

Disease Prediction System

Using Machine Learning Algorithms

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Abstract

- To create a reliable predictive model for early disease identification, "Disease Prediction Using Machine Learning" was brought out.
- This research aims to reliably forecast the possibility of a disease by analyzing medical data, such as patient demographics, symptoms, and diagnostic test results, using machine learning algorithms.
- Collecting data, preprocessing, choosing features, training the model, and evaluating it are important tasks.

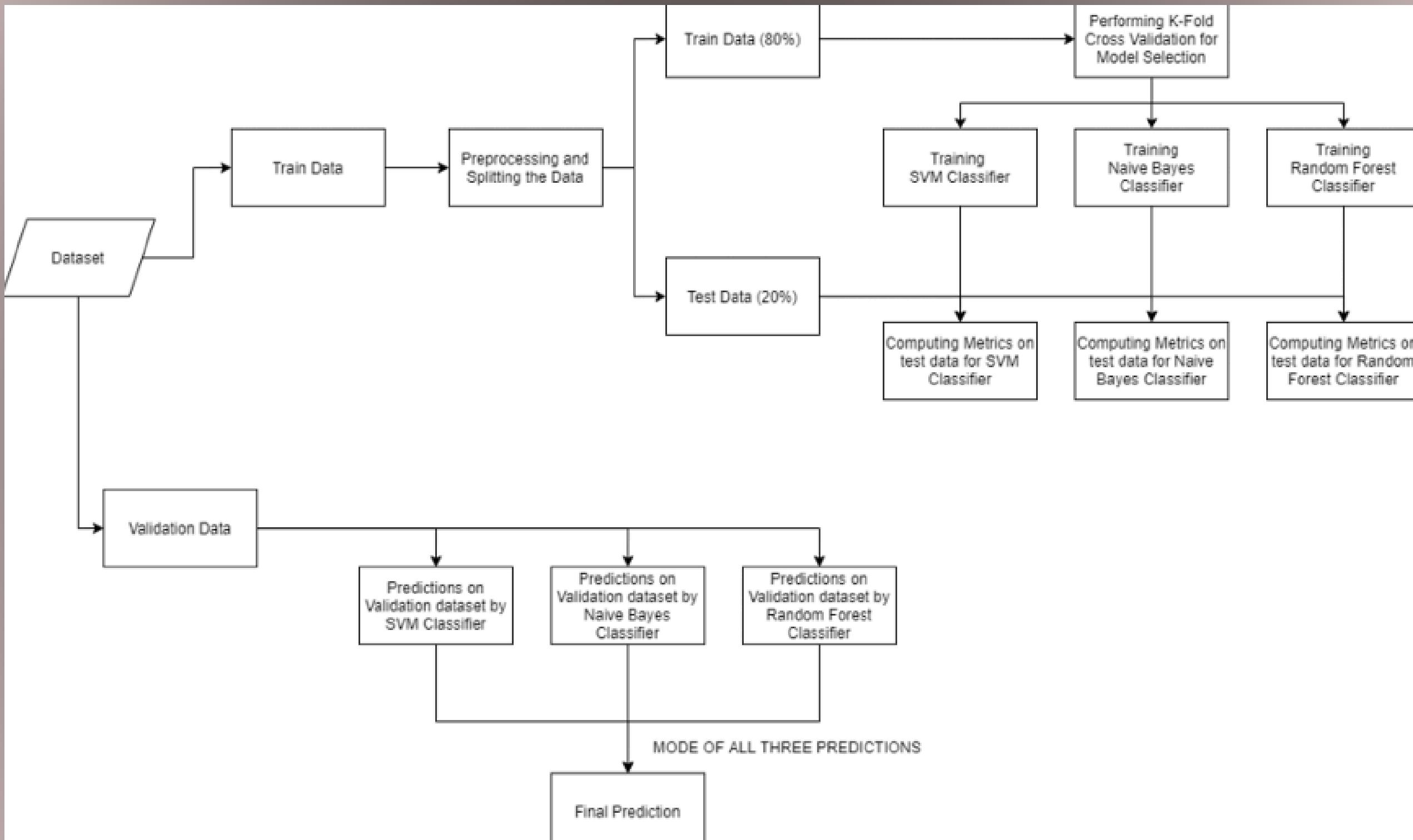
Introduction

- The emergence of ML has resulted in significant progress in numerous sectors, including healthcare. With healthcare data becoming more and more accessible, creative ways to make the most of this abundance of knowledge are desperately needed.
- Conventional diagnostic techniques sometimes depend on subjective evaluations and may overlook minute patterns or clues that might indicate the beginning of a disease.
- By facilitating prompt intervention and proactive management techniques, early illness identification has enormous promise for enhancing patient outcomes and lowering healthcare expenses.

Literature Review

- [1] explores the utilization of vast clinical data in medical decision support, focusing on cardiac disease prediction, particularly coronary heart disease.
- [2] addresses the critical challenge of cardiovascular disease prediction using machine learning (ML) techniques.
- [3] introduces an advanced methodology for early prediction of chronic diseases, such as heart attack, diabetes, breast cancer, and kidney disease, by combining cutting-edge techniques.
- [4] addresses cardiovascular concerns by proposing the TLV (Two-Layer Voting) model for disease prediction.
- [5] proposes DWRF, a novel metabolite-disease association prediction algorithm, to streamline the identification of disease pathogenesis

Disease Prediction Architecture



Modules

- Disease Module
- Description Module
- Precautions Module
- Workouts Module
- Diet Module

Output

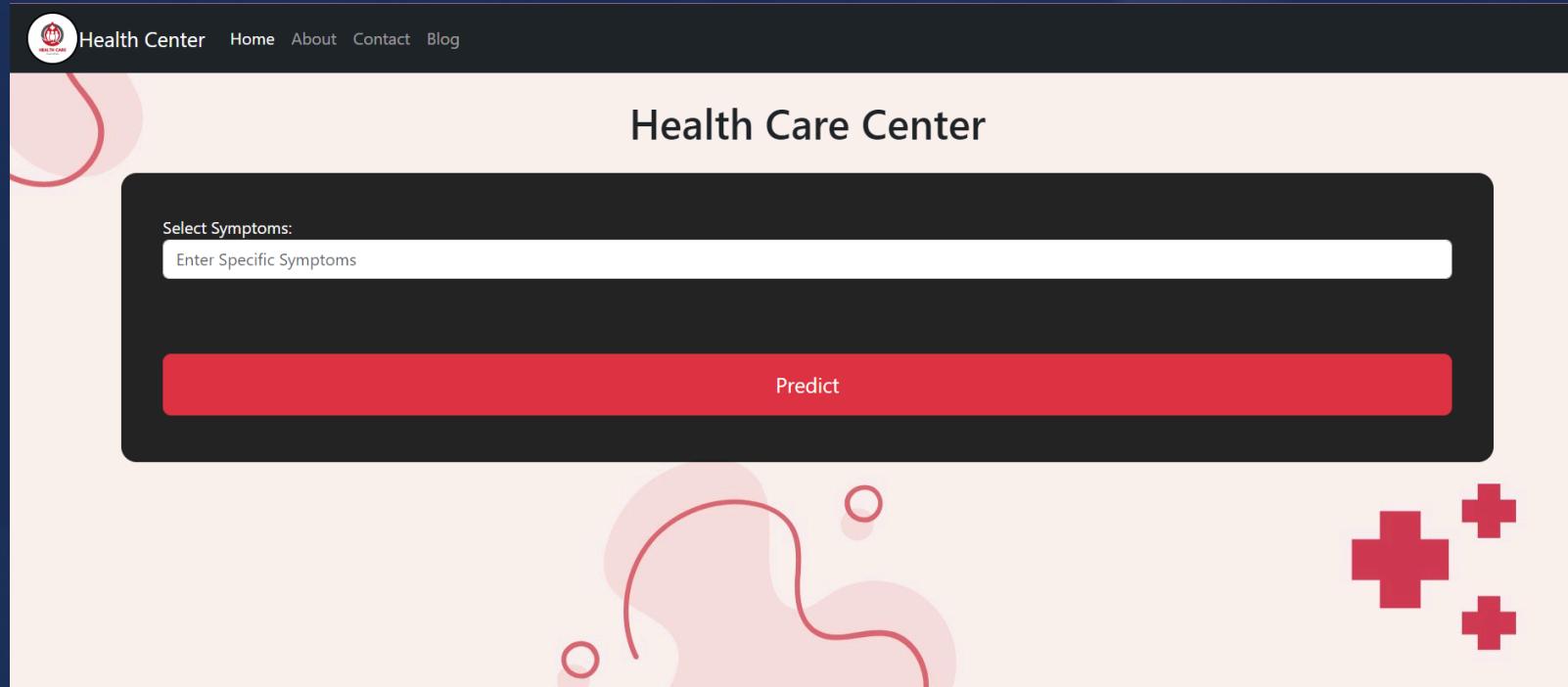


Fig 1 Home

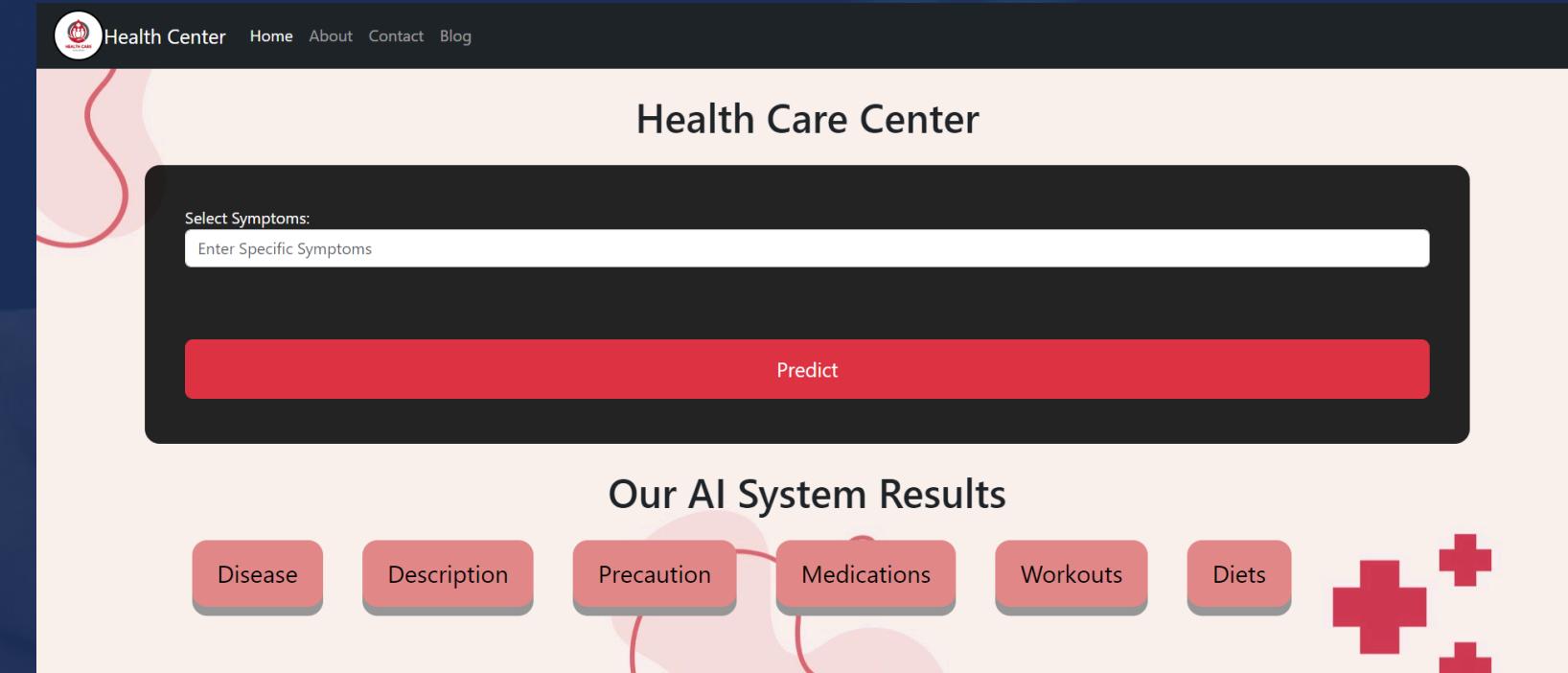


Fig 2 After Prediction

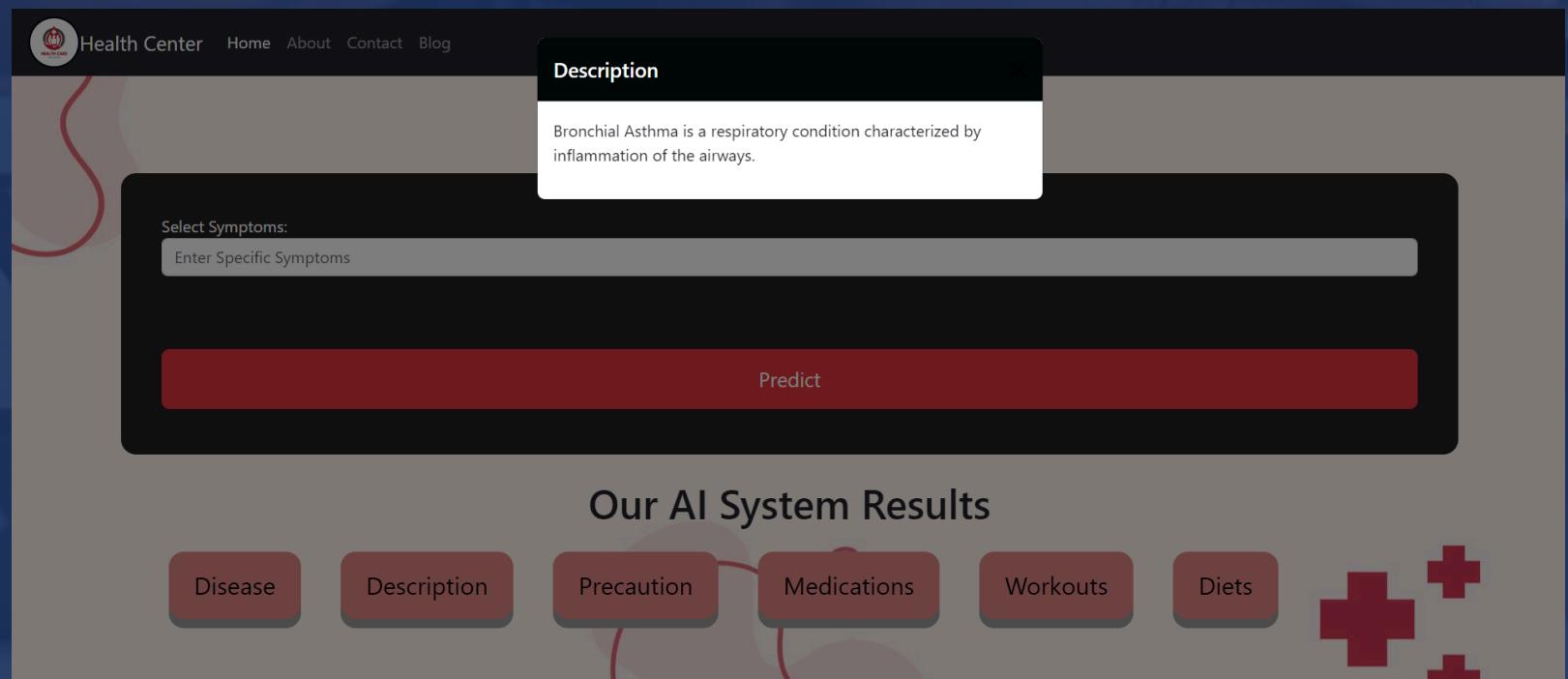


Fig 3 Disease Module

Result

- The disease prediction project encompasses five distinct modules: disease, description, workout, precautions, and diet
- Each of these modules plays a pivotal role in the predictive process, collectively aimed at providing comprehensive insights into potential health conditions.
- Leveraging machine learning algorithms, the system effectively predicts the disease corresponding to the input symptoms, offering users a clear understanding of their health status.
- Furthermore, it goes beyond mere diagnosis, furnishing detailed descriptions of the identified diseases, tailored workout regimens, necessary precautions to mitigate risks, and personalized dietary recommendations.

Conclusion

- In conclusion, the development and implementation of a disease prediction system utilizing machine learning algorithms mark a significant advancement in the realm of healthcare technology.
- The integration of multiple modules, encompassing disease prediction, description, workout, precautions, and diet, ensures a holistic approach to health management.
- Moreover, its user-friendly interface and accessibility make it a valuable tool for both healthcare professionals and individuals seeking to monitor and improve their well-being.
- As technology continues to evolve, the disease prediction system serves as a testament to the transformative potential of machine learning in reshaping the landscape of healthcare delivery

Future Enhancements

- Integrating real-time health data from wearables or electronic health records can improve prediction accuracy by adapting to changing health statuses promptly.
- Personalization efforts, including factors like genetics and lifestyle, can increase user engagement and adherence to recommendations. Expanding the database of diseases and symptoms ensures the system predicts a broader spectrum of conditions accurately.
- Through these enhancements, the system evolves into a sophisticated tool, aiding in early detection, risk mitigation, and personalized health interventions for users worldwide

References

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Thank You

Disease Prediction System

A professional healthcare website used to transform healthcare through AI based solutions.

