

# **AyuPredict – A Disease Prediction Model**

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**Abstract:** *The AyuPredict model is a machine learning-based healthcare system designed to predict diseases and provide Ayurvedic treatment recommendations. This system aims to bridge the gap in healthcare accessibility, particularly in remote areas where medical facilities are scarce. The model leverages unsupervised learning algorithms, such as Random Forest, for disease prediction and supervised learning algorithms, like K-Nearest Neighbours (KNN), for recommending nearby hospitals.*

*The system's architecture includes a user-friendly interface, disease prediction module, Ayurvedic treatment recommendation module, and hospital recommendation module. The model's performance is evaluated using accuracy metrics, with the Random Forest algorithm achieving an accuracy of 99.59% and F1 score of 99.58%.*

*The KNN algorithm is used for hospital recommendations, providing a list of nearby hospitals based on user input. Future scope includes integrating virtual consultation platforms, voice assistants, and multilingual support to enhance accessibility and usability. The AyuPredict model has the potential to revolutionize healthcare services by providing accurate disease predictions and personalized treatment recommendations, ultimately improving patient outcomes*

**Keywords:** Disease Prediction, Ayurvedic Treatment, Random Forest, K-Nearest Neighbour, Healthcare Model