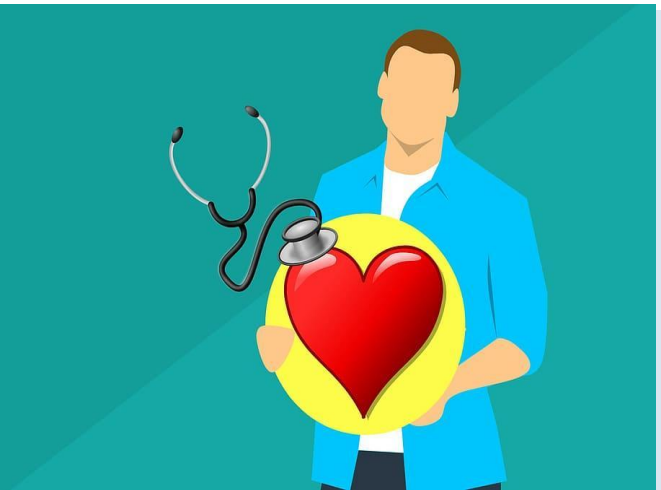
Heart Disease Diagnostic Analysis



Introduction

The analysis investigated factors associated with heart disease presence using demographic and symptom-related insights. It found that individuals with heart disease tend to be older, with a slight male predominance. Typical angina and asymptomatic chest pain types were more commonly associated with heart disease, along with potential correlations with fasting blood sugar levels and certain thalassemia types. Visualizations including pie charts and a line graph provided clear representations of gender distribution, chest pain type distribution, and trends in heart disease likelihood. Key findings highlighted the importance of typical angina and asymptomatic chest pain types as risk factors, alongside a slightly higher prevalence of heart disease among males. Further insights suggested the potential for more in-depth exploration of risk factors and the use of advanced techniques like machine learning for predictive analysis.

Details of Data

Found the analysis of age, sex, cp, trestbps , chol, fbs, restecg, thalach, exang, oldpeak,

slope,ca, thal, target.

Also found the ETL: Extract- Transform and Load data from the heart disease diagnostic database.

Even compared attributes, to visualize features and made the best dashboard.

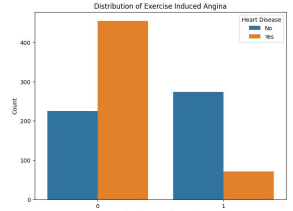
Found the key metrics and factors that showed meaningful relationships between attributes.

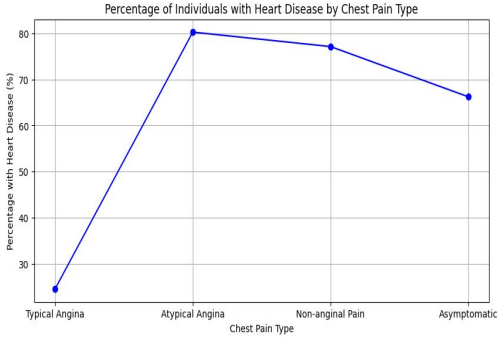
Found the mean, median, mode, standard deviation, Age Range by Heart Disease Presence,

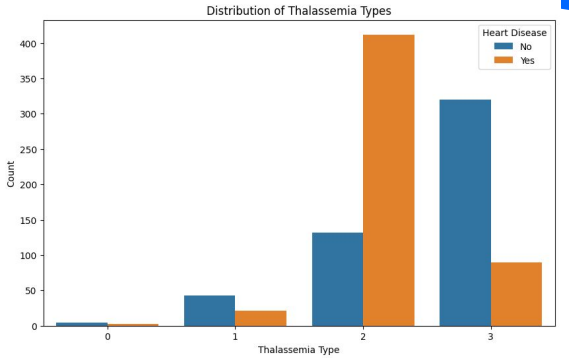
Proportion, Percentage, Frequency, Distribution for various

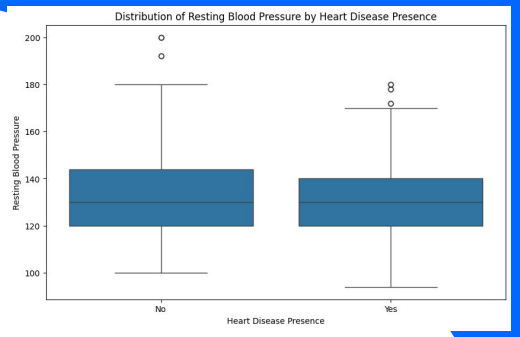
Diagnosis (Pie Chart, Bar & Histogram.)

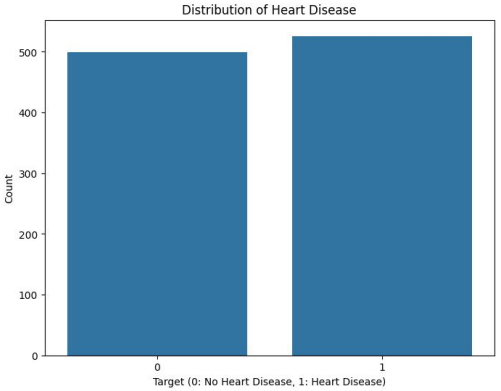
My Design

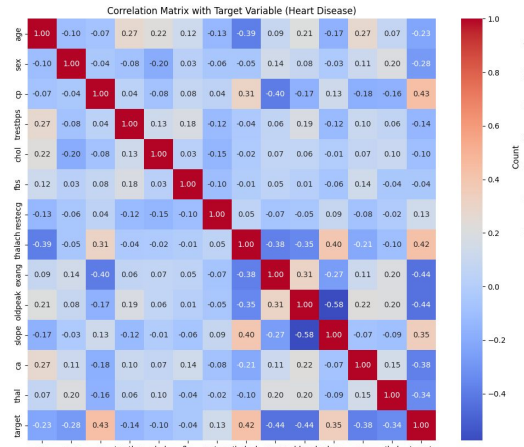

Distribution of Exercise Induced Angina
Heart Disease
No
Yes
Count
Exercise Induced Angina

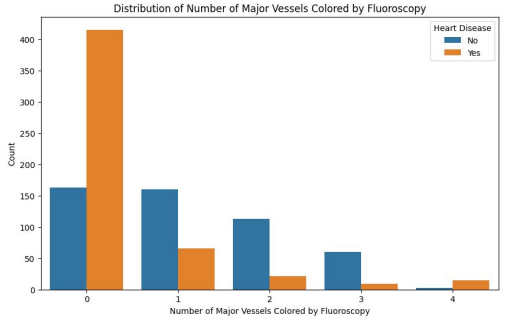

Percentage of Individuals with Heart Disease by Chest Pain Type
Percentage with Heart Disease (%)
Typical Angina
Atypical Angina
Non-anginal Pain
Asymptomatic
Chest Pain Type

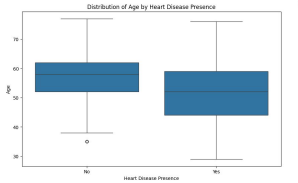

Distribution of Thalassemia Types
Heart Disease
No
Yes
Count
Thalassemia Type

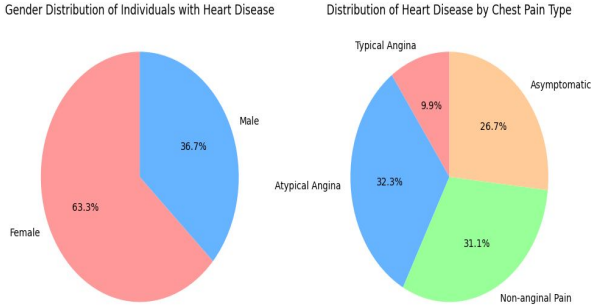

Distribution of Resting Blood Pressure by Heart Disease Presence
Resting Blood Pressure
No
Yes
Heart Disease Presence


Distribution of Heart Disease
Count
Target (0: No Heart Disease, 1: Heart Disease)

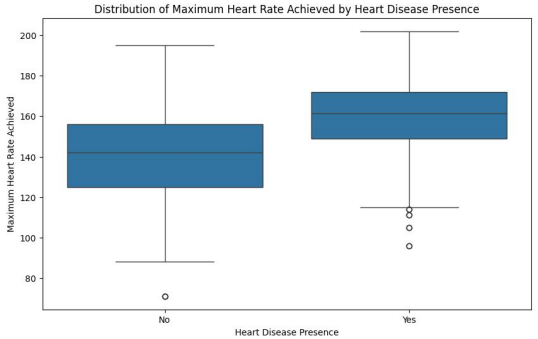

Correlation Matrix with Target Variable (Heart Disease)
age
sex
cp
trestbps
chol
fbs
restecg
thalach
exang
oldpeak
slope
ca
thal
target

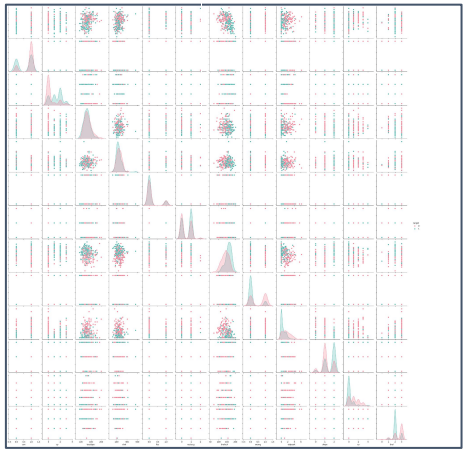

Distribution of Number of Major Vessels Colored by Fluoroscopy
Heart Disease
No
Yes
Count
Number of Major Vessels Colored by Fluoroscopy

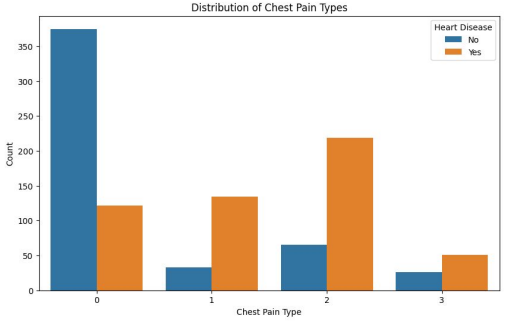

Distribution of Age by Heart Disease Presence
Age
No
Yes
Heart Disease Presence

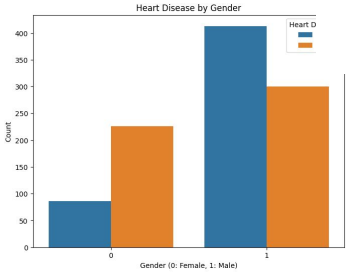

Gender Distribution of Individuals with Heart Disease
Male
Female
36.7%
63.3%

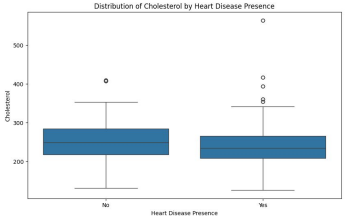
Distribution of Heart Disease by Chest Pain Type
Typical Angina
Asymptomatic
Atypical Angina
Non-anginal Pain
9.9%
26.7%
32.3%
31.1%

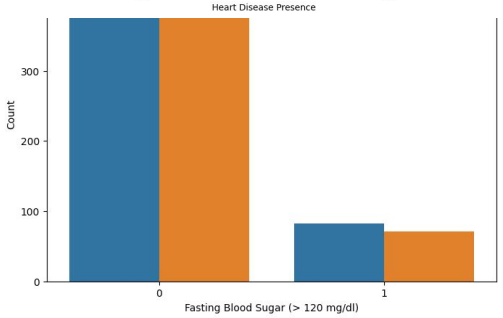

Distribution of Maximum Heart Rate Achieved by Heart Disease Presence
Maximum Heart Rate Achieved
No
Yes

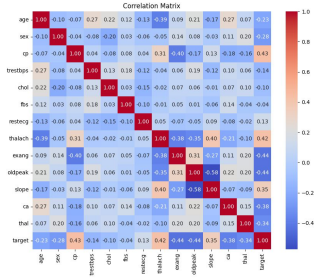


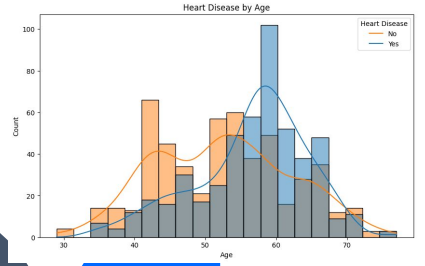

Distribution of Chest Pain Types
Heart Disease
No
Yes
Count
Chest Pain Type


Heart Disease by Gender
Heart D
Count
Gender (0: Female, 1: Male)


Distribution of Cholesterol by Heart Disease Presence
Cholesterol
No
Yes
Heart Disease Presence


Heart Disease Presence
Count
Fasting Blood Sugar (> 120 mg/dl)


Correlation Matrix


Heart Disease by Age
Heart Disease
No
Yes
Count
Age

Thank you