



AyurMeds: Empowering Wellness Through Ayurvedic Care

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Abstract : This website is designed to transform the way Ayurvedic healthcare services are accessed and delivered by combining advanced technology with traditional practices. The main feature of the platform is an intelligent Ayurvedic diagnosis chatbot that offers personalized health assessments and recommendations based on individual symptoms and lifestyle. In addition to providing expert health advice, the website also serves as a marketplace for authentic Ayurvedic medicines, ensuring convenient access to trusted remedies. Moreover, the platform enables users to schedule appointments with experienced Ayurvedic doctors, allowing them to seek professional consultations and personalized treatment plans. By seamlessly integrating these features, the website aims to promote overall well-being and facilitate meaningful interactions between users and Ayurvedic healthcare providers in the digital age.

Keywords: Healthcare System, Deep learning, Artificial Intelligence, Ayurvedic Patient Diagnosis, Patient Treatment.

I. INTRODUCTION

The combination of contemporary and traditional technologies Modern technology combined with ancient Ayurvedic treatment has opened up new avenues for creative medicinal techniques to address a range of health issues. Research like "Ayurveda for All: Your One-Stop Shop for Natural Healing" demonstrate how important it is to combine Ayurvedic treatments with contemporary e-commerce platforms to offer reasonably priced and easily accessible healthcare options. This confluence brings together the ideas of natural treatment and individualized care to enhance one's general health in addition to expanding access to Ayurvedic medications.

Research like "Ayurvedic Diagnosis using Machine Learning Techniques" further demonstrate how Ayurvedic diagnosis may be revolutionized by machine learning, and how traditional Ayurvedic knowledge can be combined with modern scientific methods. Practitioners in the medical field may improve the efficiency of their therapies and accurate diagnosis by utilizing machine learning algorithms to dig deeper into illness analysis and imbalances within the Ayurvedic framework. Furthermore, an innovative online tool that uses artificial intelligence to evaluate cardiac issues from an Ayurvedic perspective is explained in the article "Wedaduru - An Intelligent Ayurvedic Disease Screening and Remedy Analysis Solution"

This creative approach demonstrates the value of customised therapy in Ayurveda, where remedies are mostly based on an individual's constitution type, and it also shows the potential of AI in healthcare. . Taking care of oneself in this way may end up in financial savings. Further, the publication "A deep learning strategy for classifying different sorts of Ayurvedic constitutions" shows how Ayurvedic precision medicine is developing. The transition from population-average treatments to individual treatment based on distinct constitution types discovered via the application of deep learning methods and dosha dominance is highlighted by this study. The Ayurvedic principles of customized therapies for best health results are in line with the trend toward personalized treatment.

II. LITERATURE REVIEW

H. M. Manjula and A. S. P, [1] explores the intersection of ancient wisdom and modern technology in healthcare. By leveraging machine learning techniques to analyze Ayurvedic data, this research contributes to the advancement of personalized medicine while honoring the rich heritage of Ayurveda. By harnessing the vast datasets within AyurDataMart, machine learning techniques can extract valuable insights into disease etiology, progression, and response to treatment. This approach streamlines the diagnostic process, saving time and resources while ensuring adherence to Ayurvedic principles.

Almotiri, S. H., Khan, M. A., & Alghamdi, M. A. [2] address the issues of confidentiality, privacy, and security in the context of secure m-health system. They have listed several measures to protect patient information and the mHealth system. This medical system will benefit patients in many ways, including fast diagnosis, home rehabilitation , and remote monitoring. Overall, mHealth systems will efficiently minimize healthcare costs and unwanted hospitalizations.

C. S. Peter, M. Elappila, and A. C. Swathi [3] addresses the pressing need for accurate and timely diagnosis of diabetic retinopathy. By leveraging digital imaging technologies and incorporating insights from Ayurvedic medicine, the proposed model offers a promising avenue for enhancing the management of this debilitating condition. This paper contributes to the growing body of literature exploring innovative approaches to diabetic retinopathy detection and treatment, with a focus on integrating diverse medical perspectives for comprehensive patient care. Notably, the model is tailored to align with Ayurvedic treatment methodologies for this condition, thereby bridging the gap between modern medical practices and traditional healing approaches.

R. I. S. Bandara, S. Prabakaran, S. A. K. G. Perera, M. N. R. Banu, and K. A. D. C. P. Kahandawaarachchi, [4] presents a pioneering approach to heart disease diagnosis rooted in Ayurvedic principles. By leveraging AI and web-based technologies, the "Wedaduru" application offers an innovative and accessible solution for screening, diagnosing, and managing heart diseases while promoting awareness of Ayurvedic healthcare practices. This research represents a significant step towards integrating traditional medicine with modern healthcare systems to improve patient outcomes and holistic well-being.

M. A. El Khaddar, H. Harroud, M. Boulmalf, M. Elkoutbi and A. Habbani [5] underscores the critical role of wireless technologies in shaping the future of healthcare delivery. It highlights the potential of ubiquitous healthcare to improve patient care and service delivery while addressing the challenges associated with its implementation. By proposing a framework for addressing these challenges, the paper contributes to advancing the field of e-health and lays the groundwork for the integration of wireless technologies into healthcare systems.

Trivedi and Patel [6] introduces the concept of E-Ayurveda as a transformative approach to healthcare. By merging traditional Ayurvedic principles with modern technology, E-Ayurveda emerges as a promising solution to contemporary healthcare challenges, offering personalized, preventive, and accessible healthcare services. The integration of this novel paradigm has the potential to contribute to the evolution of a more sustainable and effective healthcare system.

Panwar, A., & Gupta, S [7] to expand upon the insights and accomplishments in the field of Ayurvedic healthcare by combining current literature and research findings and utilizing contemporary technologies to offer patients comprehensive and efficient healthcare solutions.

Khatua, D., Sekh, A.A., Kutum, and R. et al. Khatua, D., Sekh, A.A., Kutum, and R. et al. [8] main aspects of the Ayurvedic healthcare system that combines conventional methods with contemporary technology: Integration of Contemporary Technology with Ayurveda: In order to improve therapeutic efficacy and diagnostic precision, research projects have looked into integrating contemporary technology, such as artificial intelligence and machine learning, with Ayurveda.

Kaushal, V., & Kumar, S. [9] to advance knowledge and insights in the field of Ayurvedic healthcare systems by synthesizing and analyzing existing literature on these topics. It does this by providing a thorough and creative approach to fusing modern technology and traditional Ayurvedic practices for improved patient care and well-being. Ayurvedic healthcare systems use image recognition to automate diagnosis, customize treatment regimens, and enhance patient outcomes overall.

M. Angel, A. Patel, A. Alachkar and P. Baldi, [10] study reveal a significant variance in the performance of the evaluated LLMs, with GPT-4 emerging as the top performer, accurately answering 78.8% of the questions. This marked improvement over Bard and GPT-3 underscores the rapid progress in LLM capabilities and highlights the potential of advanced models to enhance clinical reasoning and decision-making in pharmacy.

III. SYSTEM ARCHITECTURE

System Architecture for project is

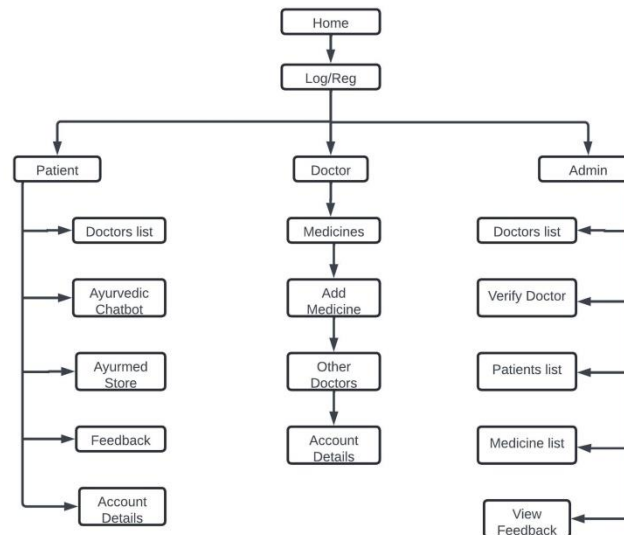


Figure 1: System Architecture

Admin Module:

In this module, the administrator must log in with valid credentials. After successful login, administrators access operations such as viewing all users and authorizing them. This authorization process allows administrators to view user details, check doctors, view medications added by doctors, and review customer feedback.

View and Authorize Users Module:

In this module, administrators have the option to view the complete list of registered users. The information displayed includes user details such as username, email, and address. Additionally, administrators have the authority to authorize users, ensuring that appropriate access privileges are granted.

End User Module:

This module is aimed at multiple end users in the system. Users are required to register before participating in any transaction. After successful registration, user information will be safely stored in the database. Authenticated users can then log in with their assigned credentials to access features such as managing their account.

IV. IMPLEMENTATION DETAILS

1) System Architecture:

Through meticulous planning and execution, we've developed a sophisticated web-based application that encompasses distinct modules catering to the needs of doctors, patients, and Ayurvedic Chatbot. Employing a robust client-server architecture has facilitated seamless communication and data exchange between these modules, ensuring optimal performance and user experience.

2) Home/Login/Registration Module:

The Home/Login/Registration module serves as the primary gateway for users, offering them a seamless entry point into the website's ecosystem. It plays a crucial role in managing user interactions by handling authentication and authorization processes. Users are prompted to log in or register, and upon successful authentication, they gain access to a wide array of website features and functionalities. This module acts as the foundation for user engagement, ensuring a secure and personalized experience throughout their journey on the platform.

3) Doctor Module:

The Doctor Module empowers medical practitioners with essential tools to efficiently manage their practice and collaborate within the platform. At its core, the Medicines Component offers doctors comprehensive control over medicinal inventory. Through the "Add Medicine" feature, doctors can seamlessly contribute new medicines to the database, ensuring an up-to-date repository of treatments. Additionally, the "Other Medicines" section provides easy access to existing medicinal options available for purchase. Facilitating professional networking, the module includes the "Other Doctors" feature, enabling practitioners to explore profiles of peers and foster collaborative opportunities. Moreover, the "Account Details" section equips doctors with pertinent information regarding their practice and professional credentials, facilitating streamlined management of their online presence and patient interactions..

4)Patient Module:

The Patient Module caters to the needs of users seeking Ayurvedic healthcare services, offering a comprehensive range of features to enhance their experience. Within this module, users can access the Doctors List, which provides detailed profiles of registered Ayurvedic doctors, enabling patients to browse and select practitioners according to their preferences. Additionally, the Ayurvedic Chatbot serves as a valuable tool for users to receive preliminary diagnoses based on their symptoms, facilitating informed decision-making regarding their healthcare needs. The Feedback Store allows patients to contribute to the community by leaving reviews for doctors they have consulted and also provides a platform for users to read feedback from others, fostering transparency and trust within the system. Furthermore, the Account Details section offers users personalized information, including profiles, and interactions, ensuring a tailored and seamless healthcare experience.

5)Admin Module:

The Admin Module serves as a centralized hub for administrators to oversee and manage various aspects of the website's operations. Administrators can access crucial functionalities such as the Doctors List, which provides a comprehensive roster of registered Ayurvedic doctors for efficient management. The Verify Doctor feature ensures the validity and currency of doctors' credentials, maintaining the integrity of the practitioner database. Additionally, administrators can utilize the Patients List to track registered patients, facilitating communication and appointment scheduling. The Medicine List offers administrators an overview of available Ayurvedic medicines, aiding in inventory management and supply chain oversight. Furthermore, the View Feedback feature enables administrators to monitor the quality of services provided by doctors through patient feedback, allowing for continuous improvement and optimization of the platform's offerings.

6) Interactions and Integration:

Interactions and Integration are pivotal aspects of the website's functionality, facilitating seamless communication and collaboration across different user roles. Patients engage with the platform by interacting with the chatbot for preliminary diagnosis, exploring profiles of Ayurvedic doctors, and providing valuable feedback on their experiences. Doctors, on the other hand, actively contribute by adding new medicines to the database, accessing profiles of peers for professional networking, and managing their accounts efficiently. Meanwhile, administrators ensure smooth system functioning by overseeing operations, maintaining data integrity, and facilitating communication between users. Integration of APIs further enhances the platform's capabilities, enabling advanced features such as appointment scheduling and medicine purchases by facilitating seamless communication between various modules. This holistic approach to interactions and integration ensures a cohesive user experience while maximizing the website's utility and effectiveness.

V. KEY ATTRIBUTES OF PROJECT

In our project towards data integrity and security in healthcare, we highlight the essential aspects that will drive the success of our initiative. These fundamentals are at the heart of our project goals and objectives.

Aspect 1: Intelligent Chatbot

A sophisticated chatbot capable of understanding user health concerns, providing personalized Ayurvedic advice, and guiding users towards appropriate treatment options.

Aspect 2: Comprehensive E-commerce Platform

An extensive e-commerce platform offering a diverse range of authentic Ayurvedic medicines, complete with detailed product listings, secure payment processing, and user-friendly browsing and purchasing options.

Aspect 3: User Authentication and Profiles

Secure user authentication mechanisms and user profiles to personalize interactions, track orders, and manage appointments seamlessly.

Aspect 4: Data Security and Privacy

Robust data security measures to protect sensitive user information, including health records, payment details, and personal data, ensuring compliance with healthcare regulations.

Aspect 5: Integration with Healthcare Providers

Collaboration with reputable Ayurvedic doctors and healthcare providers to ensure the availability of expert advice and guidance, fostering trust and credibility among users.

Aspect 6: Feedback and Support Channels

Provision of feedback mechanisms and support channels for users to provide input, seek assistance, and receive prompt responses to inquiries or concerns.

VI. CONCLUSION

In summary, in order to guarantee that patients receive high-quality, dependable healthcare, the system analysis should concentrate on the Ayurvedic healthcare system's integration features, security protocols, and functions. By fusing traditional knowledge with cutting-edge research, the proposed Ayurvedic treatment system, as described in the study report, has great potential to provide efficient healthcare solutions. Including a chatbot for Ayurvedic diagnosis.

With an Ayurvedic pharmacy and an Ayurvedic doctor appointment planner, the system provides a holistic approach to managing health issues in the modern world. Patients looking for natural healing remedies will ultimately benefit from the user-friendly design, search function, and integration of contemporary technology, which can improve the accessibility and efficacy of Ayurvedic healthcare services

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