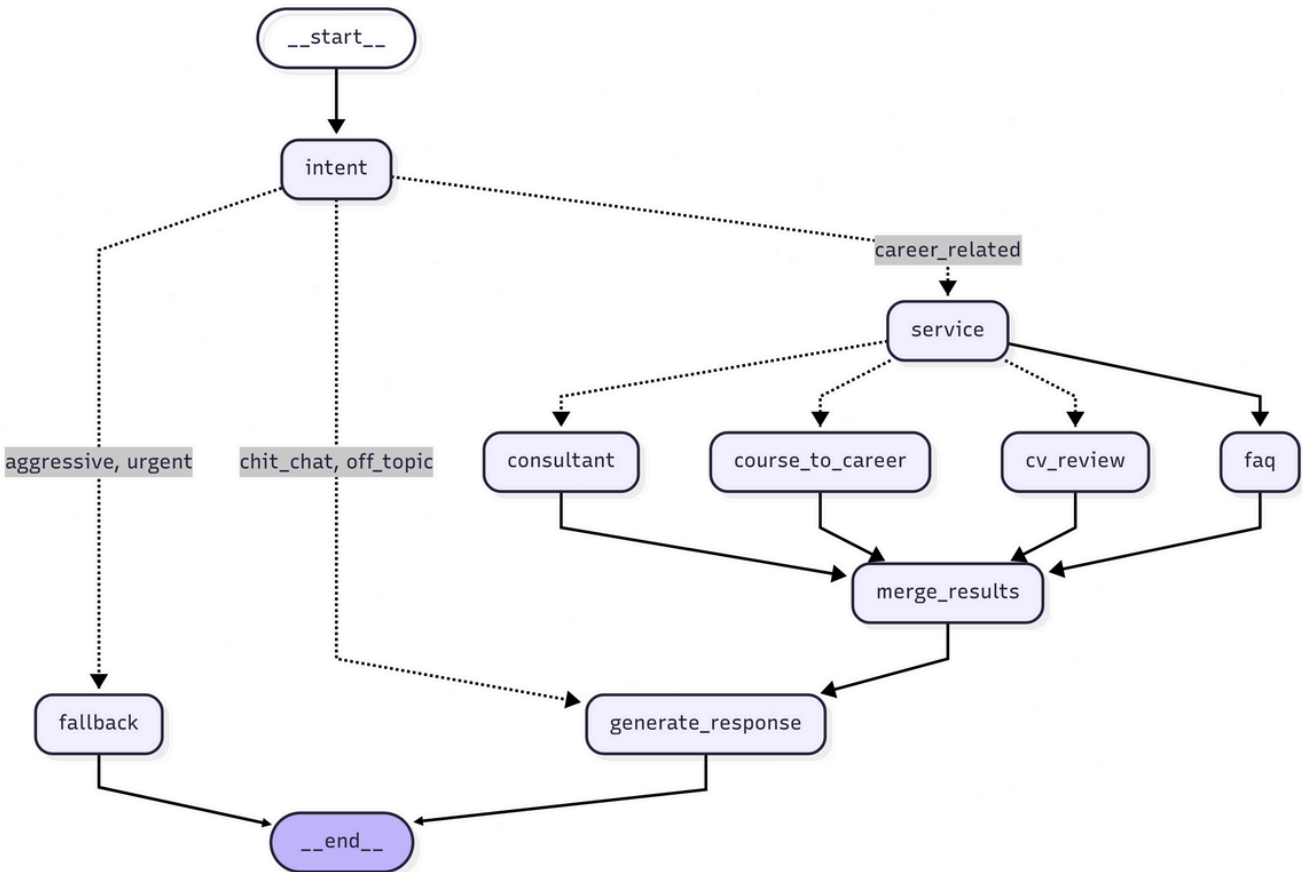
Web App's Sequence

Our AI chatbot assistant utilizes a **Retrieval-Augmented Generation (RAG) system** to load session context retrieve relevant documents and data to enhance the accuracy of its reponses.

Sent messages are delivered to the backend, utilizing FastAPI, which is then authenticated, and passed to the **AI core**, and the AI model (Azure OpenAI API) generates responses.

Replies are stored in the database and streamed back to the frontend, which utilizes the python Gradio Framework.
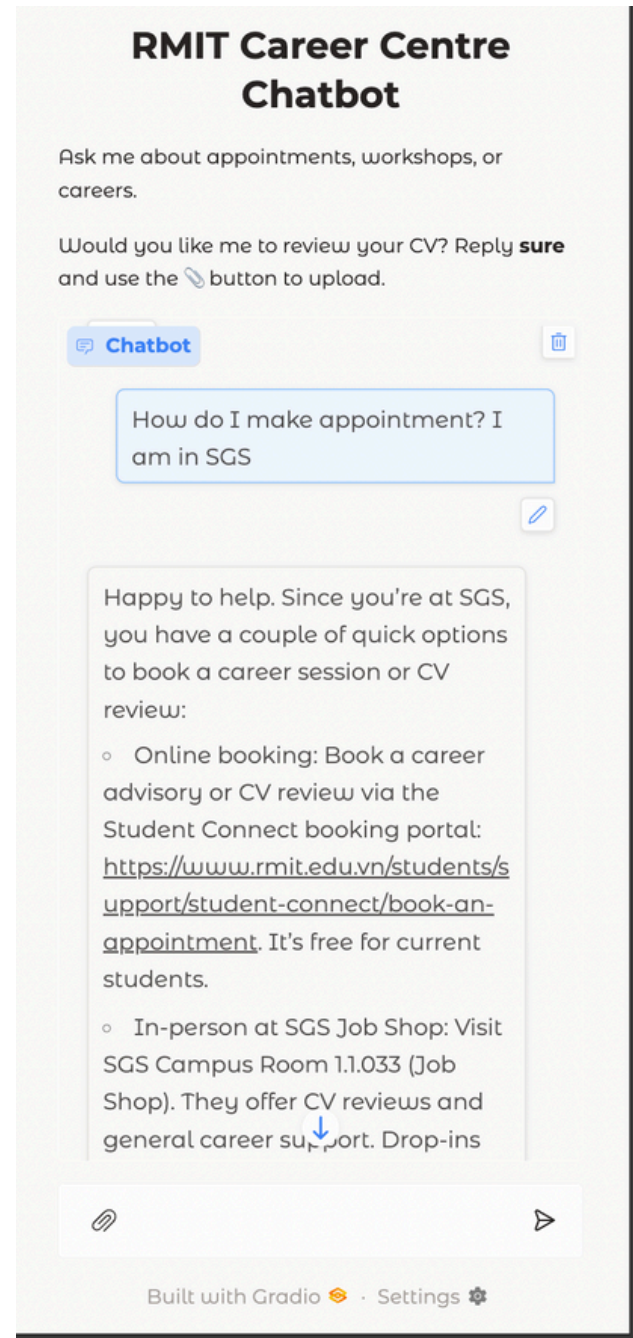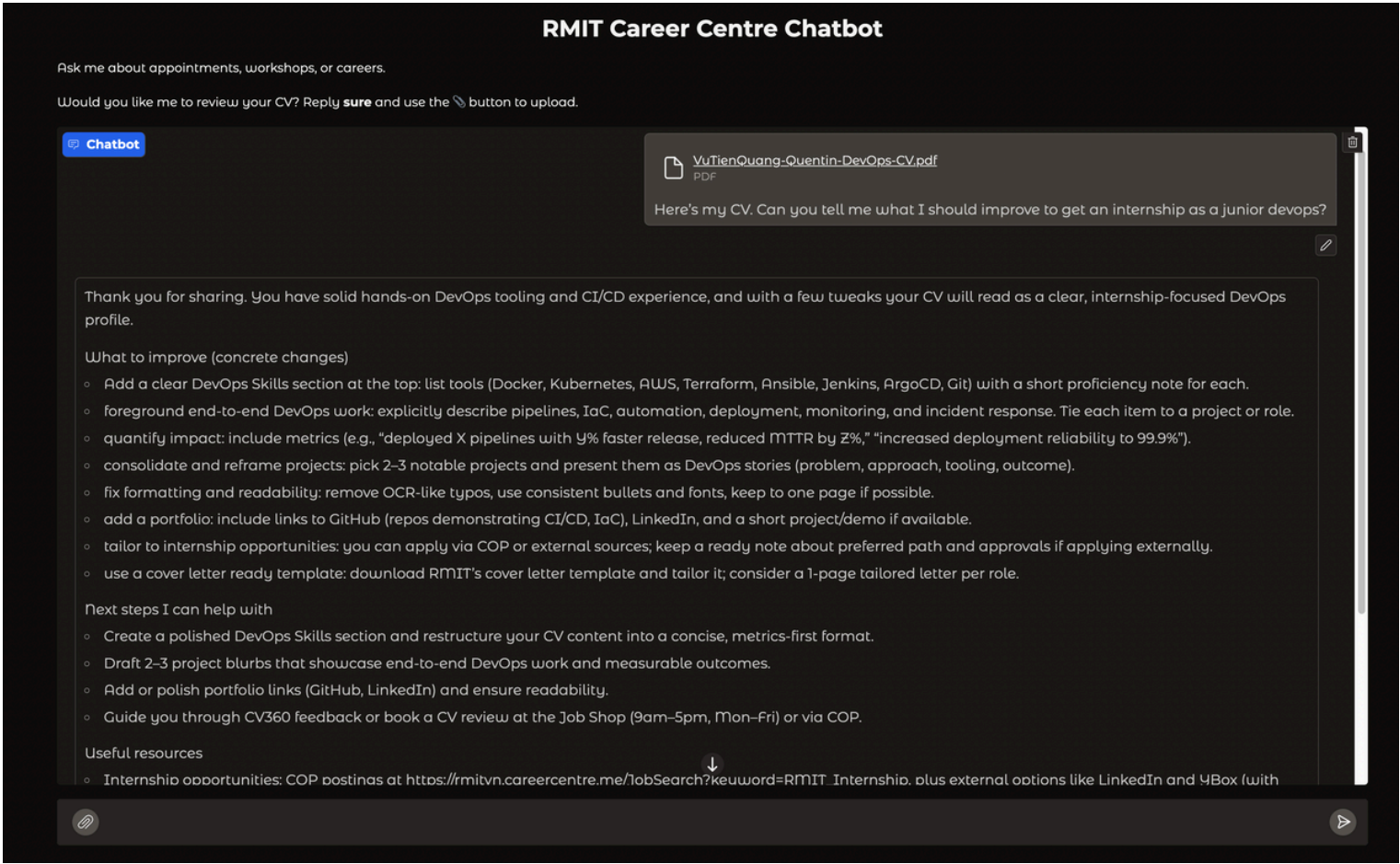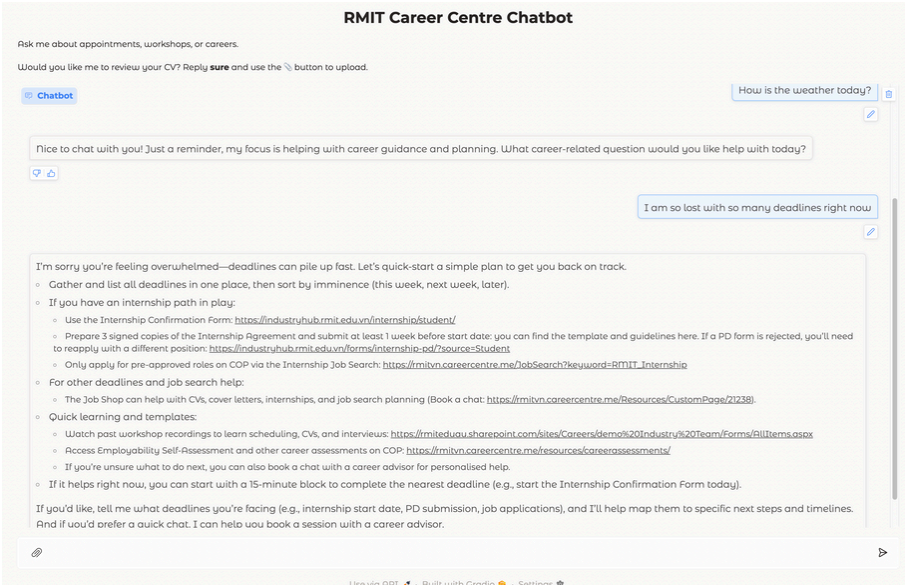

AI Chatbot Workflow

The AI chatbot assistant is designed to **classify different user intents**: route career-related queries through specialized services, which then merge relevant results, and generate tailored responses.

Off-topic or urgent inputs are handled by fallback mechanisms to maintain smooth interactions.

Results & Current Progress

Our Careers AI Chatbot currently operates as a locally hosted webapp, hooked to Azure Openai API and connected to Azure BLOB Storage to host and retrieve student uploaded files.

Future Work

- Production-level deployment to Azure Cloud services
- Integration into Careers Online Portal
- Advanced Event & Appointment Management
- Extended Knowledge Base