



HEALTHCARE ANALYTICS ON HEART DISEASE DATA

DETAILED PROJECT REPORT

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PROJECT DETAIL

Project Title	Healthcare Analytics on Heart Disease Data
Technologies	Business Intelligence Data Analysis
Domain	Healthcare
Project Difficulty Level	Intermediate



OBJECTIVE

The goal of this project is to analyse the occurrence of heart disease in a person based on a combination of features that describe the heart disease.



PROBLEM STATEMENT

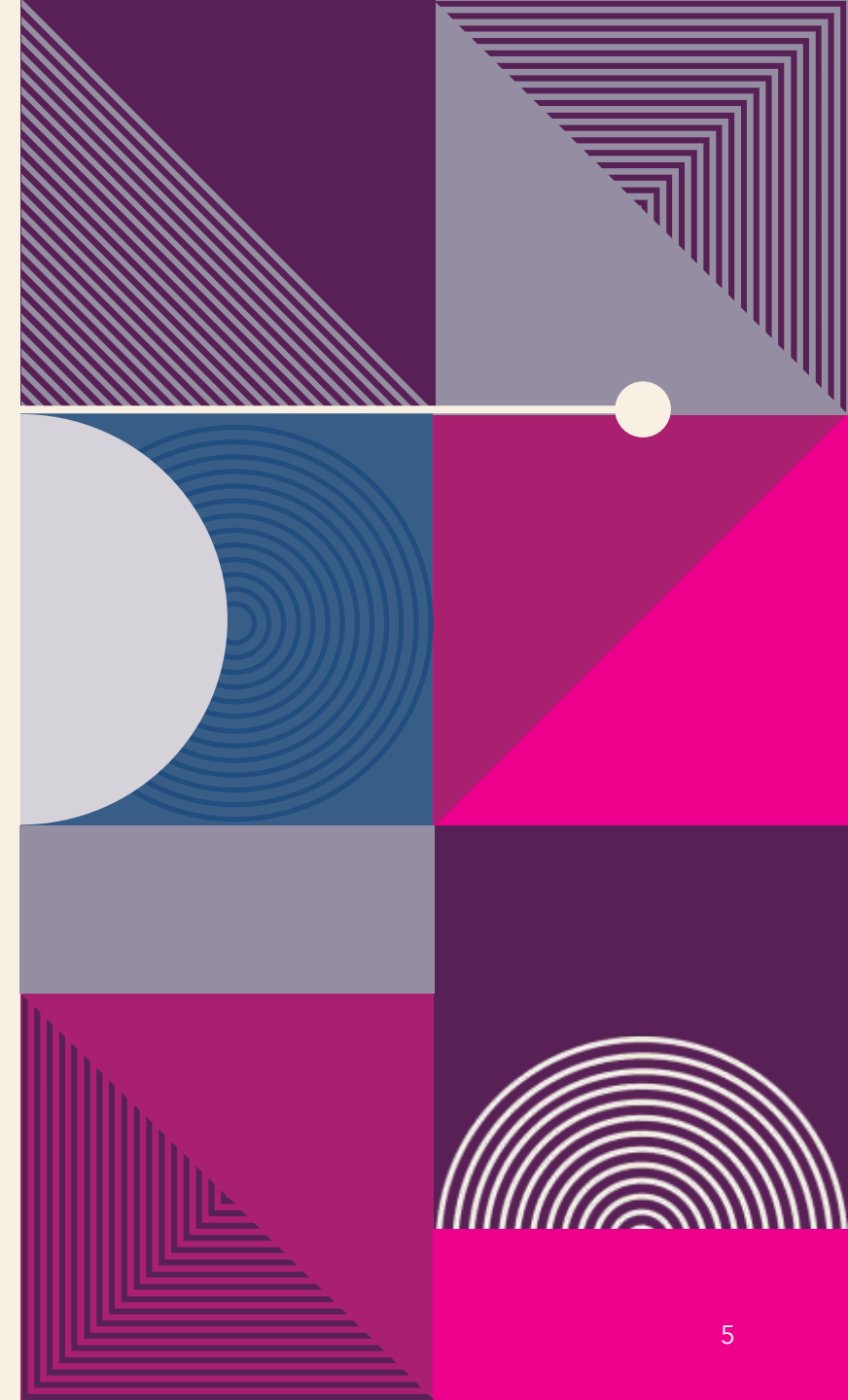
Health is real wealth in the pandemic time we all realized the brute effects of covid-19 on all irrespective of any status. You are required to analyze this health and medical data for better future preparation.

A dataset is formed taking into consideration information of some individuals. Find key metrics and factors and show the meaningful relationships between attributes of the dataset.

DATA SET DETAILS

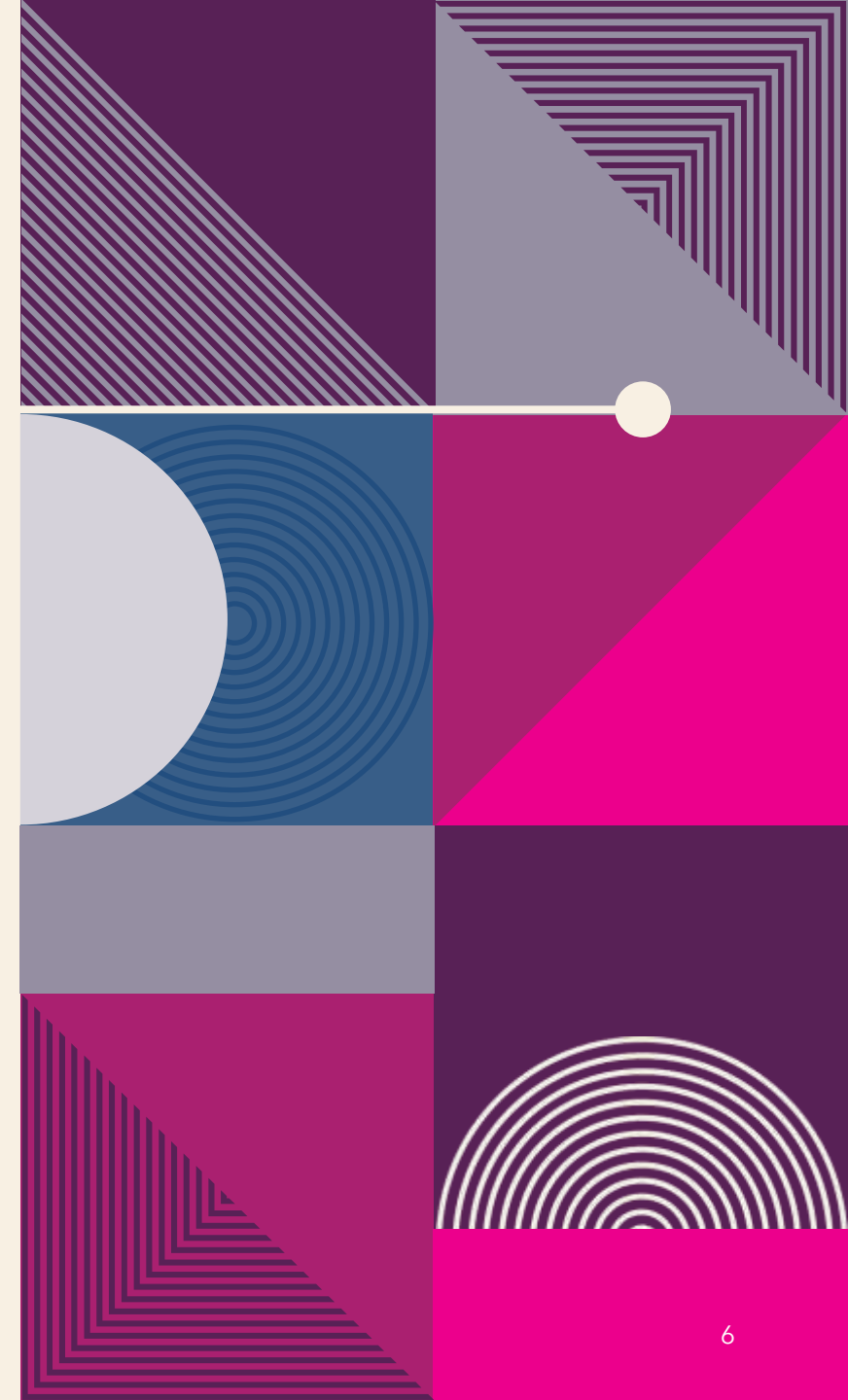
The fourteen features in Dataset we refer to are:

- ❖ Age: Age of different individuals in years
- ❖ Sex: Gender of the individuals [1=Male , 0=Female]
- ❖ Cp: Describes the Chest Pain experienced [0:asymptomatic , 1: Atypical Angina , 2: Non-Anginal Pain , 3:Typical Angina]
- ❖ Trestbps: Describes the Resting Blood Pressure in mm/hg
- ❖ Chol: Describes the Serum Cholesterol Level in mg/dl
- ❖ Fps: Describes the Fasting Blood Sugar > 120 mg/dl [0 = no, 1 = yes]
- ❖ Restecg: Describes the Resting ECG
[0: showing probable or definite left ventricular hypertrophy by Estes' criteria, 1: normal, 2: having ST-T wave abnormality]



DATA SET DETAILS

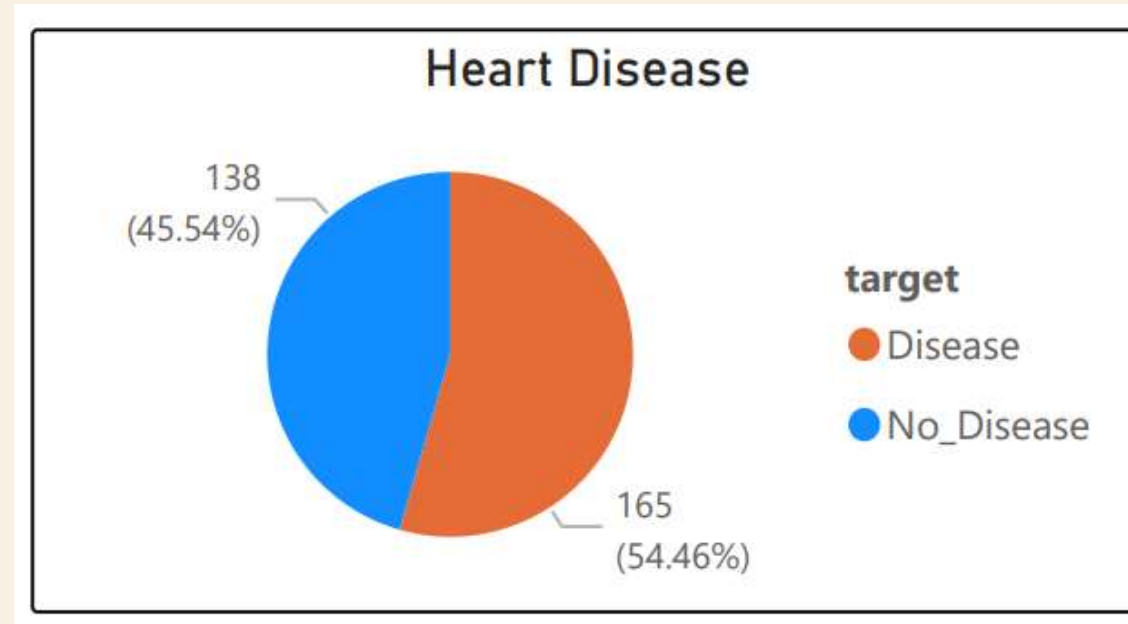
- ❖ Thalach: Describes the maximum heart rate achieved
- ❖ Exang: Refers to Exercise Induced Angina [1 = yes, 0 = no]
- ❖ Oldpeak: Refers to ST depression induced by exercise relative to rest
- ❖ Slope: Describes the slope of the peak exercise ST segment
[0: downsloping; 1: flat; 2: upsloping]
- ❖ Ca: [number of major vessels (0–3)]
- ❖ Thal: A blood disorder called thalassemia
[1 = normal, 2 = fixed defect, 3 = reversible defect]
- ❖ Target: Heart Disease [0 = disease, 1 = no disease]



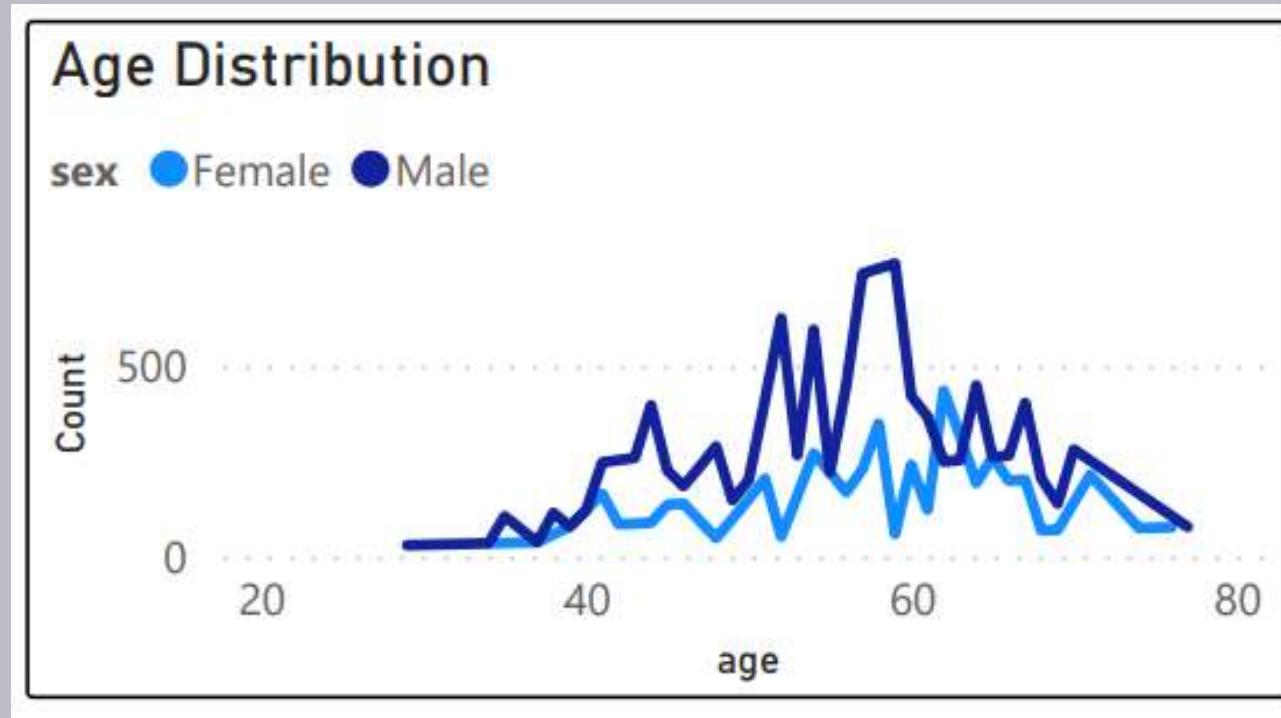


INSIGHTS

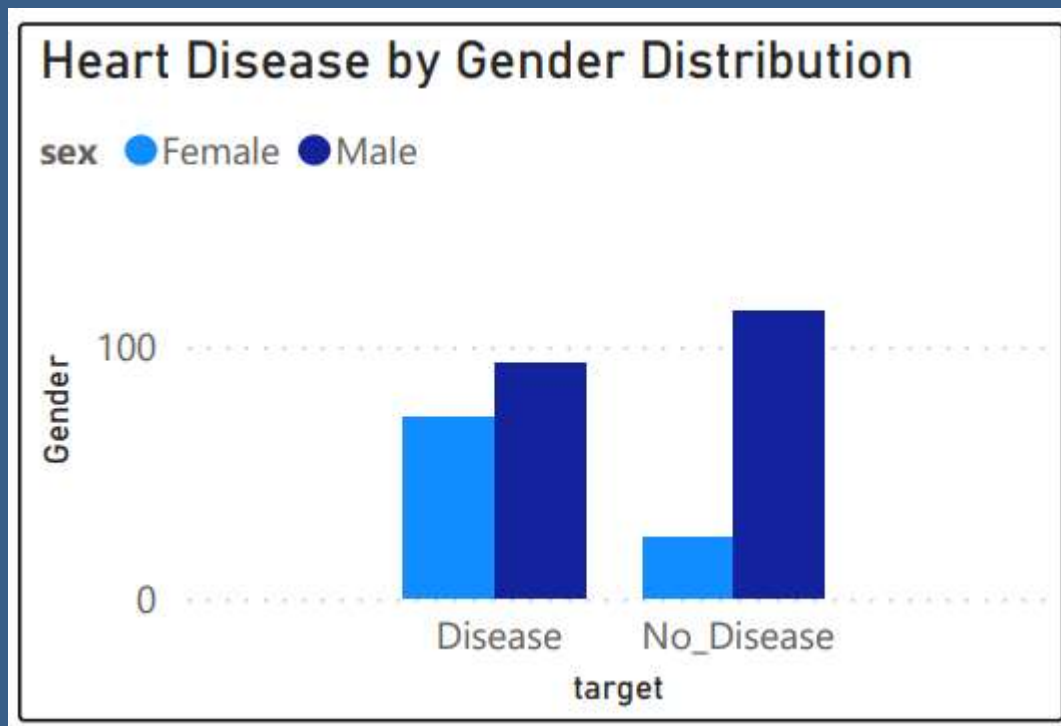
POPULATION



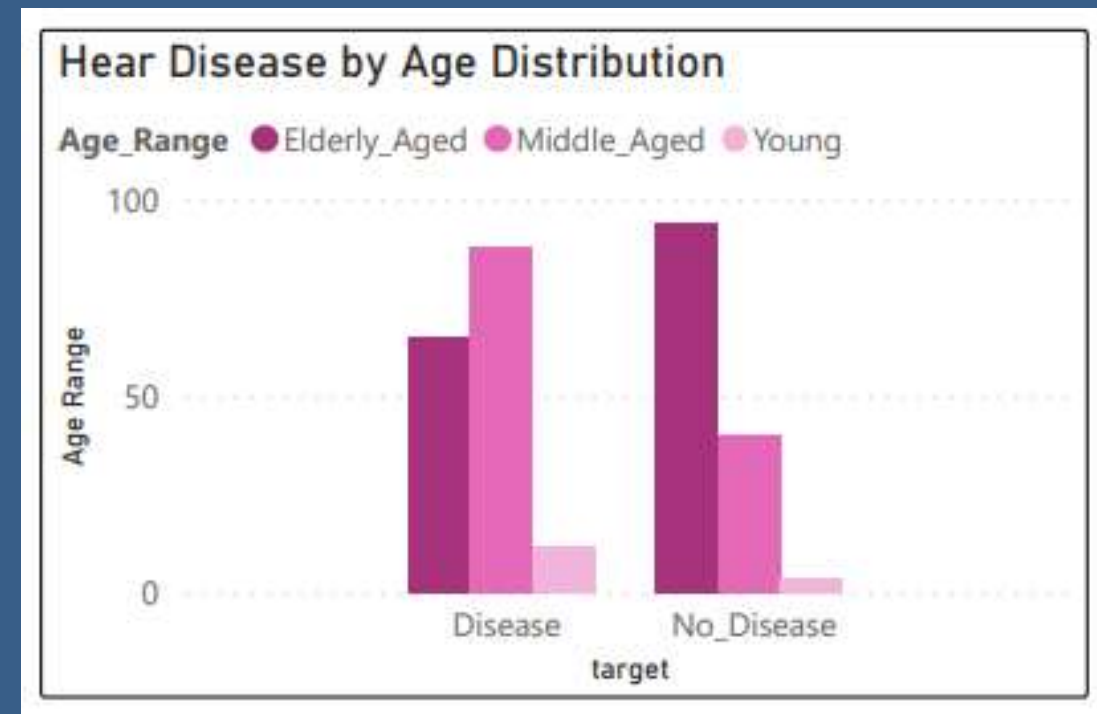
Disease accounted for 54.46% of Count of targe



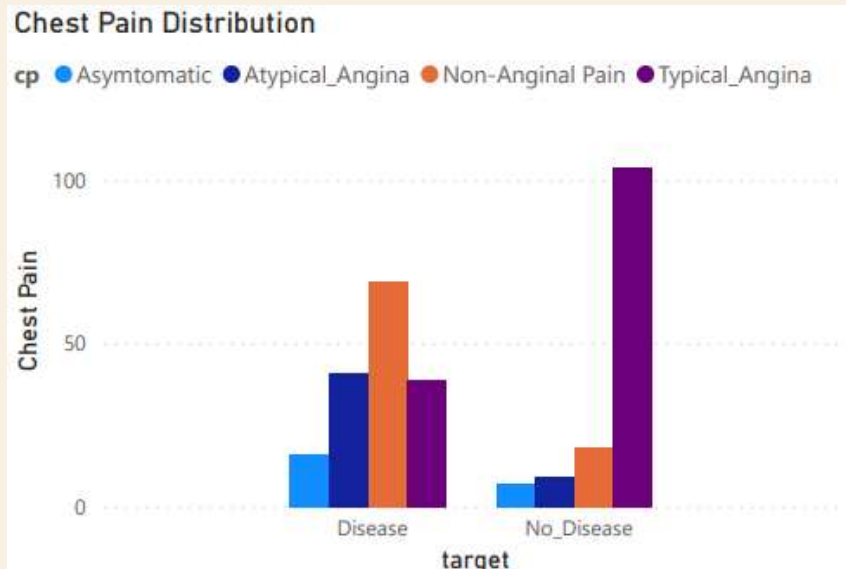
Average age was higher for Male than Female



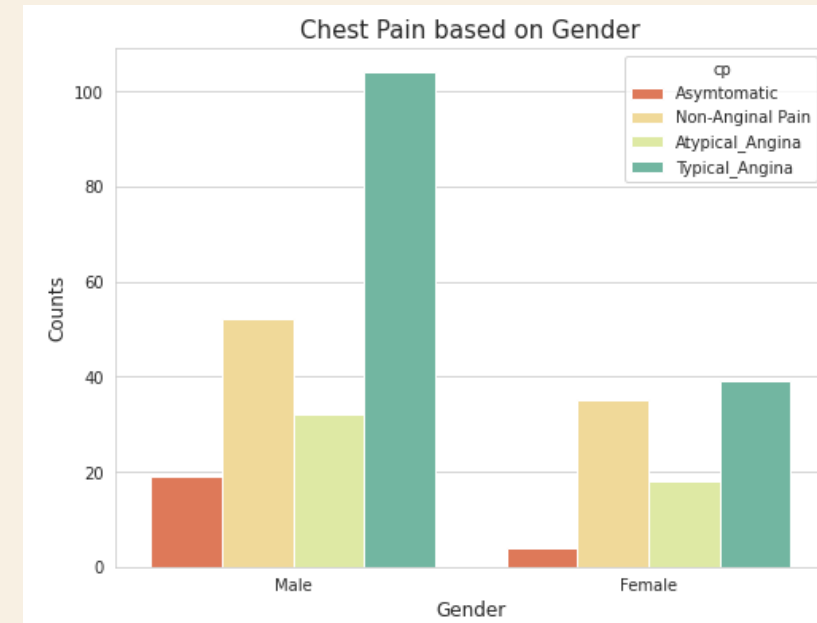
Males are more prone to heart diseases



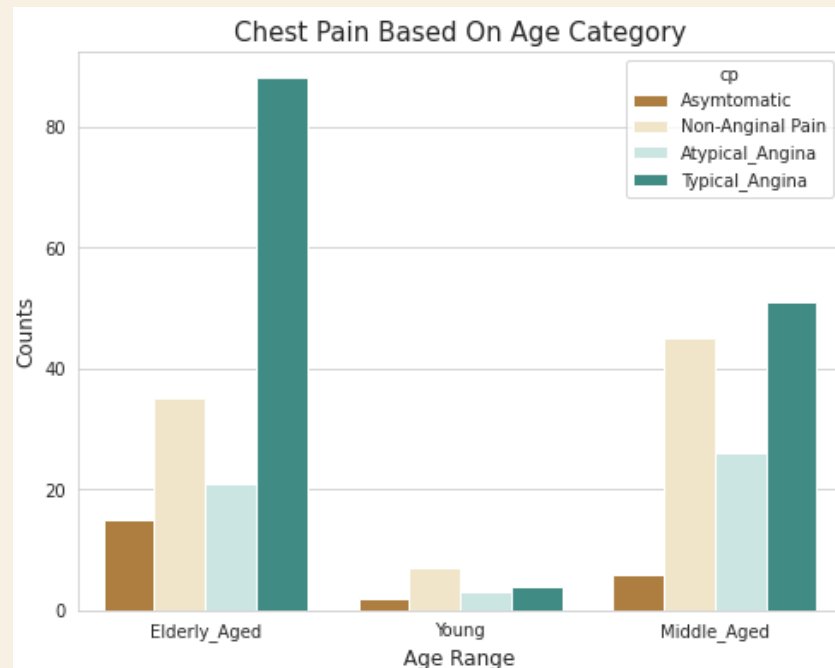
Middle Aged people are most affected by Heart Disease



higher number of healthy subjects have Typical Angina



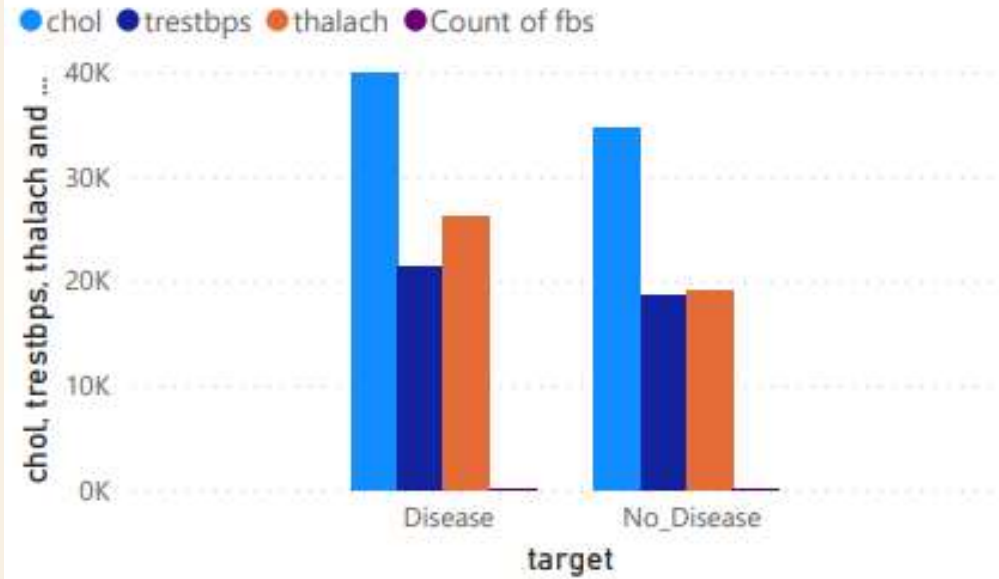
We can see that a higher number of men are suffering from Typical Angina of Chest Pain



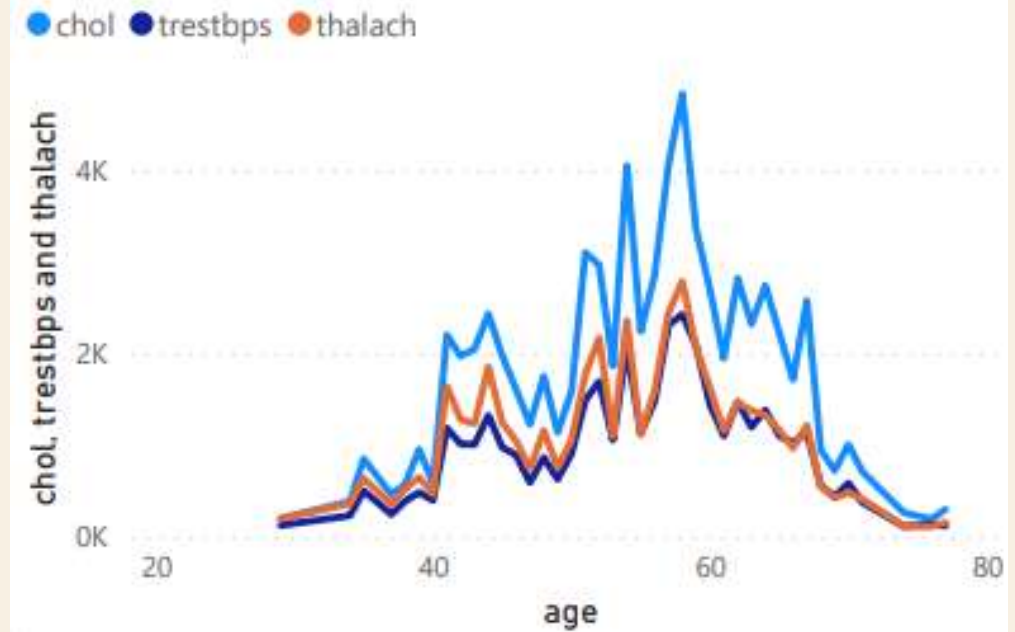
2021

subjects in Elderly Age category i.e. above 55 suffer from Typical Angina

Cholestrol,Blood Pressure,Heart Rate and Fasting Blood Sugar by Heart Disease



Cholestrol,Blood Pressure and Hear Rate by Age



chol and total trestbps are positively correlated with each other.



CONCLUSION

- People suffering from heart disease constitutes of 54% of the total population.
- Most of the patients are in the age group 50-60.
- Middle Aged people are most affected by Heart Disease
- higher number of healthy subjects have Typical_Angina can be subjective to stress, physical activities and many more and varies between gender.
- higher number of men are suffering from Typical Angina of Chest Pain
- Blood Pressure Levels are almost equal in both Males and Females
- Higher Blood Pressure Level results Chances Of Heart Disease
- Higher Cholestrol Levels results chances of Heart Disease
- ,there are higher number of heart disease patient without diabetes.