
# CodeAlpha Internship

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| **Task Title** | ***DISEASE PREDICTION FROM MEDICAL DATA*** |
| **Dataset** | Heart Disease Classification Dataset |

A heart disease prediction model is a machine learning or statistical model designed to predict the likelihood of an individual developing heart disease based on various health-related features. The model typically uses a dataset that includes both the target variable (indicating whether or not an individual has heart disease) and a set of predictor variables (features) such as age, gender, cholesterol levels, blood pressure, smoking habits, and other relevant medical and lifestyle factors.

- Data Collection
- Data Preprocessing
- Feature Selection
- Model Selection
- Model Evaluation

| Description | Machine Learning Algorithm | Evaluate the model |
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| ☐ Leveraging advanced machine learning algorithms, the program processes input data such as age, blood pressure, cholesterol levels, and smoking habits to generate a risk score. This score helps healthcare professionals make informed decisions about patient care, including recommendations for lifestyle changes, further medical testing, or preventative treatments. With a user-friendly interface, secure data handling, and robust reporting features, the program enhances the early detection and management of heart disease, ultimately aiming to improve patient outcomes and reduce the overall burden of cardiovascular conditions. | ☐ In the heart disease prediction program, we utilize the Logistic Regression algorithm, a widely-used statistical method for binary classification tasks. Logistic Regression is particularly well-suited for predicting the probability of a binary outcome—such as the presence or absence of heart disease—based on one or more predictor variables. | ☐ Test the model using the testing dataset and evaluate its performance by calculating key evaluation metrics, including accuracy, precision other relevant measures. |