Busy lives & overwhelming options making healthy, personalized food choices difficult, leading to poor habits and long-term health risks.

# Virtual Dietician

Personalized - Readily Customisable - Ongoing Guidance

## **Features**

- Diet Scheduler Requirements Generator on user data
- Meal Planner Meal plans & Food Plate Recommendation
- Modifier Special Needs Accommodation on feedback

- User Management: User registration, login (JWT), and profile management.
- AI-Powered Assistance: LLM driven diet requirement generation, Food plate recommendations & Special needs accommodation based on body responses.
- Orchestration: Coordinates services to generate final recommendations.

## **System Inputs:**

- Registration / Login: Name, Email, Password.
- User Details: Basic Info, Food Preferences, Dietary Goals, Health information.
- Queries: Diet Schedules, Meal plans, Inputs for plan adjustments, Feedback on Special needs.

### **System Outputs:**

- Al Driven Outputs: Diet Schedule, Meal Plans, Food advice, Special Needs Recommendations.
- Authorization: JWT tokens, success/error messages.
- Profiles: Stored user data.
- Notifications: Input errors, system issues.

## **Architecture**

 Microservices Architecture: Independent services for User mgt, Diet Plan, Meal Plan and for Special needs.
Can be in in-sync with others like fitness.

- External LLM Integration: Al features by Groq API depending on the Llama 4 Scout
- API-Driven: FE communicates via REST APIs.
- Containerized Deployment: Docker & Docker Compose
- Asynchronous BE: Async FastAPI+Motor(MongoDB Driver)

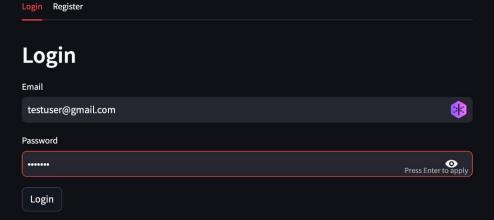
## **Tech Stack**

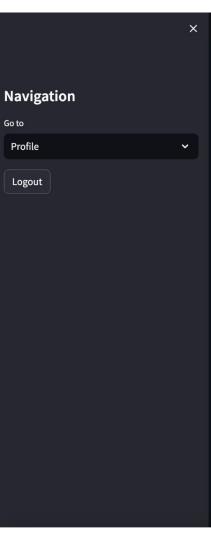
- → Frontend: Streamlit UI.
- → Backend: Python, FastAPI, Uvicorn.
- → **DB:** MongoDB+Motor (async driver).
- → LLM Integration: Groq API, groq Python SDK, Llama 4
- → Auth: JWT tokens, Passlib
- → Data Validation: Pydantic models
- → Deploy.:Docker, Docker Compose.

#### 

#### **Navigation**

# **Virtual Dietician**





## **Virtual Dietician**

#### **User Profile**

#### **Personal Information Health Information**

Name: Test User Height: 180.0 cm

Email: testuser@gmail.com Weight: 180.0 kg

Age: 18 Diet Type: non-vegetarian

Gender: Male Activity Level: very-active

Health Goal: muscle-gain

#### **Additional Information**

Allergies: None

**Dietary Restrictions:** gluten sensitive

**Medical Conditions: None** 

**Edit Profile** 

