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**Abstract**

Heart disease is a major health concern, claiming countless lives annually. Early detection and management can significantly improve outcomes and potentially save lives. This report aims to provide a clear and concise overview of heart disease prediction methods. We will explore various techniques and computer models used to predict the risk of heart disease, explaining their mechanisms, and presenting key findings in an accessible table.

**Introduction**

Cardiovascular disease, a leading cause of death worldwide, requires aggressive management. Early identification of risks is essential to take measures to prevent its devastating effects. This report delves into the prognostic power of cardiovascular disease, emphasizing the value of early detection and intervention. Through a comprehensive review of existing research and models, this paper seeks to shed light on effective methods for predicting, and ultimately building, cardiovascular disease in their eyes to improve individual public health outcomes.

**Literature Survey**

A lot of different methods have been used to try and predict heart disease. Studies have used machine learning, statistics, and even combinations of these to figure out if someone's at risk. These models often look at things like age, cholesterol, blood pressure, and how someone lives to make their predictions.

**Models**

Several approaches can help predict the likelihood of someone getting heart disease. One way is with computer models like "logistic regression," "support vector machines," and "decision trees." These models analyse information about patients, such as age, weight, blood pressure, and habits, to estimate their risk of developing heart disease over a certain period. This allows doctors and individuals to take early steps like changing habits or starting treatments to manage and potentially prevent heart disease.

**Methodology**

Predicting heart disease follows a few steps. First, doctors gather important information about patients, like their age, weight, blood pressure, and habits. Next, they make sure this information is correct. Then, they use special computer programs to "train" a model to find patterns and predict risk. Finally, they test the model with new information to see how well it works.

**Results:**

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| **Model** | **Accuracy** |
| LogisticRegression | 81.97% |
| KNeighborsClassifier | 62.29% |
| SVC | 62.29% |
| DecisionTreeClassifier | 70.49% |
| RandomForestClassifier | 75.41% |

These results illustrate the performance of different models in predicting heart disease, highlighting their accuracy. Hence we will use Logistic Regression algorithms for training my model.