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HOLISTIC WELLNESS ASSISTANT: VOICE-DRIVEN PERSONAL HEALTH AND WELL-BEING COMPANION

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ABSTRACT
This project is a voice-driven wellness platform designed to enhance user well-being through personalized assistance. It features BMI-based fitness tracking for tailored health recommendations, guided meditation and yoga sessions for mental and physical wellness, and an interactive chat mode capable of answering diverse queries. The system leverages AI-driven responses and real-time voice interactions to create a seamless and engaging user experience.

Keywords:
Wellness Model, BMI Tracking, Personalized Assistance, Yoga, Meditation, Chatbot, AI-based Health Monitoring, Speech Recognition, Fitness Tracking

INTRODUCTION

This voice-driven wellness platform integrates AI-powered assistance to promote overall well-being. It includes BMI-based fitness tracking, guided meditation and yoga sessions, and an intelligent chat mode for answering diverse queries. The system offers a personalized and interactive experience, enhancing both physical and mental health.

OBJECTIVES

The wellness platform aims to provide a personalized and interactive experience for users seeking to improve their health and well-being. It integrates BMI-based fitness tracking to offer customized workout and diet recommendations while also supporting guided meditation and yoga sessions tailored to the user's mood and experience level. The AI-powered chat assistant enhances engagement by answering queries on health, fitness, and general topics. With a seamless voice-controlled interface, users can navigate the platform hands-free for an intuitive experience. Additionally, real-time feedback and progress monitoring ensure continuous improvement, making the platform a comprehensive wellness companion.

METHODOLOGY

The wellness platform is developed using a combination of artificial intelligence, speech recognition, and computer vision techniques to provide an interactive and personalized user experience. The system utilizes **speech recognition (Speech Recognition library)** to understand user commands and **text-to-speech (pyttsx3)** for voice-based responses. **BMI calculation** is implemented to track user fitness and provide customized workout and diet recommendations. **Media pipe and OpenCV** enable real-time **pose detection** for yoga sessions, offering feedback on posture accuracy. **Pygame mixer** is used to incorporate soothing background music during meditation and yoga. A **chat mode powered by AI** allows users to seek guidance on various topics, making the platform an all-in-one wellness solution. The entire system is voice-controlled for a seamless and hands-free experience.

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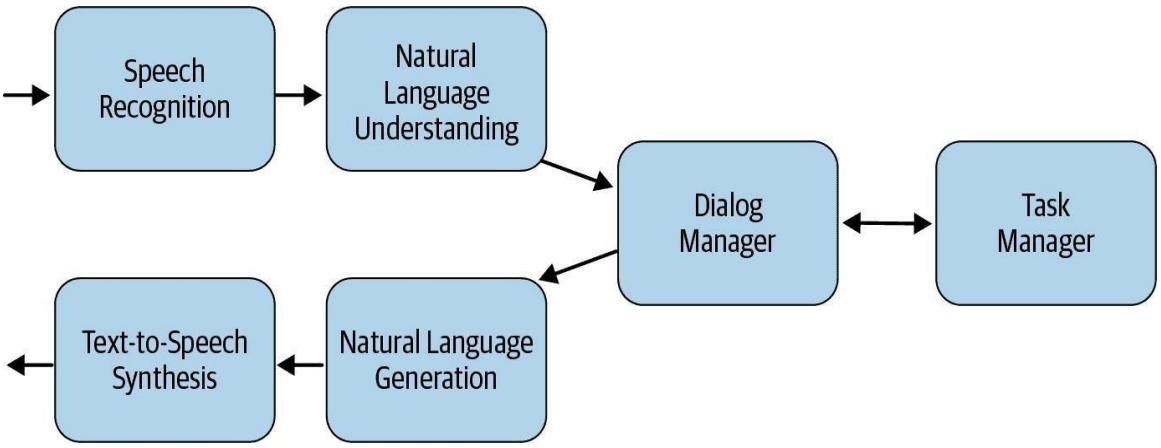

Figure: System Architecture

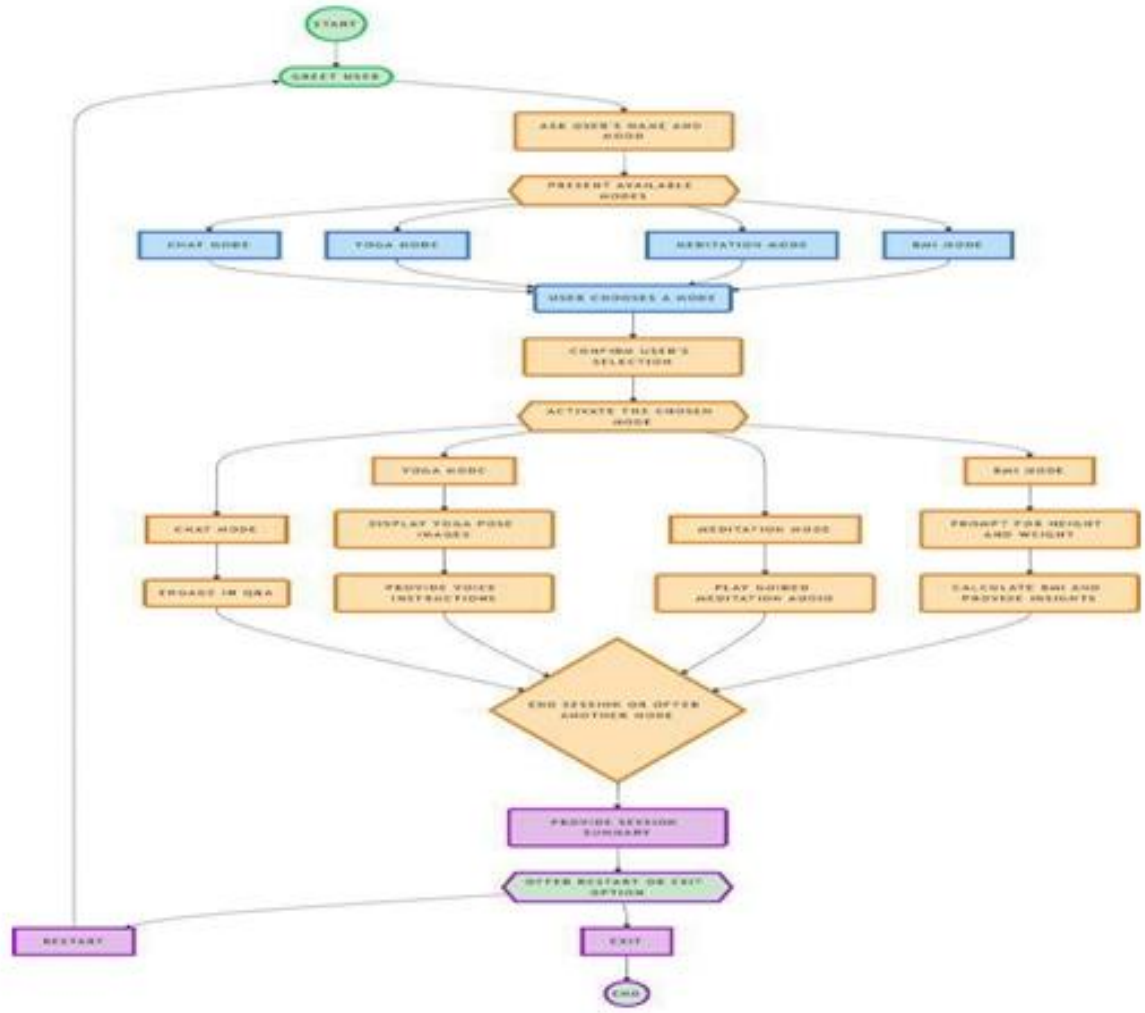

Figure: Flow Diagram

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RESULTS AND DISCUSSION

The wellness platform successfully provides a personalized and interactive experience by integrating **BMI-based fitness tracking, yoga posture feedback, meditation guidance, and AI-driven chat assistance**. The **speech recognition and text-to-speech features** enable hands-free operation, enhancing user accessibility. Real-time **pose detection using OpenCV and Media pipe** improves yoga practice by offering corrective feedback. User feedback indicates that the system enhances engagement and motivation for wellness activities. The integration of **background music and mood-based recommendations** further personalizes the experience, making it more effective and immersive.

ACKNOWLEDGEMENT

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CONCLUSION

In conclusion, this wellness platform successfully integrates BMI tracking, personalized fitness assistance, meditation, yoga, and a chat mode to provide a comprehensive health and wellness experience. The use of LLMs enhances user interaction, making it more conversational and responsive. The system offers a personalized approach to fitness and mental well-being, ensuring users receive the guidance they need based on their unique needs. Future improvements could include expanding the platform's capabilities with more detailed tracking features and further customization. Overall, the project aims to promote a holistic approach to health, empowering users to lead healthier and more balanced lives.

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