



UNIVERSITY
OF TRENTO

LLM Health Assistant **SDE Project**

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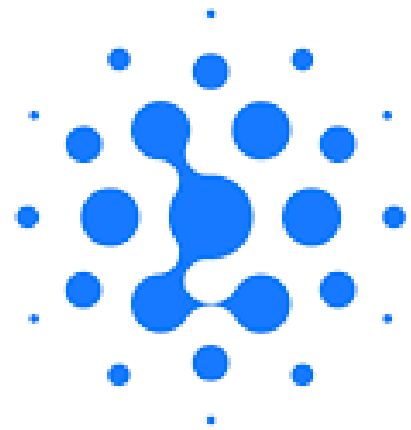
Project Goal

Develop an assistant with **text-based** health Q&A as the core, dynamically answer users' health-related questions through **generative AI** and **knowledge retrieval (RAG) technology**, and provide efficient and intelligent health services by combining accessible design, personalized recommendation. (Dec, 2024)

The goal set in December 2024 has **been achieved**.



The logo of
this project.



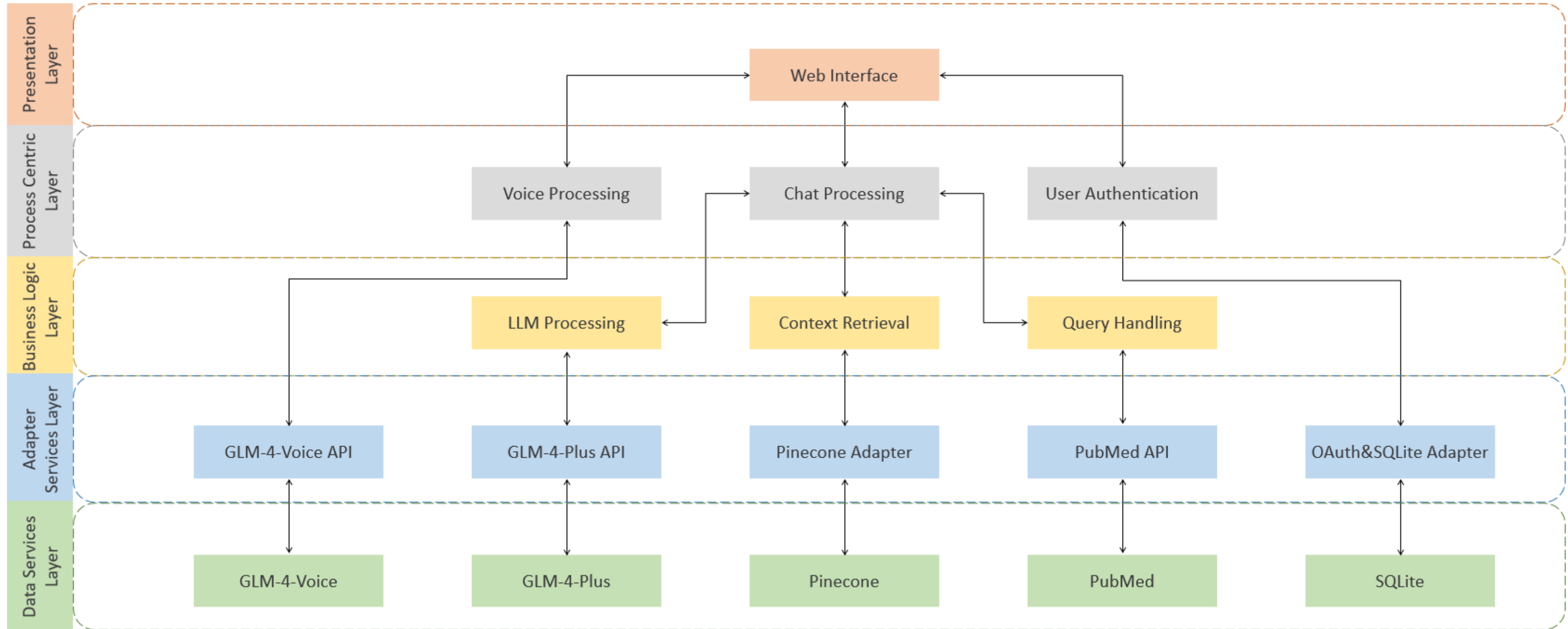
ZHIPU · AI



- [GLM-4-Plus](#) API (close to 4o)
- [GLM-4-Voice](#) API

- LLM Health Assistant
- [Text Chat](#) & [Voice Chat](#)
- RAG
- Structured Database
- Vector Database
- [Dynamic Interactive Pages](#)
- [Administrator System](#)
- External Data Source ([PubMed API](#))

- Vector Database API
- Run in the cloud
- Supply prompt based on user history and personal information





localhost:8000/static/index.html

LLM Health Assistant

Please login to continue

user1

Login

Login Page (for user)

```
PS E:\SDE> python Cli_DB_Manager.py
```

```
LLM Health Assistant Database Management System
```

1. query - Query SQLite and Pinecone
2. remove - Remove user from SQLite and Pinecone
3. exit - Exit the program

```
Enter your choice: query
```

```
Querying SQLite Database...
```

```
Querying table: users
```

```
Columns: ['username', 'hashed_password', 'gender', 'age', 'medical_history']
```

```
('user1', '$2b$12$fpwvuSANCbcSACKS7qrtR.zvb/TRjS8V/v1fbkdXk.f0ZkTsQHm8u', 'Man', 34, 'Ea  
ting Disorder')
```

```
('user2', '$2b$12$eBmKba6X7MckGa5LREJ1l.N/jKMrqd/K3Mvm4KhLcNE3Cz9G0kG/y', 'Woman', 30, '  
None')
```

```
-----
```

```
Querying Pinecone...
```

```
Pinecone Namespaces:
```

- user2
- user1

```
LLM Health Assistant Database Management System
```

1. query - Query SQLite and Pinecone
2. remove - Remove user from SQLite and Pinecone
3. exit - Exit the program

```
Enter your choice: remove
```

```
Enter username to remove (or '1' to return): user1
```

```
Removed user1 from SQLite.
```

```
Removed namespace user1 from Pinecone.
```

Administrator System (for Admin)

By the way...

The database management system can be also regarded as a service.

Presentation Layer: Handling user interactions (CLI interface)

Process Centric Layer: Coordinate different services and logic processing, call `query_sqlite()`...

Business Logic Layer: Process the core business logic of data operations, such as deleting user and querying databases

Adapter Services Layer: Handles interaction with external data stores (Pinecone)

Data Services Layer: Handles reading and writing operations on SQLite databases

Thank you.

