

# Heart Attack Prediction System

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**Abstract:** Heart disease remains a significant cause of mortality worldwide, with heart attacks being one of its most critical manifestations. Early detection and accurate prediction of heart attacks are essential for timely medical intervention and improved patient outcomes. This paper proposes a heart attack prediction system based on machine learning techniques to identify individuals at high risk of experiencing a heart attack. The system utilizes a comprehensive set of features, including demographic information, medical history, and physiological parameters, to train and develop predictive models. The performance of various machine learning algorithms is evaluated, and the most accurate model is selected for prediction purposes. Experimental results demonstrate the effectiveness of the proposed system in accurately identifying individuals susceptible to heart attacks.

**Keywords:** Heart attack prediction, machine learning, cardiovascular diseases, risk assessment, feature selection

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