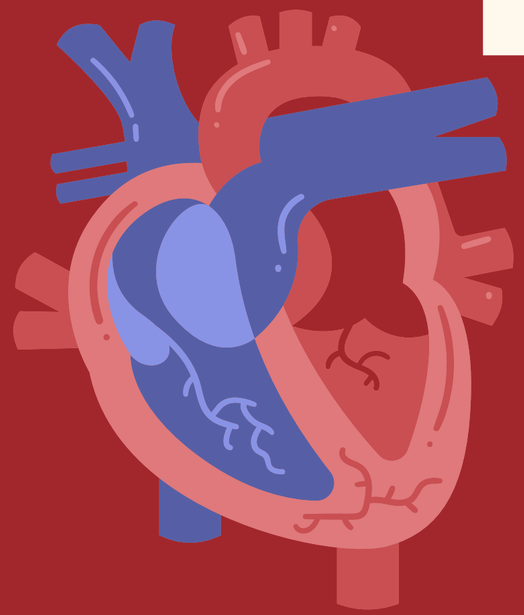
AI & SOCIETY PROJECT

HEART DISEASE PREDICTION



PROJECT BY:
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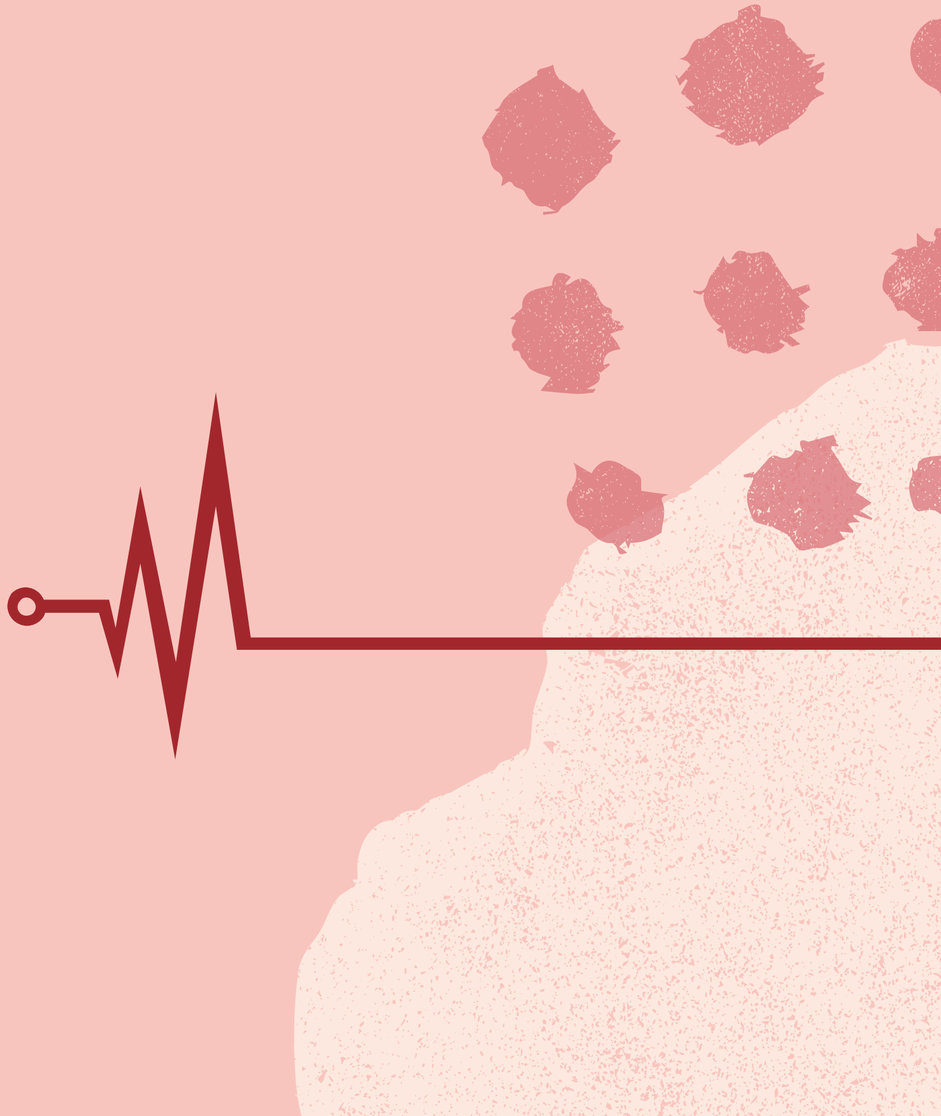
INTRODUCTION

The growing prevalence of heart disease worldwide underscores the urgent need for early detection and proactive management of cardiovascular conditions. Artificial Intelligence (AI) has emerged as a transformative tool in healthcare, enabling the development of predictive models that can assess an individual's risk of heart disease with remarkable accuracy.

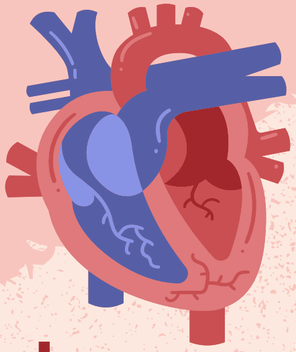


MOTIVATION

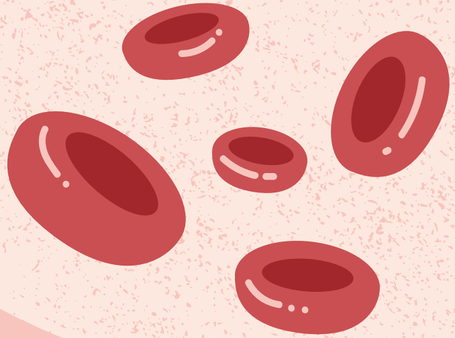
Heart disease remains one of the leading causes of death worldwide, affecting millions each year and placing an immense burden on healthcare systems.

The motivation behind developing an AI-based heart disease prediction model lies in its potential to bridge this gap in early diagnosis and risk assessment. By analyzing large volumes of health data—including medical history, lab results, and lifestyle information—AI can identify high-risk individuals who may otherwise go undetected.

OBJECTIVES



To make good use of technology & develop a heart prediction model and extract hidden knowledge of disease



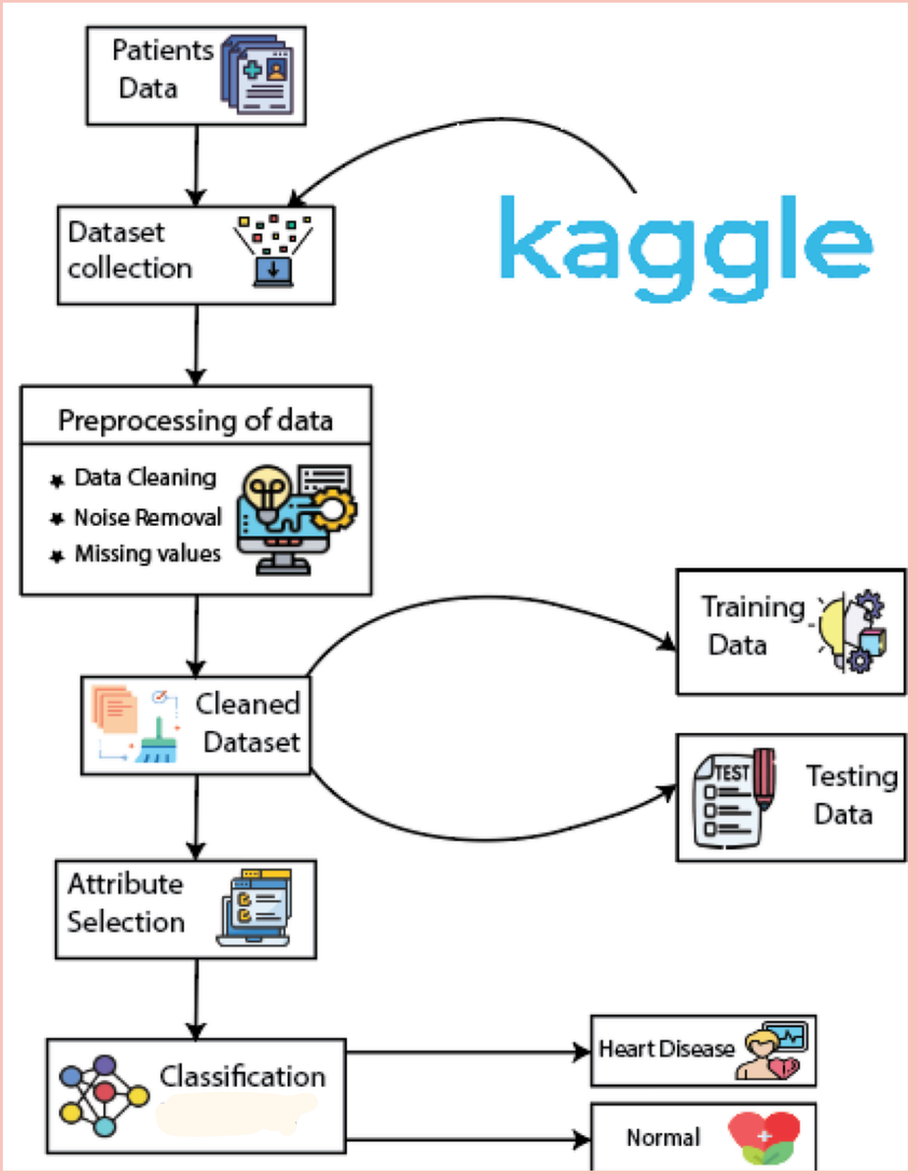
Reduce the cost of medical tests & avoid human biases

MAIN FACTORS

age: Age of the patient in years.
sex: Sex of the patient (1 = male; 0 = female).
cp (Chest Pain Type): Types of chest pain experienced, often represented as:

trestbps (Resting Blood Pressure): Resting blood pressure in mm Hg when the patient was admitted.
chol (Serum Cholesterol): Serum cholesterol in mg/dL.
fbs (Fasting Blood Sugar): Fasting blood sugar level (>120 mg/dL = 1; otherwise = 0)
restecg (Resting Electrocardiographic R
thalach (Maximum Heart Rate Achieved): Maximum heart rate achieved during the test.
exang (Exercise-Induced Angina): Exercise-induced angina (1 = yes; 0 = no).
oldpeak: ST depression induced by exercise relative to rest.
slope (Slope of the Peak Exercise ST Segment): Slope of the peak exercise ST segment, typically:
ca (Number of Major Vessels Colored by Fluoroscopy): Number of major vessels (0–3) colored by fluoroscopy, indicating the severity of blockage.
thal: Thalassemia status

PROPOSED MODEL



Heart Disease Prediction using application Machine Learning model

Age

1

Sex

M

F

Chest Pain types

0

Resting Blood Pressure

50

Serum Cholestoral in mg/dl

20

Fasting Blood Sugar > 120 mg/dl

50

Resting Electrocardiographic results

0

Maximum Heart Rate achieved

0.00

Exercise Induced Angina

0.00

ST depression induced by exercise

0.00

Slope of the peak exercise ST segment

0.00

Major vessels colored by flourosopy

0

Thalassemia

normal

APPLICATIONS

- Medical institutions

To teach medical students how heart attack are measeared or to identify heart disease

- Hospitals

To detect heart disease of patient

- To create awareness regarding heatlh issue and maintenance

GITHUB LINK: https://github.com/riyag8076/HEART-DISEASE-PREDICTION.git

THANK YOU