WellBot: Global Wellness Assistant Chatbot

Infosys Springboard Internship – Milestone 1

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1. Project Overview

- WellBot is an AI-powered global wellness chatbot designed to help users maintain balance in diet, fitness, sleep, and mental health.
- It integrates AI, NLP, and wearable device data to provide personalized wellness recommendations.
- The chatbot supports multilingual communication and is accessible across web and mobile platforms.
- Its goal is to offer continuous, personalized, and data-driven wellness assistance to users worldwide.

2. Objectives

- Develop an intelligent chatbot that provides customized wellness guidance.
- Integrate AI/ML models to generate adaptive health insights.
- Use wearable APIs for real-time health data tracking.
- Ensure scalability, security, and multilingual user experience.

3. Analysis of Requirements

Functional Requirements:

- User authentication and profile management.
- NLP-driven conversational interface for wellness advice.
- Recommendation system for fitness, diet, and sleep patterns.
- Integration with wearable APIs and health data sources.
- Admin dashboard for system monitoring and analytics.

Non-functional Requirements:

- Fast and reliable response time.
- Data security and user privacy.
- Scalable and multilingual infrastructure.
- Interactive and intuitive chatbot UI.

4. Development of Functionalities

Module 1 – Data Collection and Preprocessing (1 week)

- Collect multimodal wellness data from wearable devices, user inputs, and open datasets.
- Clean, preprocess, and normalize data for machine learning models.
- Ensure data privacy and handle missing values.
- Prepare training data for NLP and recommendation systems.

Module 2 – NLP Processing (2 weeks)

- Implement tokenization and intent classification using BERT/DistilBERT models.
- Handle multilingual queries for better accessibility.
- Integrate natural language understanding and response generation modules.
- Evaluate NLP accuracy using sample wellness dialogues.

Module 3 – Recommendation System (3 weeks)

- Design hybrid recommendation system combining content-based and collaborative filtering.
- Train using user wellness data for personalized results.
- Validate and tune recommendation algorithms for accuracy.

Module 4 – Integration and API Layer (2 weeks)

- Develop backend APIs connecting chatbot, models, and database.
- Integrate wearable APIs and synchronize real-time data.
- Perform backend testing for performance and security.

Module 5 – Frontend and Chatbot Interface (2 weeks)

- Design chatbot UI for web and mobile platforms.
- Integrate with NLP backend for real-time communication.
- Support multilingual text display and accessibility features.

5. Testing of Functionalities

- Unit testing for individual modules such as NLP, APIs, and UI.
- Integration testing to verify module interactions.
- User acceptance testing with sample users for usability feedback.
- Performance and scalability testing under simulated load.

6. Deployment and Working

- Deploy chatbot on cloud for high availability and global access.
- Provide access via website, mobile app, and WhatsApp integration.
- Monitor live performance using analytics dashboard.
- Collect feedback for continuous improvement and retraining of models.

7. Conclusion

- WellBot delivers AI-powered, personalized wellness guidance across multiple platforms. Combines data analytics, NLP, and recommendation models for smarter health support.
- Ensures privacy, scalability, and global accessibility.
- Future enhancements include AR/VR-based wellness sessions and blockchain-based health data management.