**INTRODUCTION:**

Since heart disease is one of the world's leading causes of mortality, improving patient outcomes requires early detection. Based on clinical data, this study uses machine learning algorithms to create a precise and effective system for forecasting the risk of heart disease. Our methodology seeks to support medical practitioners in early diagnosis and decision-making by examining patterns in the data.

**PROBLEM STATEMENT:**

Because they are frequently costly, time-consuming, and need specialist knowledge, traditional methods of diagnosing cardiac disease are not available in settings with limited resources. By utilizing the UCI Heart Disease Dataset to create a machine learning-based predictive model, this study aims to address these issues. The objective is to develop a reliable and understandable method for estimating the likelihood of heart disease based on patient characteristics including age, blood pressure, and cholesterol levels.

**TEAM MEMBERS:**

**GOWTHAMI GUDE**

**Role**: Model evaluation, deployment, and API integration.

**Contribution:** deployed the application using Streamlit and implemented model performance metrics (ROC-AUC, F1-score).

**SURENDER REDDY**

**Role:** Data preprocessing, EDA, and model development.

**Contribution:** Handled feature scaling, data cleaning, and created initial ML models (Logistic Regression, Random Forest) and done the application using panel app