

Wellbot-Global wellness assistant chatbot project



Origin of the idea

Problem:

People struggle to maintain balance across diet, exercise, sleep, and mental health. Existing apps are fragmented and not personalized.

Solution:

WellBot is an AI-driven wellness assistant designed to promote healthy living through personalized recommendations.

It combines Artificial Intelligence, Machine Learning, and Natural Language Processing to help users improve lifestyle factors such as diet, sleep, fitness, and mental health.



Project vision and mission



01.

Empowering Personalized Wellness:

WellBot aims to revolutionize digital health by offering intelligent, data-driven wellness support that adapts to each user's unique lifestyle, habits, and preferences.

02.

Bridging Technology and Holistic Well-being:

The project envisions an AI-powered wellness companion that not only understands natural human conversation but also interprets emotions, habits, and health data to provide actionable guidance

03.

Creating a Global, Accessible Wellness Ecosystem:

WellBot aspires to build a scalable, multilingual platform that promotes global health equity by making intelligent wellness guidance accessible to everyone.

Project Objectives

- ✓ To create a chatbot that provides wellness recommendations using AI & ML.
- ✓ To integrate Natural Language Processing for smart and human-like conversations.
- ✓ To build a hybrid recommendation engine for personalized advice.
- ✓ To support multilingual communication and global accessibility.
- ✓ To analyze and utilize user lifestyle data for meaningful health insights.





system workflow

01

User sends
a query
(text/voice)

02

NLP Layer
processes
intent &
entities

03

ML Models
generate
personalized
recommendations

04

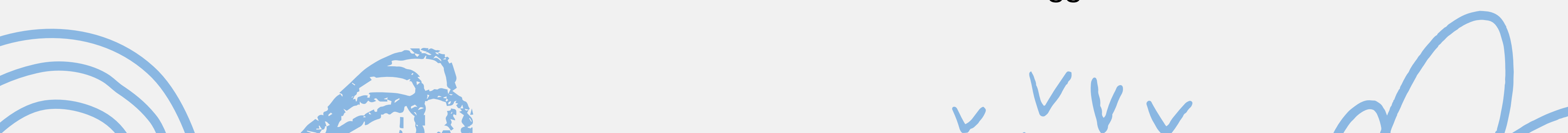
Wellness
Knowledge Base
verifies advice

05

Chatbot
delivers
customized
responses and
suggestions

06

Feedback loop
updates user
profile for
future
improvement





Tools & Technologies

Data Handling: Python, Pandas, NumPy

Machine Learning: Scikit-learn, TensorFlow

NLP Models: BERT, Huggingface Transformer

Visualization: Matplotlib, Seaborn

Database & Backend: MongoDB, Flask

Interface & Deployment: Streamlit, WhatsApp API, AWS



Module 1: User Authentication & Profile Management

→ Secure login, user data protection, and personalized health profiles for every user.



Module 2: Conversational AI Core (Chatbot Engine – Basic NLU & Dialogue Flow)

→ Enables natural, fluid conversations using basic intent detection and structured dialogue management..



Module 3: Health Knowledge Base Expansion & Advanced NLP

→ Enhances medical accuracy by integrating richer health data and advanced language understanding.

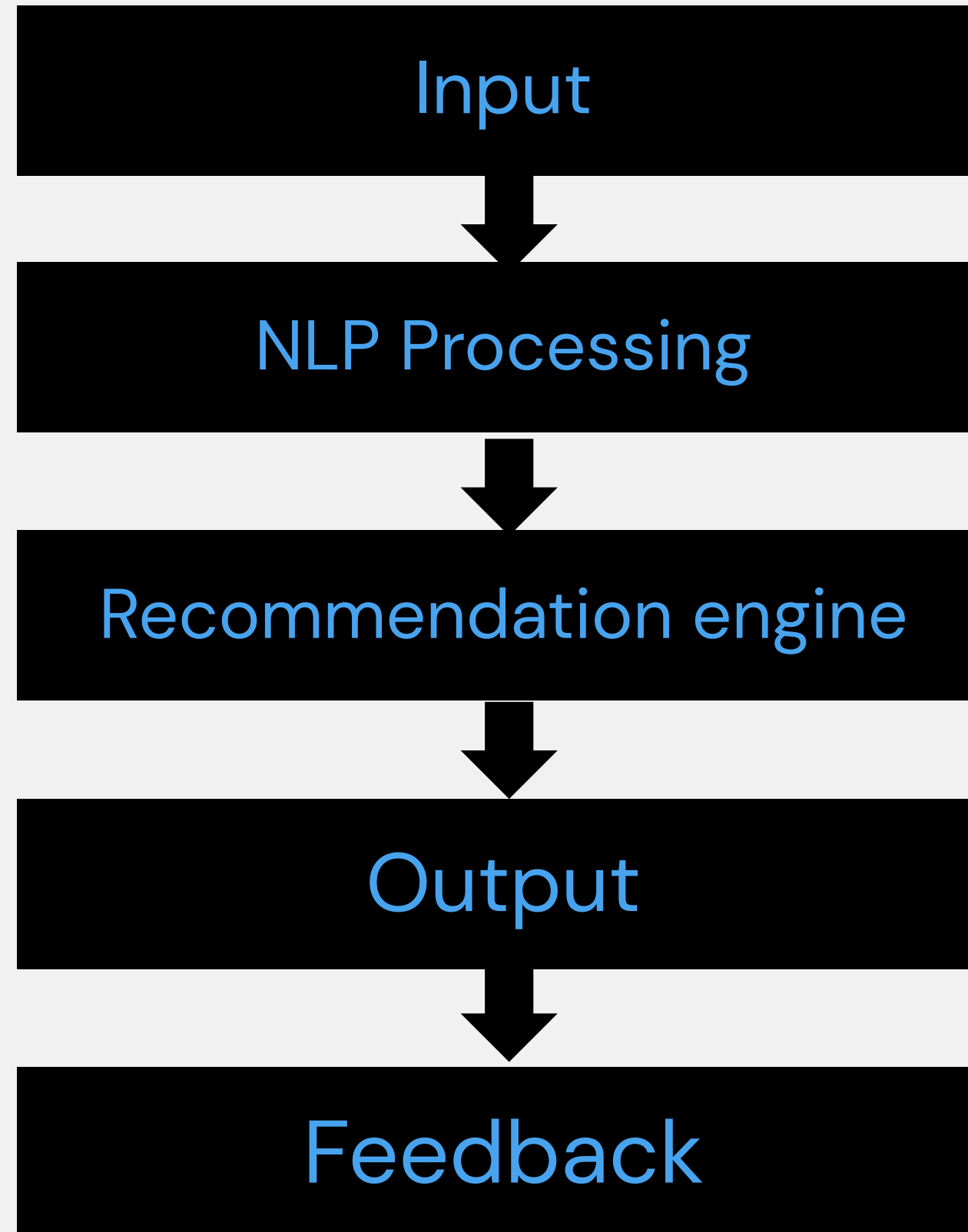


Module 4: Admin Dashboard & System Refinement

Provides administrators full control for monitoring, analytics, and continuous system improvement.

Module wise plan

Workflow:



Future Enhancements:

- Integration with wearable devices (smartwatches, fitness trackers).
- Voice-based and multilingual chatbot support.
- Emotion and stress detection using sentiment analysis.
- AR/VR-based guided meditation and relaxation sessions.
- Blockchain-enabled secure data sharing.



Expected outcomes & conclusion:

- ✓ Data-driven wellness insights
- ✓ Personalized daily health recommendations
- ✓ Improved user engagement and lifestyle balance
- ✓ Scalable and adaptable system architecture
- ✓ Ready for future AI integration

WellBot represents a step toward intelligent, accessible, and continuous wellness guidance.

By integrating AI, NLP, and personalized analytics, it transforms the way individuals interact with their health data. It can increase upto 90% user satisfaction.





Thank you very much!

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