

LEVERAGING ARTIFICIAL INTELLIGENCE FOR DISEASE DIAGNOSIS IN  
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## ABSTRACT

*Ayurveda*, an ancient system of medicine originating from India, offers a holistic approach to disease diagnosis and management. With the advent of artificial intelligence (AI) technologies, there is growing interest in leveraging AI for improving the accuracy and efficiency of disease diagnosis in *Ayurveda*. This paper explores the potential applications of AI in disease diagnosis within the framework of *Ayurvedic* principles and discusses the challenges and opportunities associated with its implementation.

**KEYWORDS:** *Ayurveda*, *Prakriti*, *Vikriti*, *Roga*.

## INTRODUCTION

*Ayurveda*, often described as the "science of life," emphasizes the balance of body, mind, and spirit for maintaining health and preventing disease. Central to *Ayurvedic* diagnosis is the assessment of individual constitution (*prakriti*), imbalances (*vikriti*), and disease manifestations (*roga*) through a combination of clinical examination, patient history, and diagnostic techniques such as pulse diagnosis (*nadi pariksha*) and tongue examination (*jihva pariksha*). However, the subjective nature of these methods and the complexity of *Ayurvedic* diagnosis pose challenges for standardization and accuracy.

## METHODOLOGY

A comprehensive literature review was conducted to identify relevant studies and articles related to the integration of AI in disease diagnosis within the context of *Ayurveda*. Electronic databases including PubMed, Google Scholar, and relevant *Ayurvedic* journals were searched using keywords such as "*Ayurveda*," "artificial intelligence," "machine learning," "disease diagnosis," "pulse diagnosis," and "tongue examination." Studies published in English language journals up to January 2022 were included.

## RESULTS

The integration of AI in disease diagnosis in *Ayurveda* offers several potential benefits.

- Enhanced accuracy:** AI algorithms can analyze large volumes of patient data, including clinical symptoms, diagnostic findings, and medical history, to identify patterns and correlations that may not be apparent to human practitioners. This can lead to more accurate and timely diagnosis of diseases based on *Ayurvedic* principles (Gupta et al., 2020).
- Personalized medicine:** AI-driven decision support systems can recommend personalized treatment plans based on individual patient profiles, *prakriti*, and *vikriti*. By considering multiple factors, including dietary habits, lifestyle choices, and environmental factors, AI can help tailor treatment strategies to the specific needs of each patient (Srivastava et al., 2019).
- Early detection:** AI algorithms can analyze subtle changes in diagnostic parameters over time, enabling early detection of diseases and proactive interventions to prevent progression or complications. This is particularly relevant in chronic diseases where early intervention can significantly impact outcomes (Kumar et al., 2021).

## CONCLUSION

The integration of AI in disease diagnosis holds great promise for improving the accuracy, efficiency, and personalized nature of *Ayurvedic* healthcare. However, challenges such as data quality, model interpretability,

and cultural relevance need to be addressed to ensure the responsible and effective implementation of AI in *Ayurvedic* practice.

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