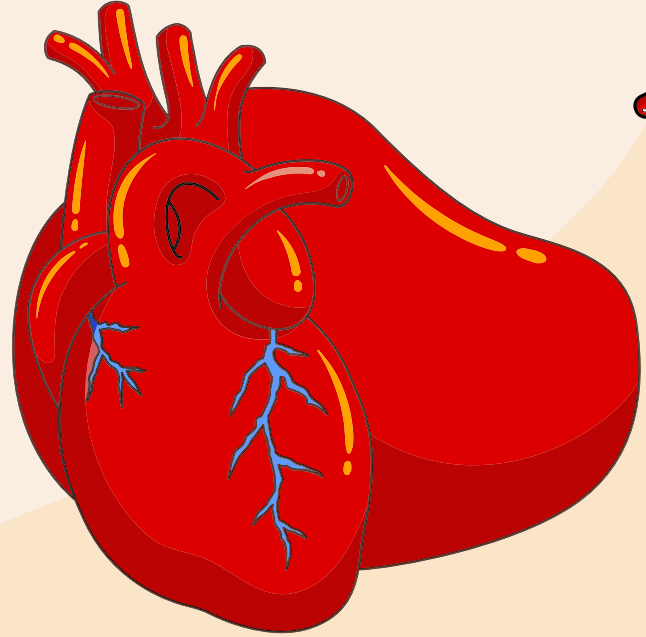# HEART DISEASE DIAGNOSTIC ANALYSIS

Here is where your presentation begins

PROJECT DETAIL :

- **Project Title**

- **Technology**

- **Domain**

- **Project Difficulty level**

- **Programming Language Used**

- **Tools Used**

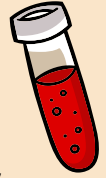Heart Disease Diagnostic-Analysis

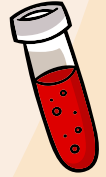Data Science

Healthcare

Intermediate

Python

Jupyter Notebook, MS Excel, MS Power BI

OBJECTIVE :

- The goal of this project is to analyse the heart disease occurrence, based on a combination of features that describes the heart disease.

BENEFITS:

- **Improved Healthcare Outcomes**: Enhanced prediction, prevention, and treatment of heart disease.

- **Enhanced Data Utilization**: Efficient management and utilization of large healthcare datasets.

- **Comprehensive Analysis**: In-depth analysis of heart disease rates by gender and age, uncovering key patterns.

- **Skill Development**: Hands-on experience with data science tools like Python, Tableau, and Power BI.

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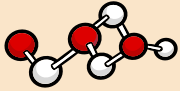
- Health is real wealth in the pandemic time we all realized the brute effects of covid 19 on all irrespective of any status. You are required to analyse this health and medical data for better future preparation.

- A dataset is formed by taking into consideration some of the information of 303 individuals.
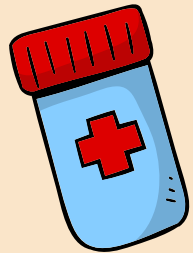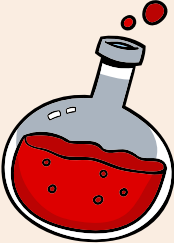
DATASET INFORMATION :

- **age :** The person's age in years

- **sex :** The person's sex (1 = male, 0 = female)

- **cp :** The chest pain experienced (Value 1: typical angina, Value 2: atypical angina, Value 3: nonanginal   pain, Value 4:asymptomatic)

- **trestbps :** The person's resting blood pressure (mm Hg on admission to the hospital)

- **chol :** The person's cholesterol measurement in mg/dl

- **fbs :** The person's fasting blood sugar (> 120 mg/dl, 1 = true; 0 = false)

- **restecg :** Resting electrocardiographic measurement (0 = normal, 1 = having ST-T wave abnormality, 2 = showing probable or definite left ventricular hypertrophy by Estes' criteria)

- **thalach :** The person's maximum heart rate achieved

- **exang:** Exercise induced angina (1 = yes; 0 =no)

- **oldpeak:** ST depression induced by exercise relative to rest

- **slope:** the slope of the peak exercise ST segment (Value 1: upsloping, Value 2: flat, Value 3: down sloping)

- **ca:** The number of major vessels (0 3)

- **thal:** A blood disorder called thalassemia (3 =normal; 6 = fixed defect; 7 =reversible defect)

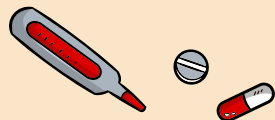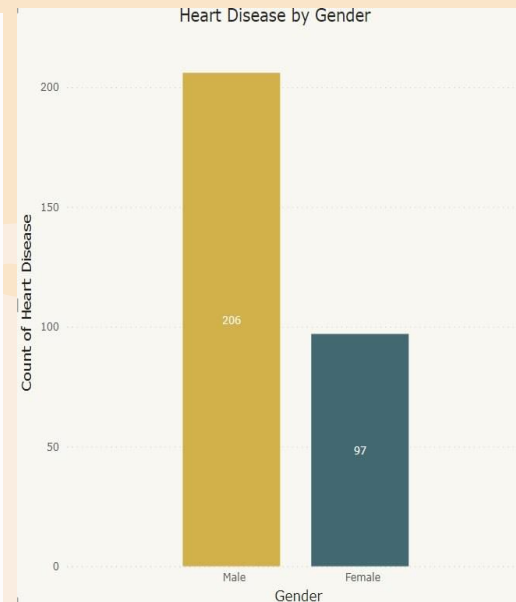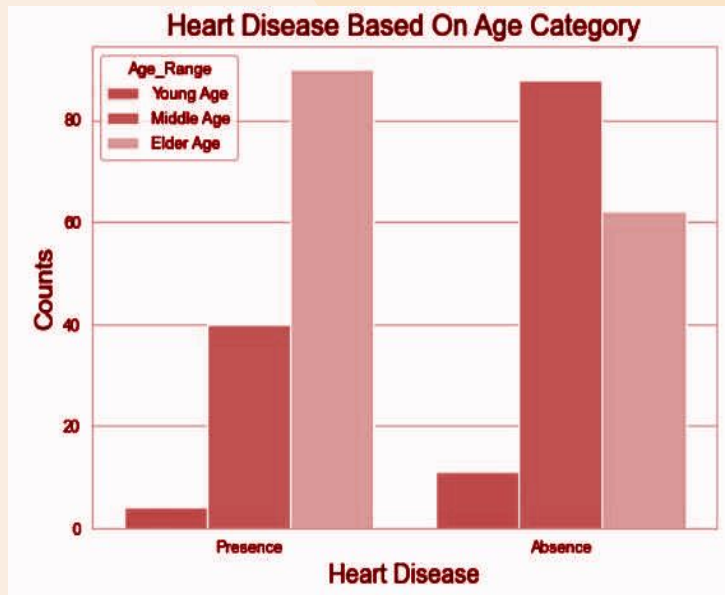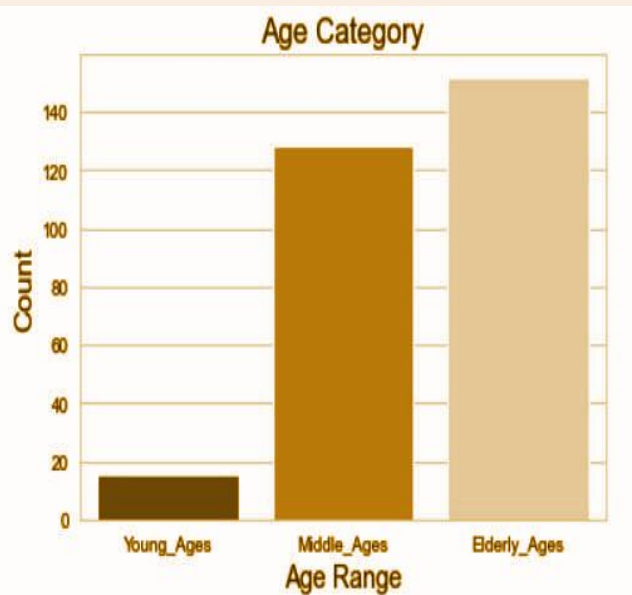- **num:** Heart disease (0 = no, 1 = yes)

INSIGHTS:

➢ What Kind of Population do we have?
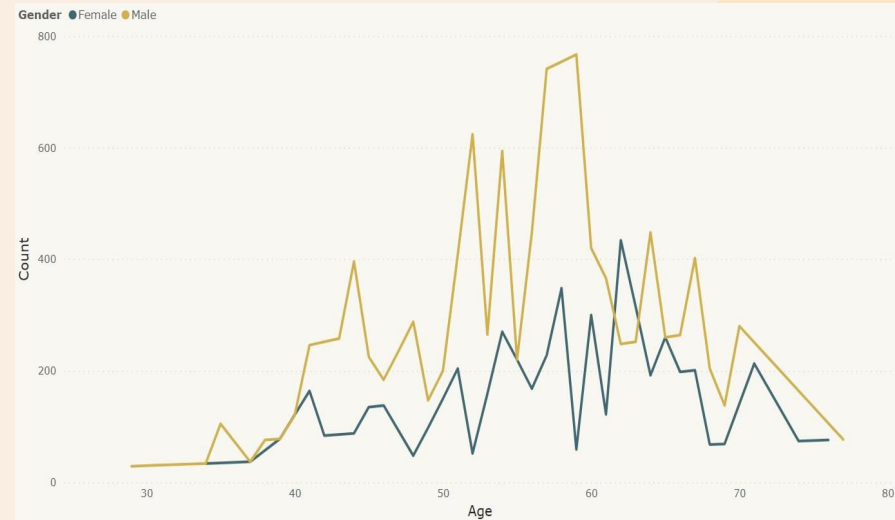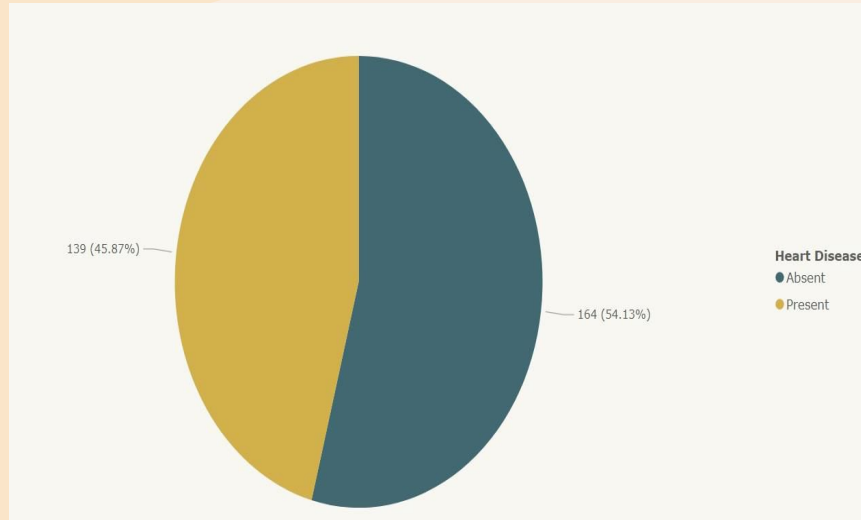
- 45.87% People suffering from heart disease.

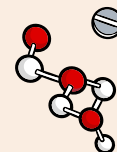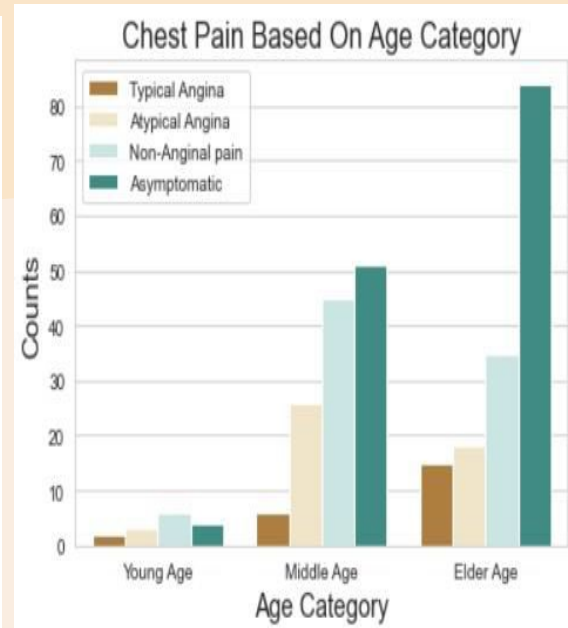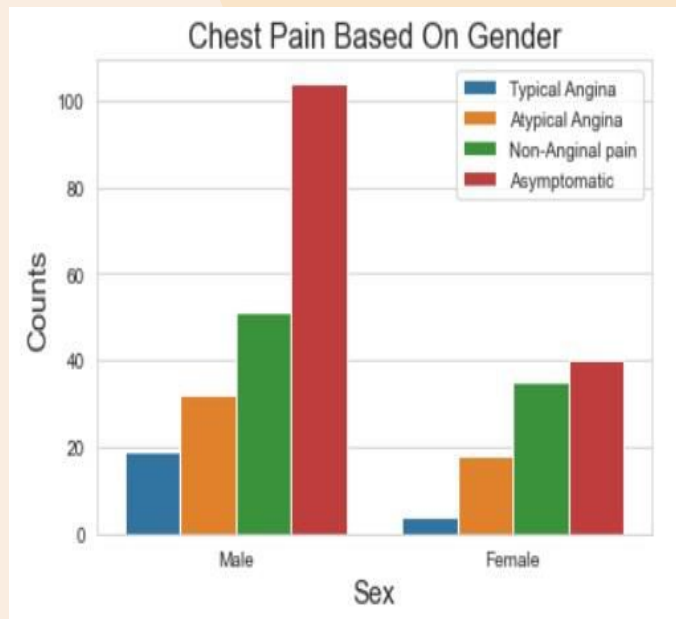- More men are from age category >50 and females are from category >55.
  ○

Who Suffers from Heart Disease?

Age Category

Heart Disease Based On Age Category

Heart Disease by Gender

Chest Pain Experienced By Patients:
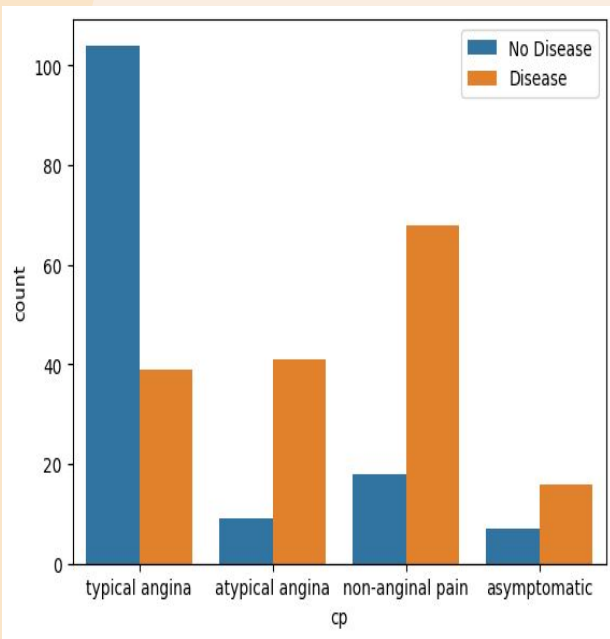
➢ Other symptoms people experience in heart disease:

Blood Pressure, Cholestrol and Max Heart Rate By Age

● Blood Pressure ● Cholestrol ● Max Heart Rate

ST Depression by Age and Heart Disease

Heart Disease ● Absent ● Present
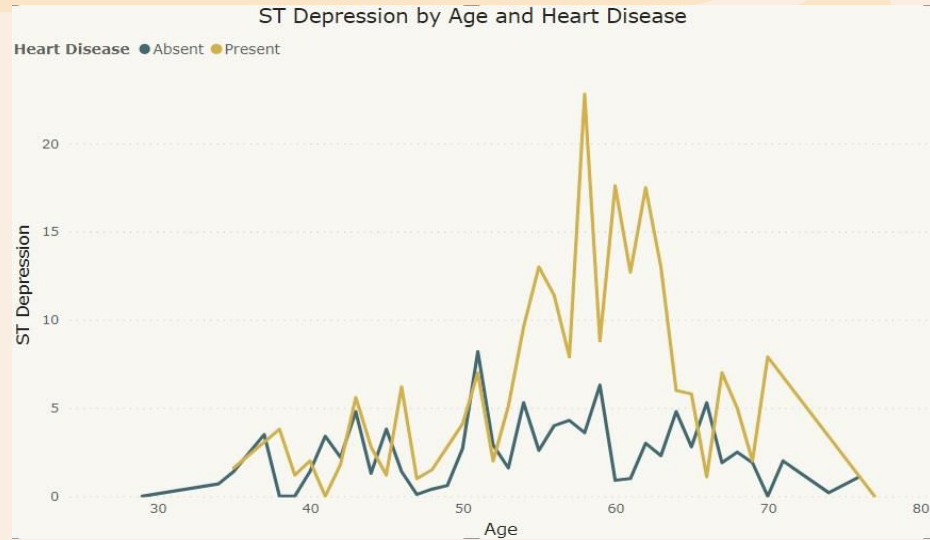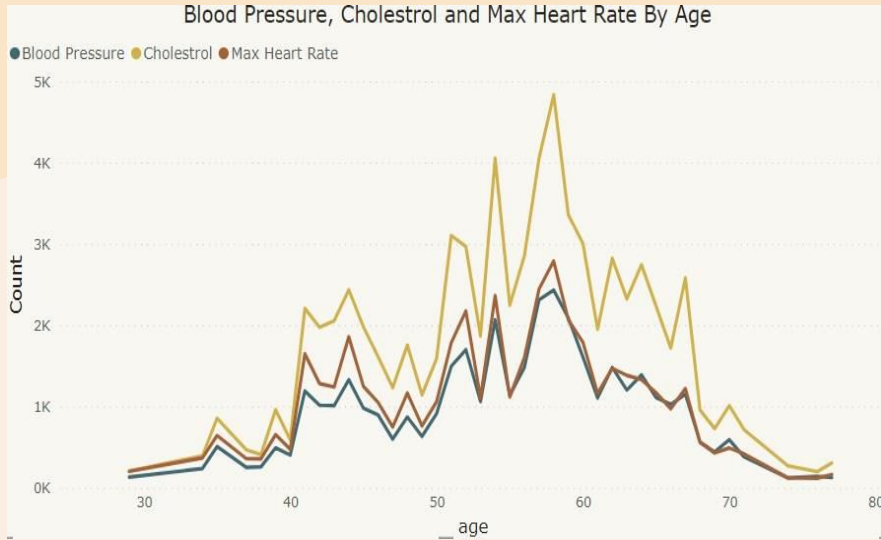
- Here we can observe that Blood Pressure increases between age of 50 to 60 and somehow continue the pattern till 70.

- Similarly, Cholesterol and maximum heart rate Increasing in the age group of 50 60.

- we can observe from here that ST depression mostly increases between the age group of 30 40.

KEY PERFORMANCE INDICATOR (KPI):

- Percentage of People Having Heart Disease

- Age Distribution including Gender

- Gender Distribution Based on Heart Disease

- Chest Pain Experienced by People Suffering from Heart Disease

- Blood Pressure, Cholesterol Level and Maximum Heart Rate of People According to their Age and Heart Disease Patients.

- ST Depression Experienced by People According to their age and heart disease.

CONCLUSION :

- 45.87% People suffering from heart disease.

- Elderly Aged Men are more (50 to 60 Years) and Females are more in 55 to 65 Years Category.

- Males are more prone to heart disease.

- Elderly Aged People are more prone to heart disease.

- People having asymptomatic chest pain have a higher chance of heart disease.

- High number of cholesterol level in people having heart disease.

- Blood Pressure increases between age of 50 to 60 and somehow continue till 70.

- Cholesterol and maximum heart rate Increasing in the age group of 50 60.

- ST depression mostly increases between the age group of 30 40.

THANK YOU