# Evaluation Report – Heart Disease Prediction

This evaluation report presents the performance analysis of a Logistic Regression model trained on the Heart Disease dataset. The dataset was divided into training and testing sets using an 80:20 split to ensure unbiased evaluation on unseen data.

## Model Evaluation Metrics

Accuracy represents the overall correctness of the model by measuring the proportion of correct predictions made on the test dataset. Precision measures the reliability of positive predictions by indicating how many predicted heart disease cases were actually correct. Recall evaluates the model's ability to correctly identify patients who truly have heart disease, which is a critical metric in healthcare applications.

### Confusion Matrix Analysis

The confusion matrix provides a detailed breakdown of prediction results in terms of true positives, true negatives, false positives, and false negatives. True positives and true negatives represent correct predictions, while false positives indicate incorrect disease predictions and false negatives indicate missed disease cases.

## Result Interpretation

The Logistic Regression model shows balanced performance across accuracy, precision, and recall, making it a suitable baseline model for heart disease prediction. High recall helps minimize missed diagnoses, while reasonable precision reduces false alarms. Overall, the results demonstrate that the model effectively captures important patterns in the data and provides reliable predictions.