# HEART DISEASE PREDICTION USING DATA MINING AND MACHINE LEARNING

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Using a combination of machine learning algorithms—Random Forest and Logistic Regression—this study introduces a novel method for predicting future cardiac health. The end goal is to create a reliable model that can detect cardiovascular risks early and predict them accurately. By comparing and contrasting the two methods, we find that Random Forest and Logistic Regression work well together and have complementary strengths when dealing with data that contains complicated relationships. The study goes above and beyond traditional static models by incorporating a Real-Time Application that gives users tailored heart health predictions in real-time. In order to provide timely insights for preventive cardiovascular risk management, the application uses the trained models to assess user-input data in real-time. This research adds to the growing body of knowledge in healthcare IT by demonstrating how machine learning may be used to develop interactive, intuitive tools for the detection and prevention of cardiovascular disease. The approach has the potential to reshape future efforts for heart health monitoring and prevention, as the results show promising accuracy and reliability.

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