**ChatTRC**

A Python-based application that integrates FastAPI with Google's Gemini AI model, featuring database storage and streaming responses. The project consists of both server and client components.

**Prerequisites**

* Python 3.8 or higher
* SQLite database (included)

**Required Packages**

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fastapi==0.104.1

uvicorn==0.24.0

httpx==0.24.1

databases==0.7.0

sqlalchemy==2.0.23

pydantic==2.0.3

requests==2.31.0

Install all dependencies using:

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pip install -r requirements.txt

**Getting Google Gemini API Key**

1. Visit [Google AI Studio](https://makersuite.google.com/app/apikey)
2. Sign in with your Google account
3. Click "Get API Key"
4. Copy the generated API key
5. Replace PROVIDE API KEY in server.py with your API key:

python

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API\_KEY = "your\_api\_key\_here"

**Running the Application**

**Starting the Server**

1. Navigate to the project directory
2. Run the server:

bash

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python server.py

or

bash

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uvicorn server:app --reload

The server will start at http://localhost:8000

**Running the Client**

In a new terminal window:

bash

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python client.py

**Using the Application**

**1. Via FastAPI Swagger UI**

1. Open http://localhost:8000/docs in your browser
2. Available endpoints:
   * POST /query: Submit queries to Gemini
   * GET /history: View chat history
3. Try the /query endpoint:

json

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{

"text": "Your question here"

}

**2. Via Postman**

1. Send queries:

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POST http://localhost:8000/query

Content-Type: application/json

{

"text": "Your question here"

}

1. View history:

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GET http://localhost:8000/history

**3. Via Command-line Client**

1. Start the client application
2. Available commands:
   * Type your query and press Enter
   * Type 'history' to view chat history
   * Type 'quit' to exit

**4. Custom Domain Setup**

To deploy with a custom domain:

1. Update the server configuration in server.py:

python

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uvicorn.run(app, host="0.0.0.0", port=8000)

1. Configure your domain's DNS settings
2. Update the client's URL in client.py:

Python Copy url = "http://your-domain.com/query"