

# Health Care - A Personalized Guidance for Non-Communicable Diseases

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## Abstract

All people expect to live a healthy life. But today about eighty million people a year suffer from non-communicable diseases. Among non-communicable diseases, heart disease and diabetes are at the forefront, and the number of deaths due to heart disease is on the rise in people with diabetes. Changes in lifestyle, work-related stress and bad food habits, and smoking addiction all contribute to the increase in the rate of several heart diseases and diabetes diseases. Therefore, a reliable and accurate system is needed to identify such diseases in time for proper treatment. The methodology proposed in this research is based on Machine learning classification techniques using Random Forest (RF), Logistic Regression, Gradient Boosting, etc. It is an android mobile application. The prognosis process gives a cardiac risk analysis percentage based on the patient's heart condition and a diabetic risk analysis percentage based on the diabetic condition by the Kaggle dataset. Accordingly, a daily guideline including calculation of risk level, Exercise recommendation, Meal planner, and Stress Releaser have been proposed system. The accuracy of the proposed system was risk calculation of heart at 82.75%, risk calculation of Diabetics at 81.66%, Meal planner at 89.8%, the exercise scheduler Cardiac status prediction at 73.57%, diabetic status prediction at 78.57%, body performance prediction 74.68% and stress release 100%. This system helps to prevent the associated risk levels and keep healthy life.

## Keywords

Non-Communicable Diseases, Machine Learning, Personalized Daily Guidance, Risk Calculation, Meal Planner, Exercise Scheduler, Stress Releaser