Project Patent

on

Chatbot to Known Individual Prakriti (Phenotype)

Bachelor of Technology in

Computer Science

Submitted by

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Proposed Title:

AI-Driven Prakriti-Based Chatbot for Personalized Ayurvedic Health Guidance

Field of the Invention:

This invention pertains to the field of healthcare and artificial intelligence, specifically focusing on personalized health assessment and guidance based on Ayurvedic principles. The invention leverages AI-driven algorithms to analyse user responses and provide customized recommendations for diet, lifestyle, and yoga practices.

Background of the Invention:

Modern lifestyles have led to increased stress, dietary imbalances, and health issues, often due to a lack of personalized healthcare solutions. Ayurveda offers a holistic approach to wellness through individualized guidance based on Prakriti—the unique constitution of an individual. However, accessing expert Ayurvedic advice remains a challenge for many.

This project bridges this gap by developing a chatbot powered by advanced machine learning techniques to predict the user's Dosha (Vata, Pitta, Kapha) and offer personalized recommendations. It leverages a combination of models, including Naive Bayes, Decision Trees, Support Vector Classifiers, and Deep Learning, to ensure precise predictions and adaptability. Supporting modules for data analysis, recommendation engines, and NLP-driven logic enable real-time, interactive user experiences.

By integrating environmental factors, seasonal variations, and user-specific data, the chatbot delivers accurate, holistic health guidance, making Ayurvedic wellness accessible to a broader audience.

Differentiate with Other Works:

- **Existing Works:** Most health chatbots provide symptom-based advice or generic recommendations without factoring in Ayurvedic principles. These systems are often static and lack dynamic personalization based on a person’s unique constitution (Prakriti).

- **Proposed Innovation:** This chatbot combines Ayurvedic philosophy with machine learning algorithms to predict the user's Dosha and deliver personalized guidance. It offers advice that is responsive to the individual’s health needs, while also including downloadable PDFs of recommendations, video links for further learning, and localized Ayurvedic practices, setting it apart from existing solutions.

Objectives:

- Develop an AI-driven chatbot capable of Prakriti analysis by utilizing a suite of machine learning models, including Naive Bayes, Decision Trees, Support Vector Classifiers, and Deep Learning, to ensure robust and accurate Dosha predictions.
- Provide personalized Ayurvedic health guidance on diet, lifestyle, and yoga practices, dynamically tailored to the individual's unique constitution and needs.
- Incorporate real-time environmental data and seasonal variations to enhance the accuracy and relevance of health recommendations, making them adaptable to changing conditions.
- Implement a supervised system for managing user data, refining predictive models, and identifying Dosha imbalances to offer actionable and proactive health insights

Flowchart:

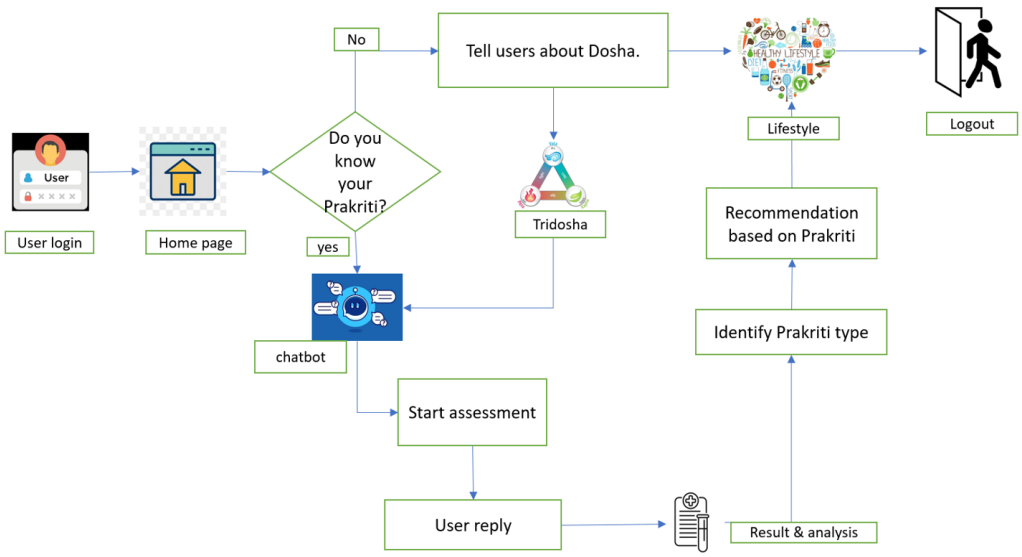

Fig 1: SYSTEM ARCHITECTURE DIAGRAM

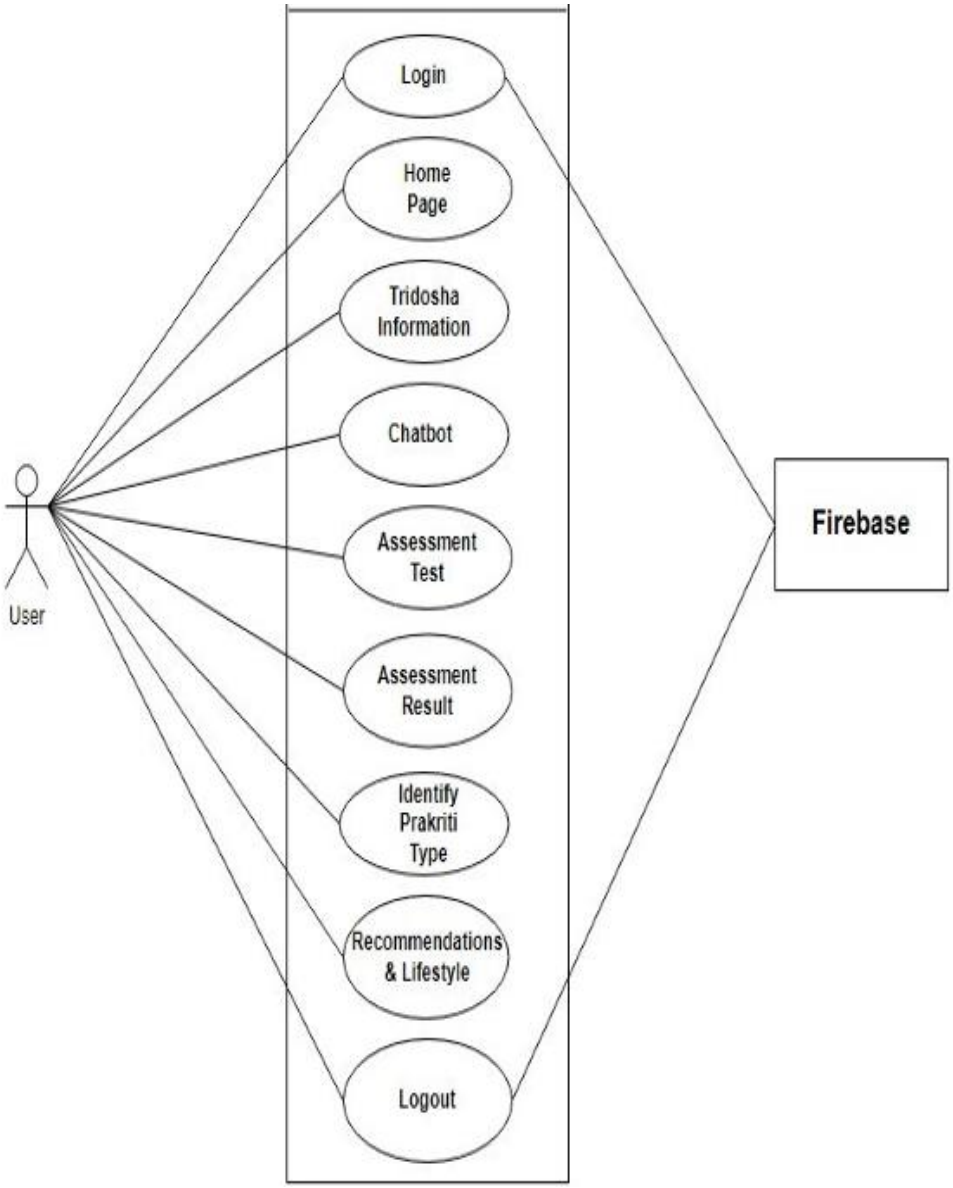

FIG 2: SEQUENCE DIAGRAM

Claims:

- AI-driven chatbot that analyses user responses using machine learning algorithms to predict their Dosha (Vata, Pitta, or Kapha) and offers personalized Ayurvedic health advice.
- Incorporates real-time environmental factors and seasonal changes to provide dynamic and context-sensitive Ayurvedic health recommendations for diet, lifestyle, and yoga.
- A supervised admin system for managing user data, tracking dosha imbalances, and updating health advice to ensure accuracy and continuous improvement.
- Localized Ayurvedic practices and recommendations based on regional dietary habits, environmental factors, and cultural contexts, enhancing the relevance and effectiveness of the guidance.

Technology used:

Software:

- Frontend: React.js, HTML5, CSS3, Tailwind CSS
- Backend: Node.js, Python (FastAPI or Django)
- Database: SQLite, PostgreSQL, MongoDB
- Machine Learning: Naive Bayes, Decision Tree, Logistic Regression, Support Vector Classifier (SVC), Deep Learning
- Cloud Service: Firebase
- Development Tools: Visual Studio Code, Jupyter Notebooks

Hardware:

- Cloud server
- User devices: Smartphone, Tablet, PC

Abstract:

This invention presents a Prakriti-based chatbot that leverages artificial intelligence to analyze an individual's unique constitution (Prakriti) according to Ayurvedic principles. The chatbot uses a Naive Bayes algorithm to predict the user's Dosha and provides personalized dietary, lifestyle, and yoga recommendations. It incorporates real-time factors like weather and seasonal changes to offer dynamic guidance. The system features an admin interface for data supervision, ensuring accuracy and relevance. This innovation bridges the gap between traditional Ayurveda and modern technology, making holistic health accessible and user-friendly.

End Users:

- Health-conscious individuals seeking personalized guidance.
- Ayurvedic practitioners and clinics.
- Wellness and fitness platforms.
- Educational institutions teaching Ayurveda.
- Individuals in remote areas lacking access to Ayurvedic expertise.

Advantages:

- Provides tailored health advice aligned with Ayurvedic principles.
- Combines AI and Ayurveda for modern, accessible healthcare solutions.
- Incorporates real-time environmental and seasonal insights for dynamic recommendations.
- Educates users through notifications and localized health practices.
- Cost-effective and scalable solution for personalized healthcare.

Conclusion:

The Prakriti-based chatbot is a transformative innovation that blends ancient Ayurvedic wisdom with modern AI technology. By providing real-time, personalized health advice, the chatbot addresses the rising demand for accessible, holistic wellness solutions. Its novel integration of environmental and seasonal factors enhances relevance, making it a practical tool for diverse users. This invention promotes sustainable health practices, revolutionizing how Ayurvedic principles are applied in the digital age.