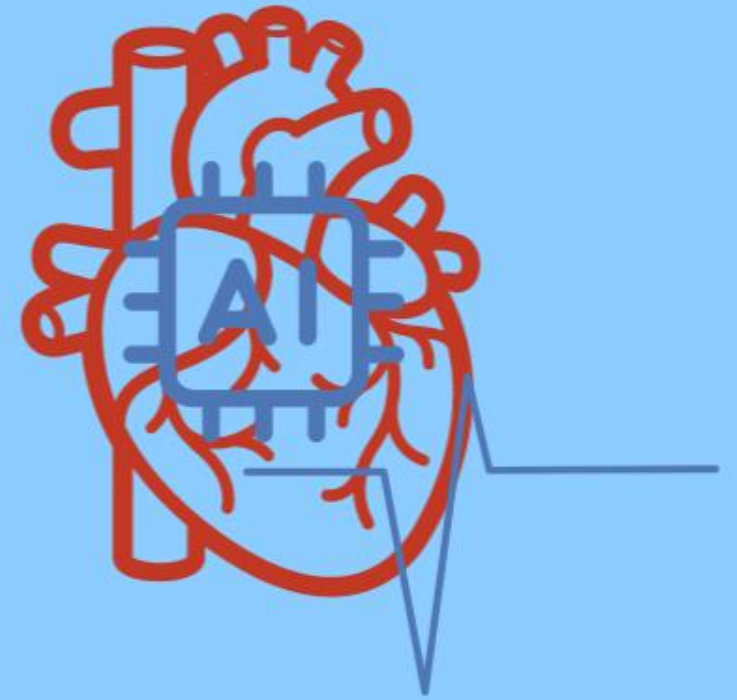


# AI Medical Diagnosis Prediction Tool

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# INTRODUCTION



Heart disease is the leading cause of death worldwide, causing millions of fatalities annually.



The goal of the Project is to develop an AI Medical Diagnostic Tool that uses machine learning to predict heart diseases or conditions based on patient data, medical history, and test results.



This project aims to create an AI-powered medical diagnosis prediction tool using machine learning algorithms to predict heart disease based on patient data.

# Implementation

01

Developed AI tool for medical diagnosis prediction addresses the problem of inaccurate heart disease diagnosis and patient outcomes.

02

Data preprocessing steps taken to ensure accurate predictions include imputing missing values, converting categorical features to numerical representations, and normalizing or standardizing numerical features.

03

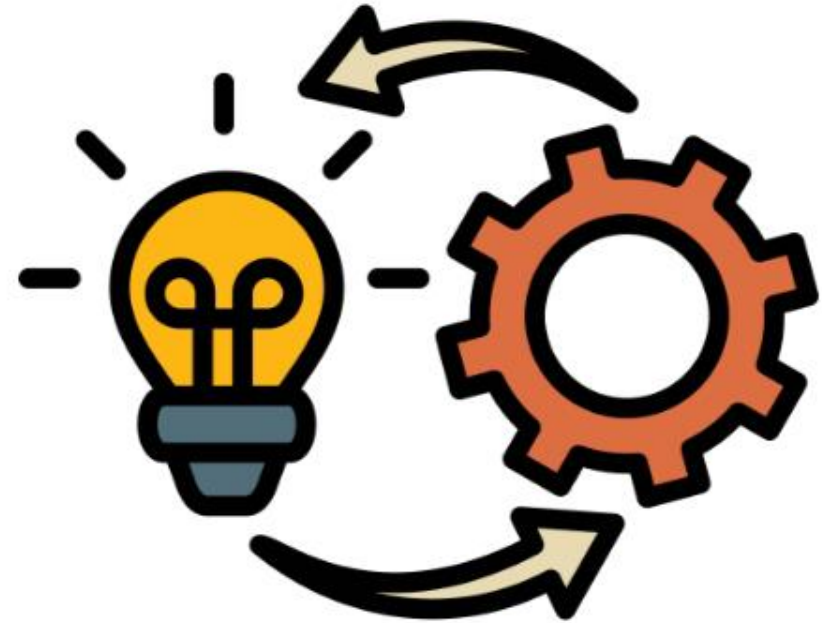
Feature selection techniques like correlation analysis and relevant feature selection were used to select the most important features for the predictive model.

04

The combination of these data preprocessing and feature selection techniques helped to ensure the validity of the predictive model.

05

Overall, the developed AI tool can accurately predict a patient's heart disease status, potentially leading to better outcomes and improved patient care.



# Model Evaluation

The AI tool was evaluated using a separate test dataset, achieving high accuracy, precision, recall, and an effective trade-off between sensitivity and specificity, indicating its ability to generalize to new data.



Accuracy



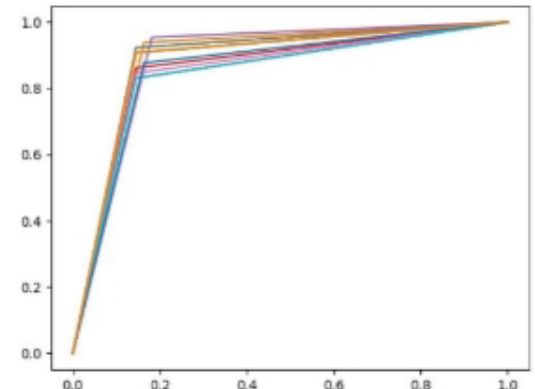
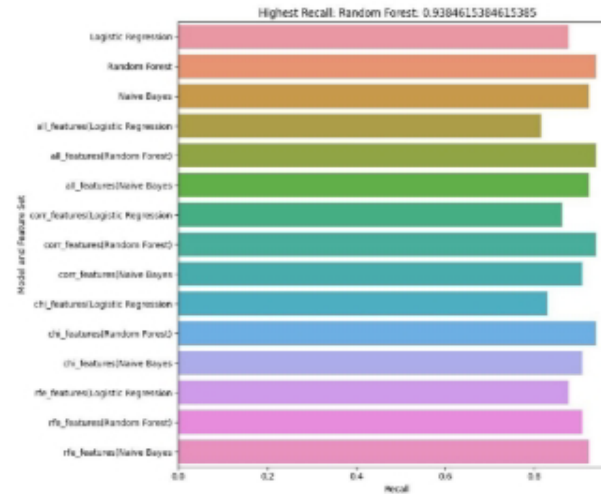
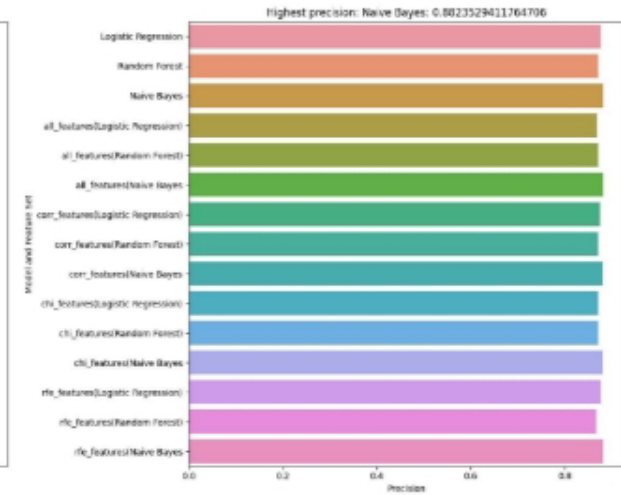
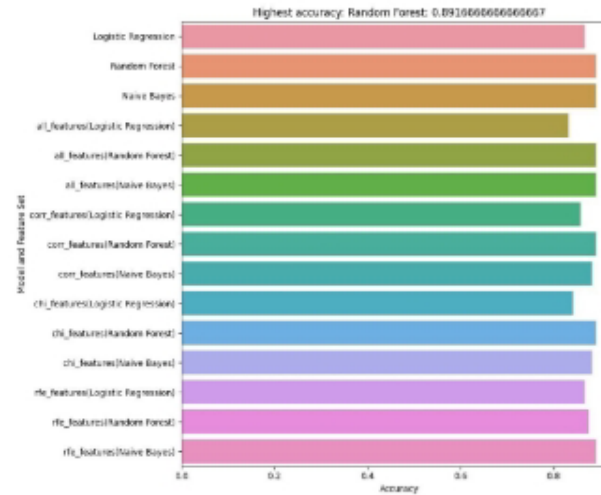
Precision



Recall



ROC



# Conclusion

- An AI medical diagnostic prediction tool for heart disease was developed using patient data.
- Data preprocessing and cleaning, feature selection, model selection and training, model assessment, user interface creation, and displaying predictions and outcomes were all part of the process.
- The tool has the potential to enhance early identification and treatment of heart disease, thus lowering its impact on public health.
- Lessons learned include the importance of data quality, feature selection, and model fine-tuning for optimal performance.
- The accuracy and usefulness of the tool will depend on continuous examination and upgrading as new data and studies emerge.

## Heart Disease Prediction Tool

Age:

Sex:

Select one

Chest Pain Type:

Select one

Resting Blood Pressure:

Cholesterol (mg/dL):

Fasting Blood Sugar (mg/dL):

Select one

Resting ECG:

Select one

Maximum Heart Rate:

Cholesterol (mg/dL):

Fasting Blood Sugar (mg/dL):

Select one

Resting ECG:

Select one

Maximum Heart Rate:

Exercise-Induced Angina:

Select one

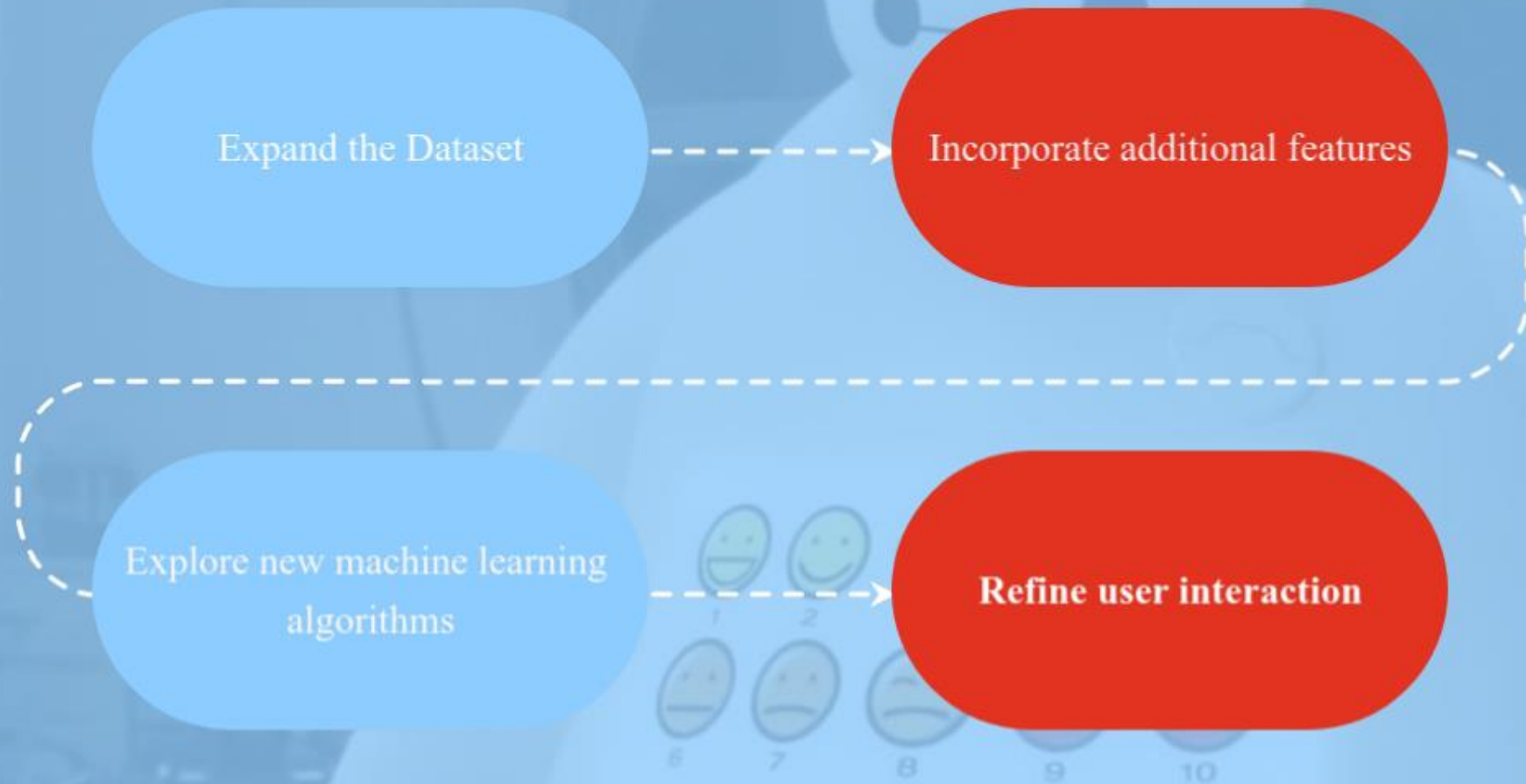
ST Depression:

ST Slope:

Select one

Predict





# Thank You

<https://github.com/comp195/senior-project-spring-2023-medical-ai-disease-diagnostic-tool.git>

