





## Project Details

<b>Project Title</b>	Heart Disease Diagnostic – Analysis
<b>Technology</b>	Business Intelligence
<b>Domain</b>	Healthcare
<b>Project Difficulty level</b>	Advanced
<b>Programming Language Used</b>	Python
<b>Tools Used</b>	Jupyter Notebook

# Objective

The goal of this project is to analyze the heart disease occurrence, based on a combination of features that describes 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 by taking into consideration some of the information of 1024 individual.



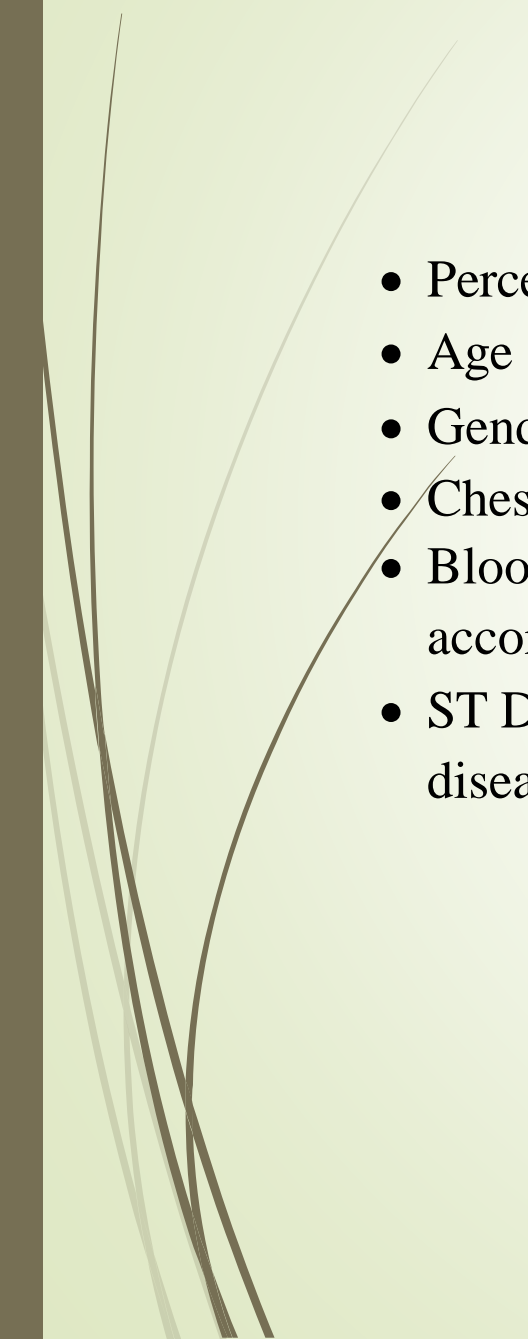
## Dataset Information

There are 13 features in Dataset:

- age: The person's age in years
- sex: The person's sex (1=male, 0=female)
- cp: The chest pain experienced
- trestbps: Person's resting blood pressure
- chol: person's cholesterol measurement in mg/dl
- fbs: person's fasting blood sugar
- resrecg: Resting electrocardiographic measurement
- thalich: person's maximum heart rate achieved
- exang: Exercise induced angina
- oldpeak: ST depression included by exercise relative to rest
- slope: the slope of the peak exercise ST segment
- ca: The number of major vessels
- thal: A blood disorder called thalassemia
- target: Heart disease (0 = no, 1 = yes)



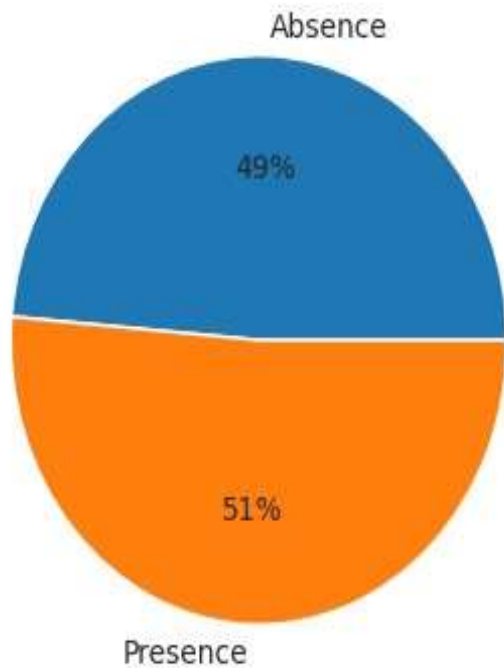
## Key Performing Indicator

- 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.
- 

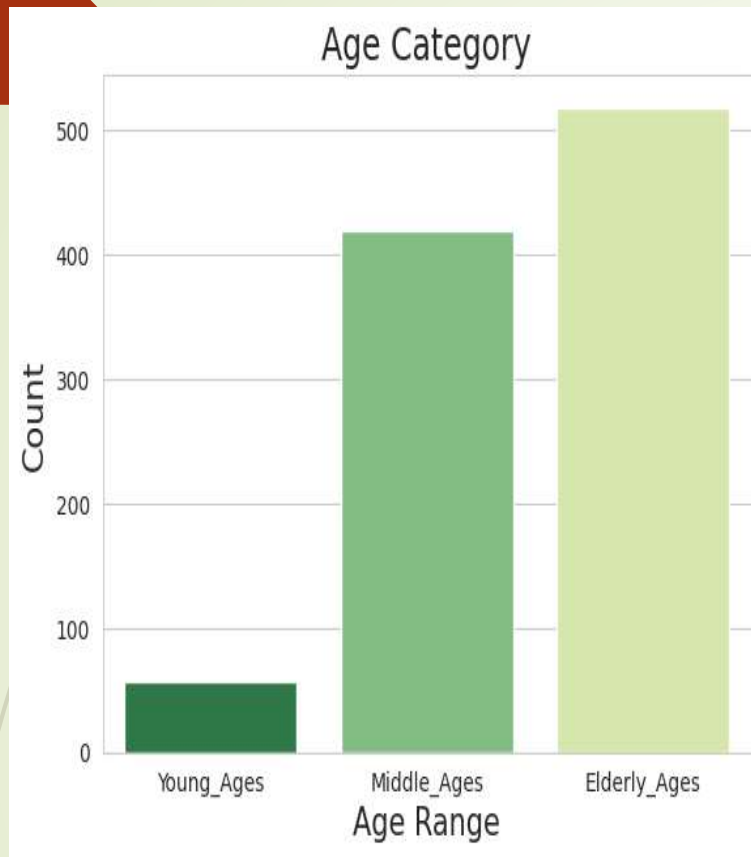


# Insights

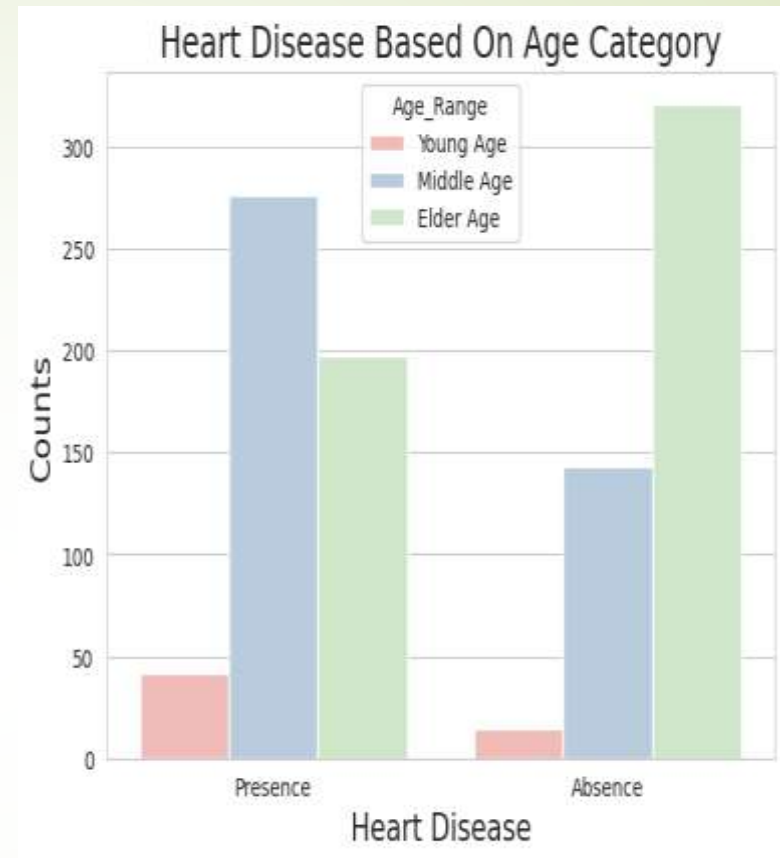
Heart Disease Population %



- Heart disease refers to any problem affecting the heart, such as coronary artery disease, arrhythmia, and heart failure.
- Among the heart disease population more people are suffering from heart disease.
- 51% people are suffering from heart disease among the data.
- 49% people are safe from heart disease.

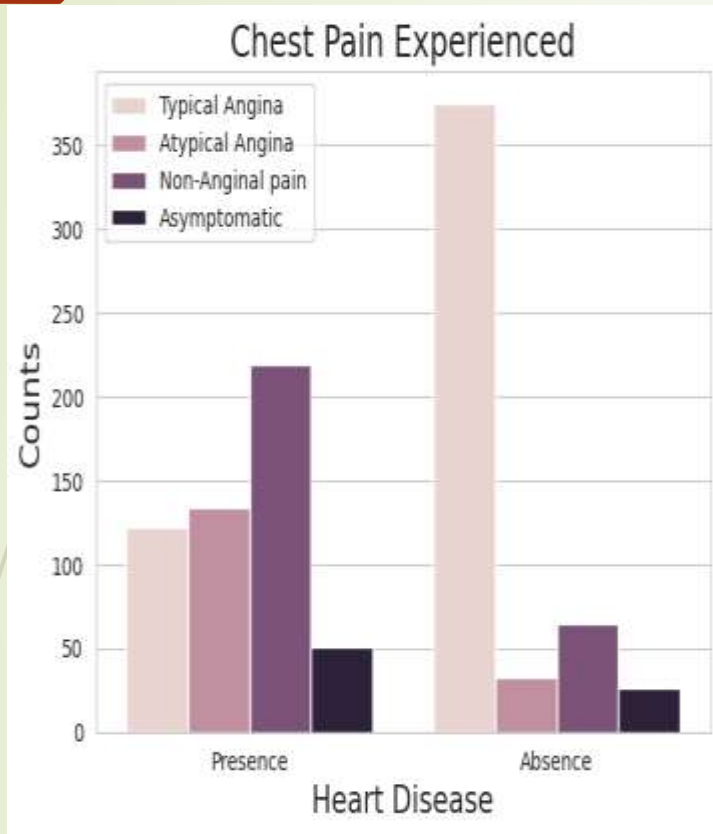


**Age Categories of data were divided into young ages, Middle Ages, Elderly Ages.**

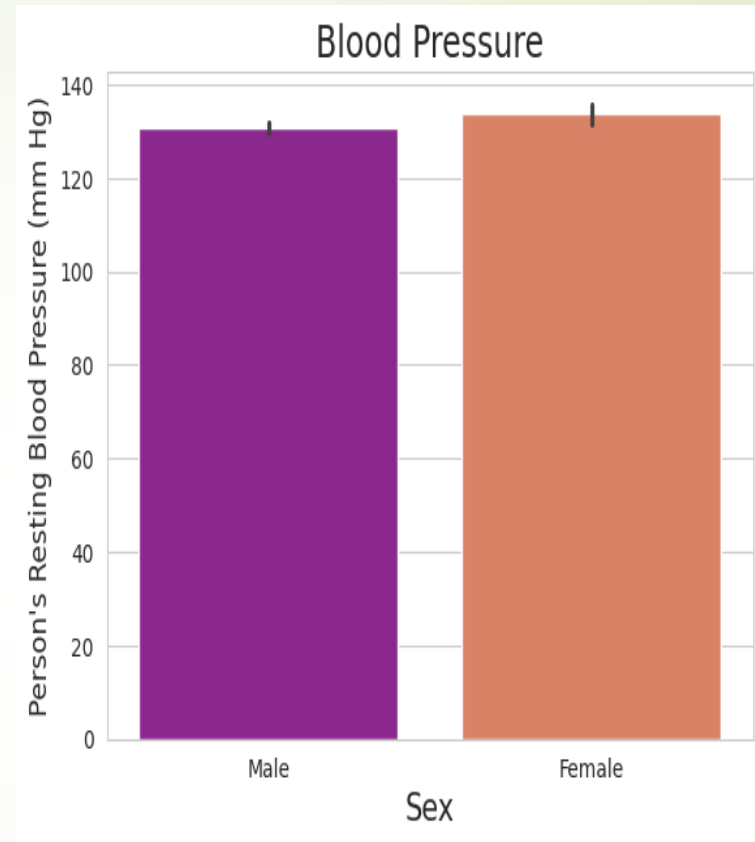


**As Per Age category heart disease present more in Middle Age Group as compare to count and absent more in elder group.**



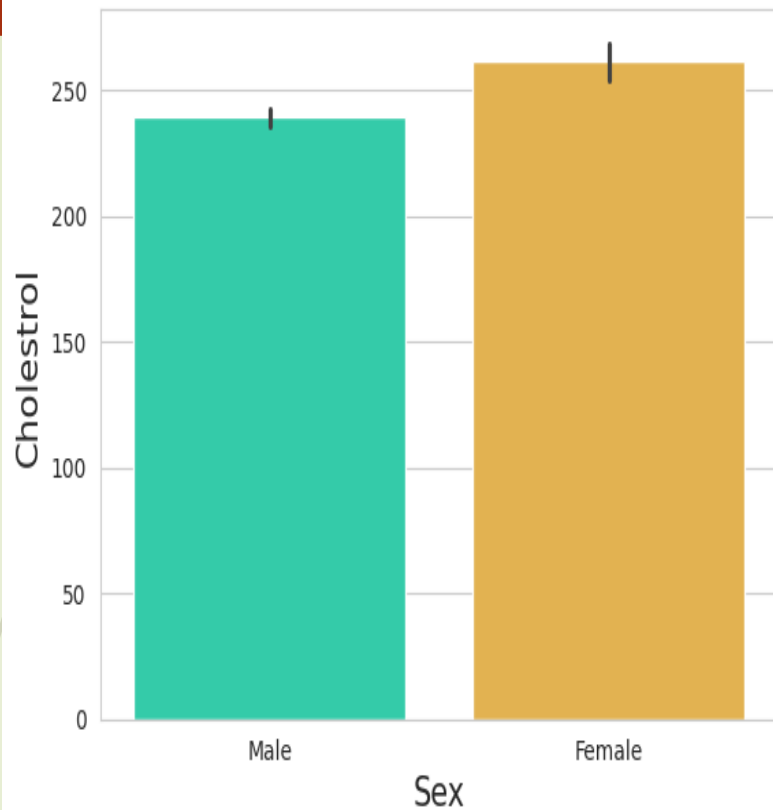


**Chest pain experienced in above four categories which is Typical angina, atypical angina, non-Anginal pain and Asymptomatic as compare to counts.**



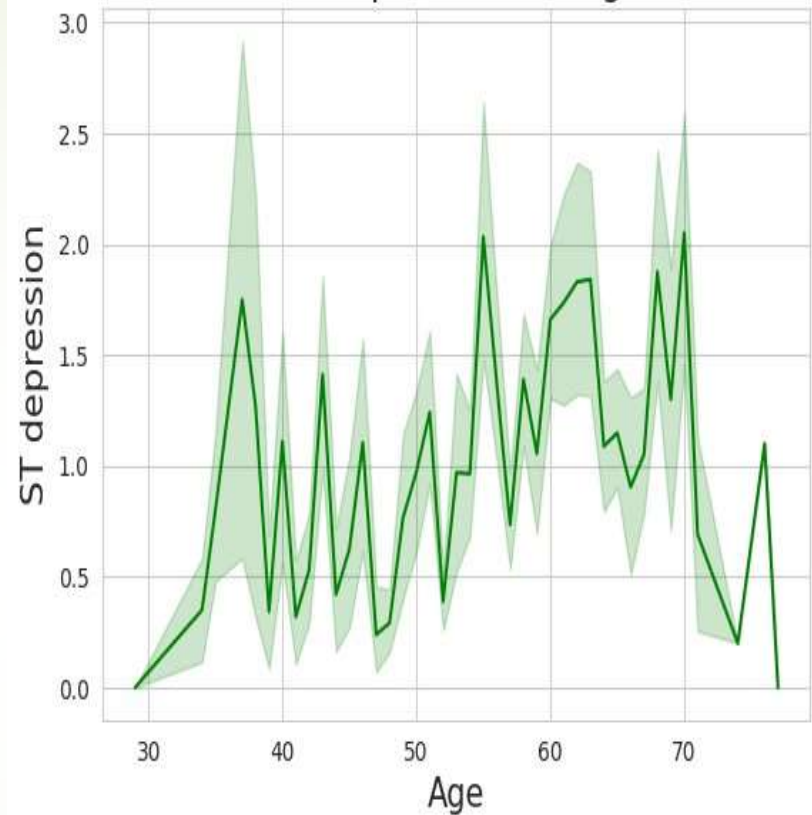
**Blood Pressure in Both genders similarly high but female having more count than male.**

Cholestrol Level Based On Gender



**Cholesterol level among the gender female having more number than men.**

ST Depression VS Age



**ST depression is more in the age range 55 to 70 among the all the all-age group.**



# Conclusion

- 51% People suffering from heart disease.
- Elderly Aged Man are more (50 to 60 Years) and Females are more in 55 to 66 years category.
- Elderly Aged people more prone to heart disease.
- As per count of age category number Middle age group people more suffer from 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**