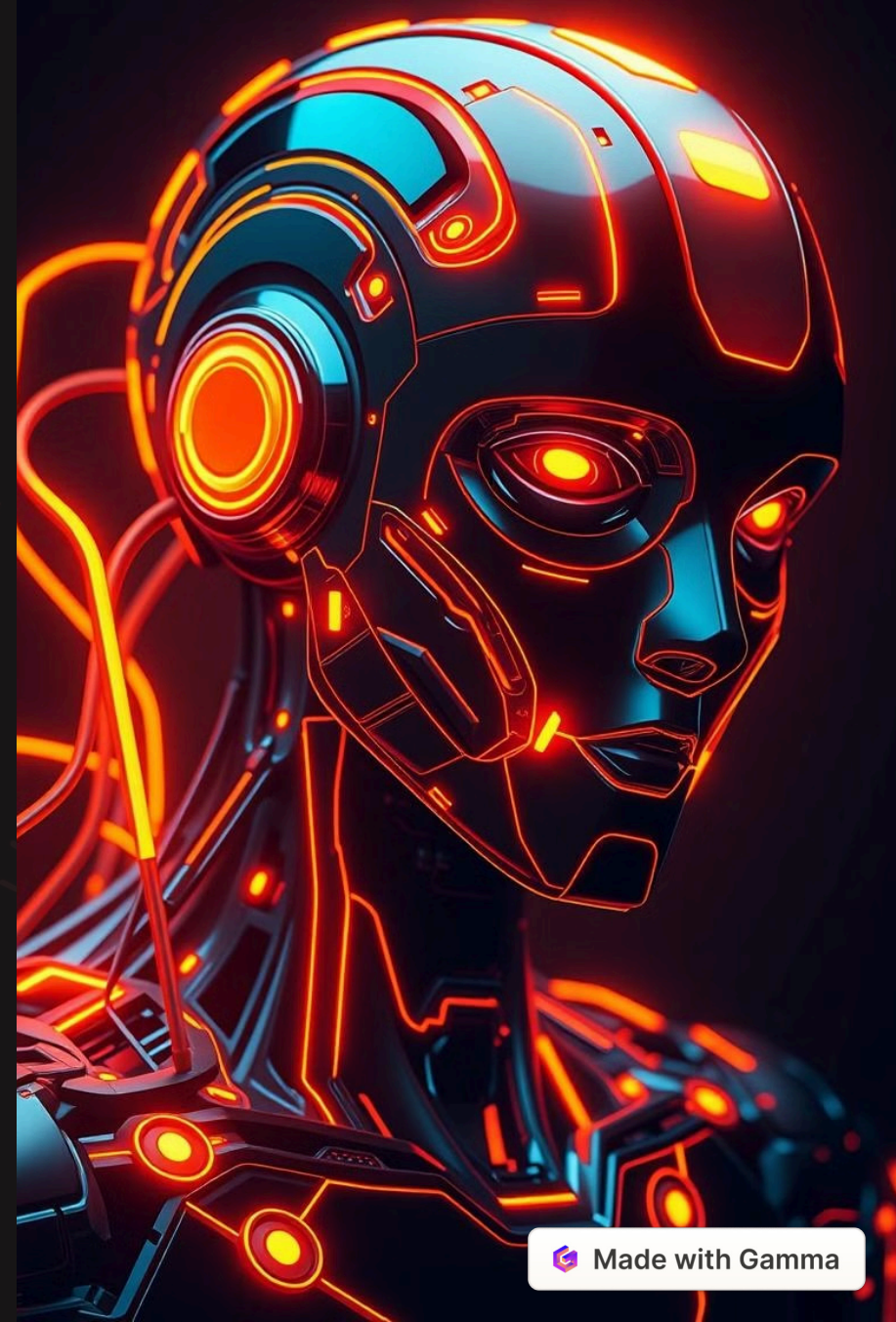


Techietalks AI - Multi-Model Chat Assistant with RAG and Tool Integration

Welcome to the Techietalks AI repository! This project is a multi-model AI-powered chat assistant built using Streamlit, Pydantic_AI, and multiple AI models like OpenAI, DeepSeek, and Gemini. It allows users to interact with different AI models, switch between them, and enjoy a conversational experience. Additionally, this version includes Retrieval-Augmented Generation (RAG) functionality for processing PDF documents and tool integration for advanced query handling.



by **Sreeprakash Neelakantan**



Repository Structure

Key Files

- .env: Stores environment variables like API keys.
- app.py: Main application file with chat interface, AI model integration, RAG, and tool integration.
- Dockerfile: Instructions to build a Docker image for the Streamlit application.
- requirements.txt: Lists Python dependencies.

Data Directory

- pdfs/: Stores uploaded PDF documents.
- vector_store/: Stores vector embeddings of PDFs for RAG functionality.



How It Works

1

Streamlit

Powers the chat interface, providing an interactive web application.

2

AI Models

OpenAI, DeepSeek, and Gemini provide conversational responses.

3

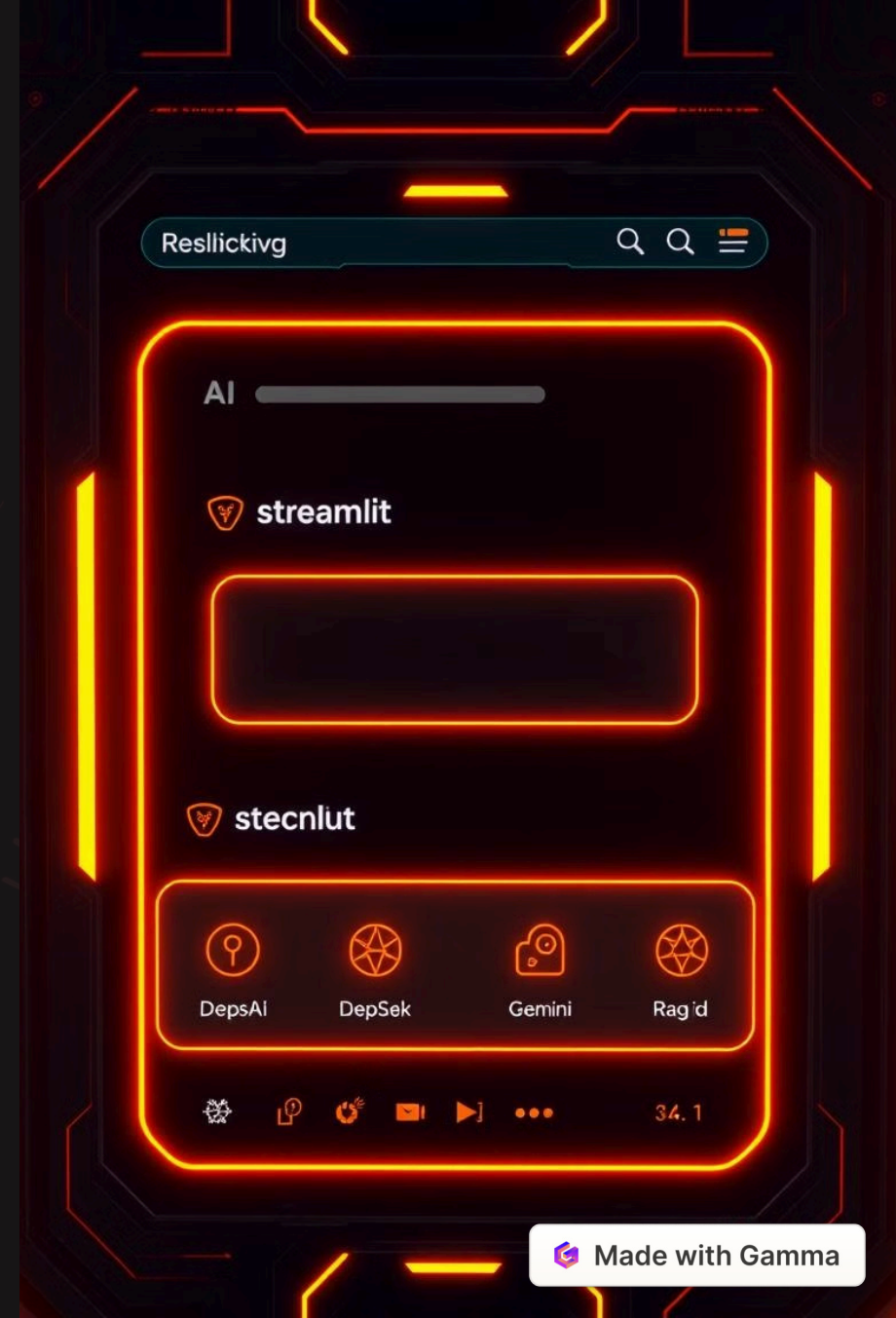
RAG Functionality

Processes PDF documents to provide context-aware answers.

4

Tool Integration

Enables the AI to use custom tools for enhanced responses.





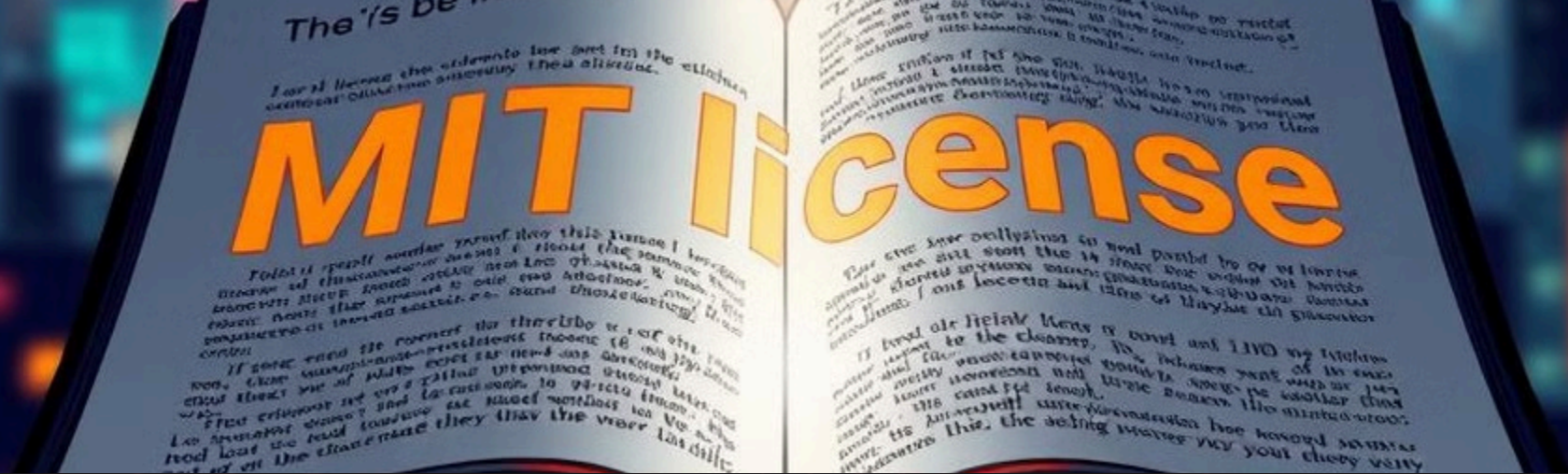
Setup Instructions

Prerequisites

- Python 3.11
- Docker
- API Keys for OpenAI, DeepSeek, and Gemini

Steps

1. Clone the repository.
2. Set up environment variables in .env file.
3. Run the application using Docker Compose.
4. Upload PDFs using the sidebar in the chat interface.



License

This project is open-source and available under the MIT License. Feel free to use, modify, and distribute it as needed.

Contact

For AI consultancy, training, and development, contact Schogini Systems Private Limited at <https://www.schogini.com>.





Author

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- Website: <https://www.schogini.com>
- GitHub: <https://github.com/schogini/techietalksai.git>



Enjoy Techietalks AI!

Enjoy using the Techietalks AI Multi-Model Chat Assistant with RAG and Tool Integration! If you have any questions or feedback, feel free to reach out. 😊