# Heart Disease Diagnostic Analysis

"Empowering Hearts: Precise Diagnosis, Lifelong Wellness"

- JYOTHI N.M

# OBJECTIVE

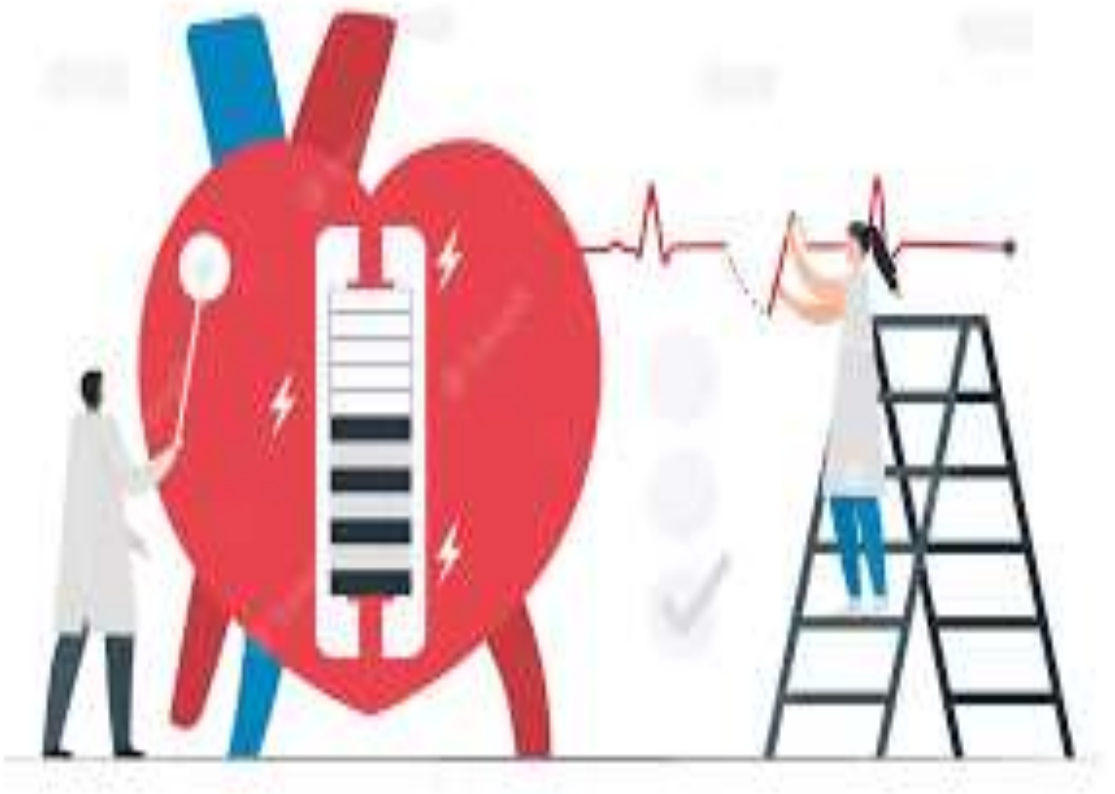
**Early Detection**: Identify at-risk individuals through advanced diagnostics.

**Risk Stratification**: Tailor care based on patient risk factors.

**Precision Medicine**: Personalize heart disease treatment plans.

**Public Awareness**: Promote heart health and early detection.

**Improved Outcome**: Reduce heart disease mortality through timely management.



# Dataset Parameters

**Age**: The person's age in years.

**Gender**: The person's sex ( male, female)

**Chest Pain**: The chest pain experienced (Value 1:typical angina, Value 2: atypical angina, Value 3: non-anginal pain, Value 4: asymptomatic)

**Cholesterol**: The person's cholesterol level in mg/dl.

**Resting electrocardiographic results** = (values 0,1,2)

**Fasting Blood Sugar**: The fasting blood sugar level of the person (1 = true,0 = false).

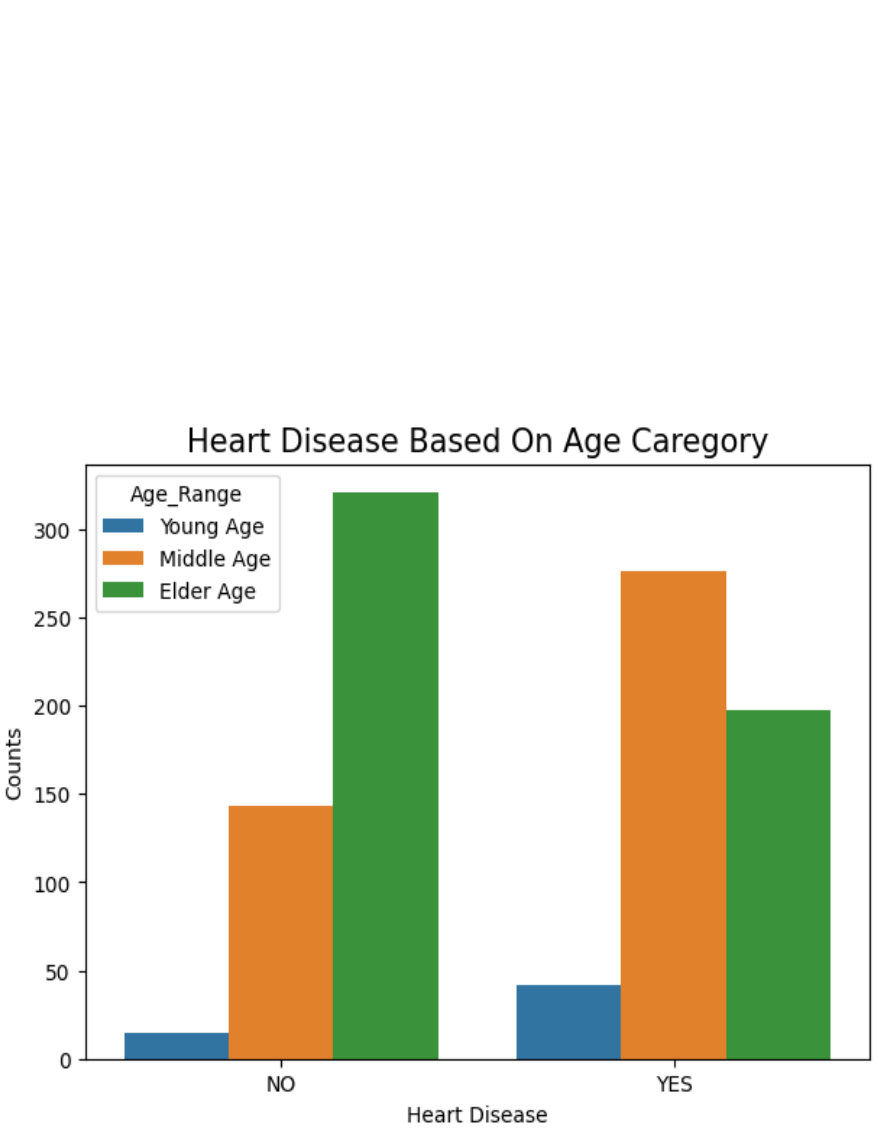
**Exercise Induced Angina** : Whether the person experienced angina during exercise (1 = yes, 0 = no).

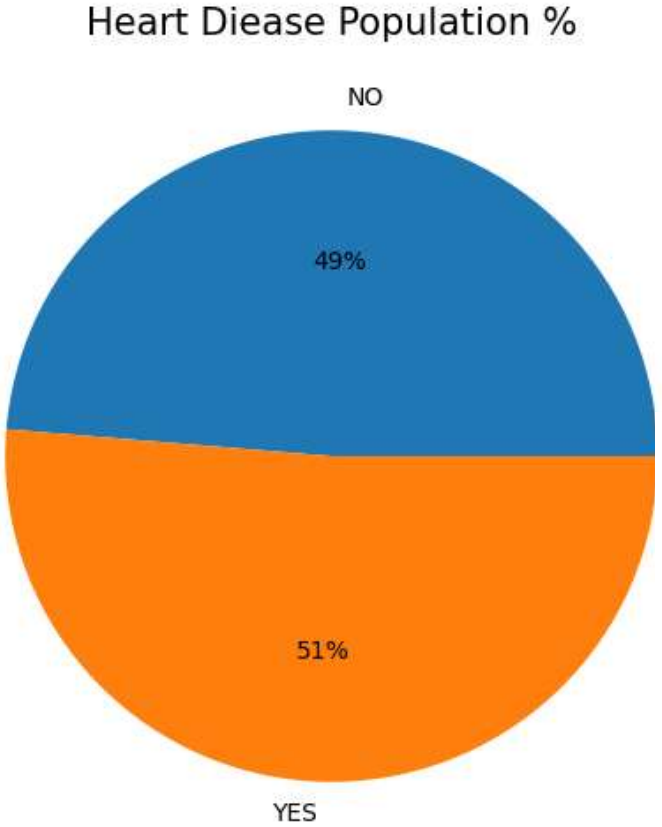
**Oldpeak** : ST depression induced by exercise relative to rest.

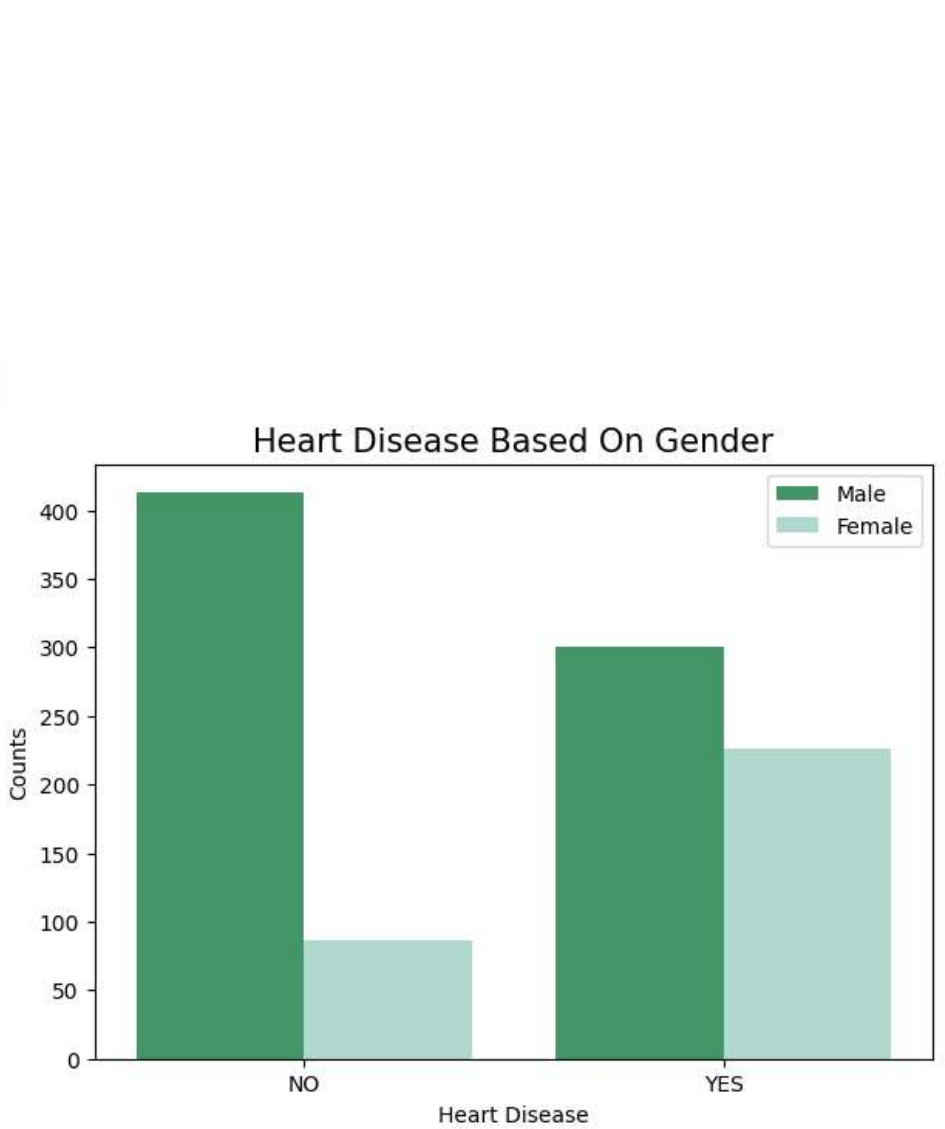
**Resting Blood Pressure**: The person's resting bloodpressure (mm Hg on admission to the hospital).

**Number of major vessels** = (0-3) colored by flourosopy ( 0 = normal ; 1 = fixed defect ; 2 = reversable defect)

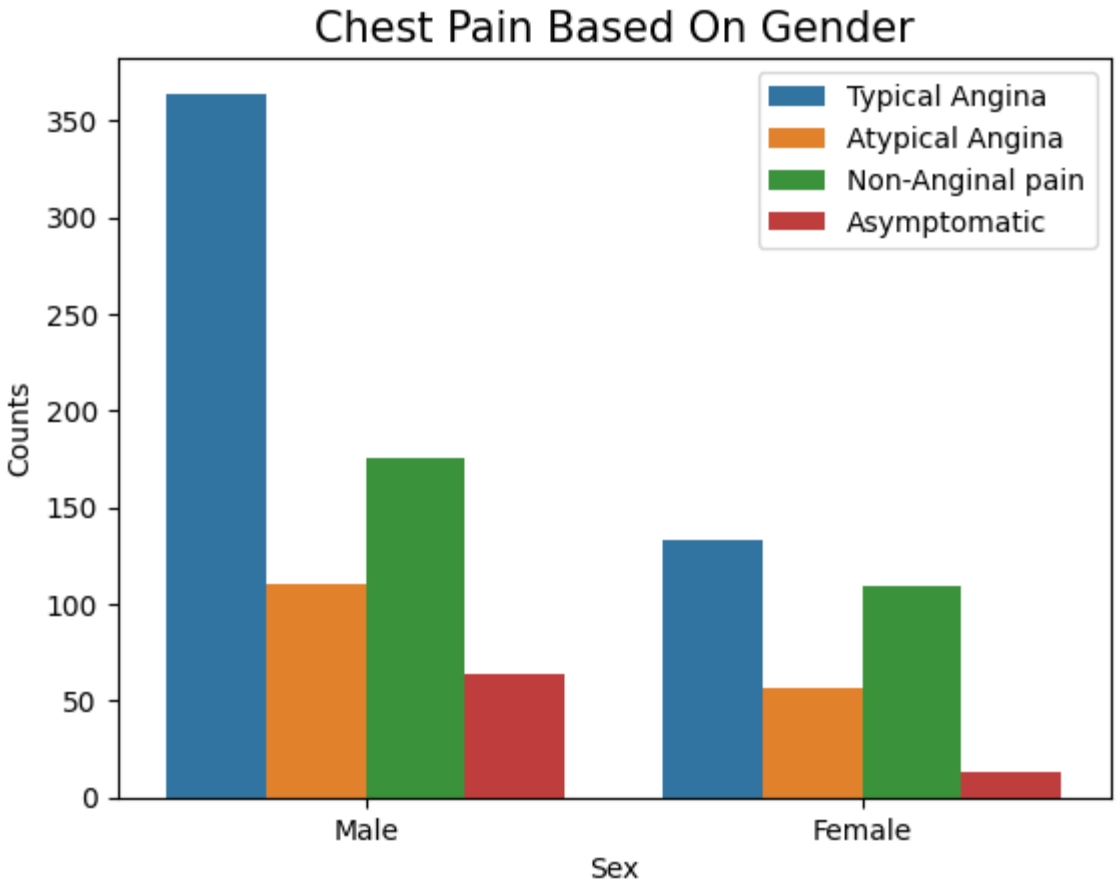
# Population affected by Heart disease

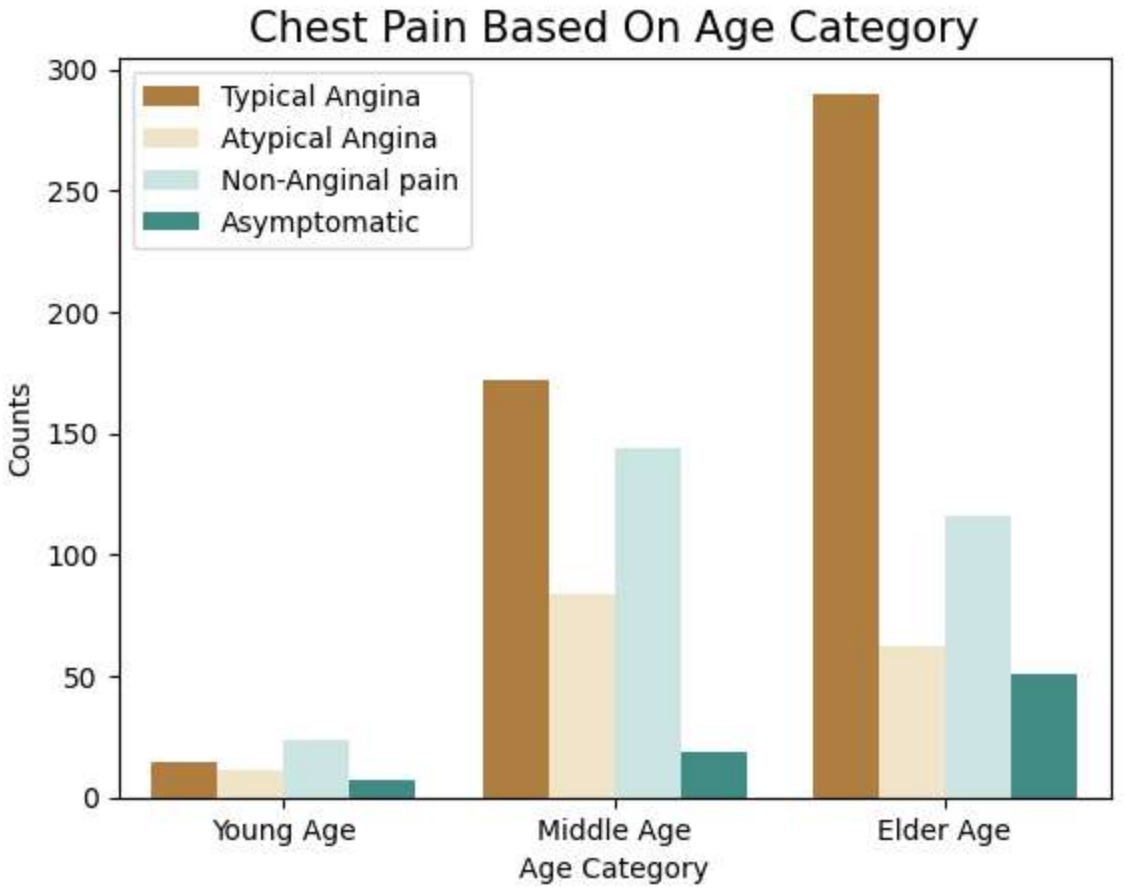


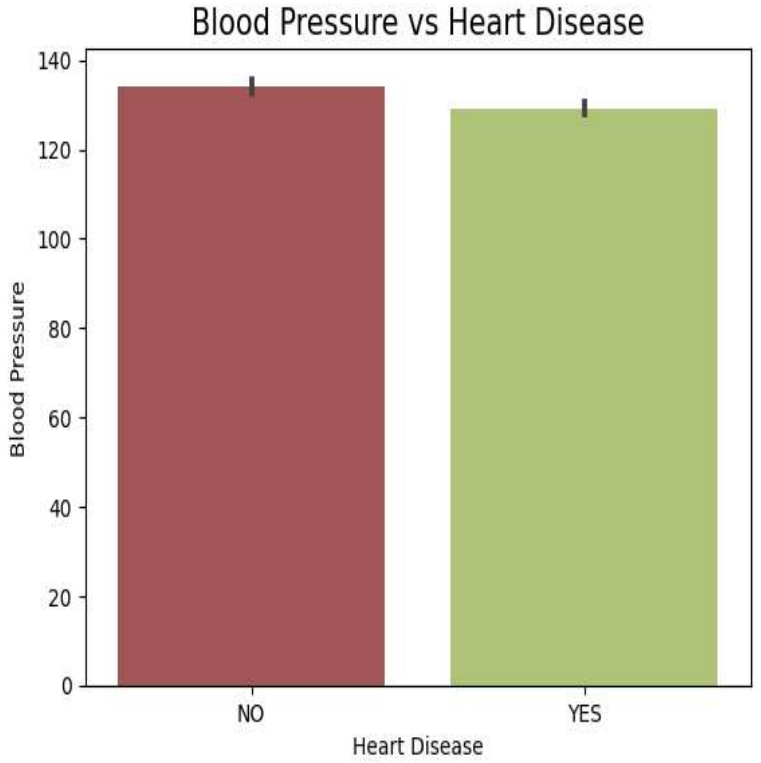



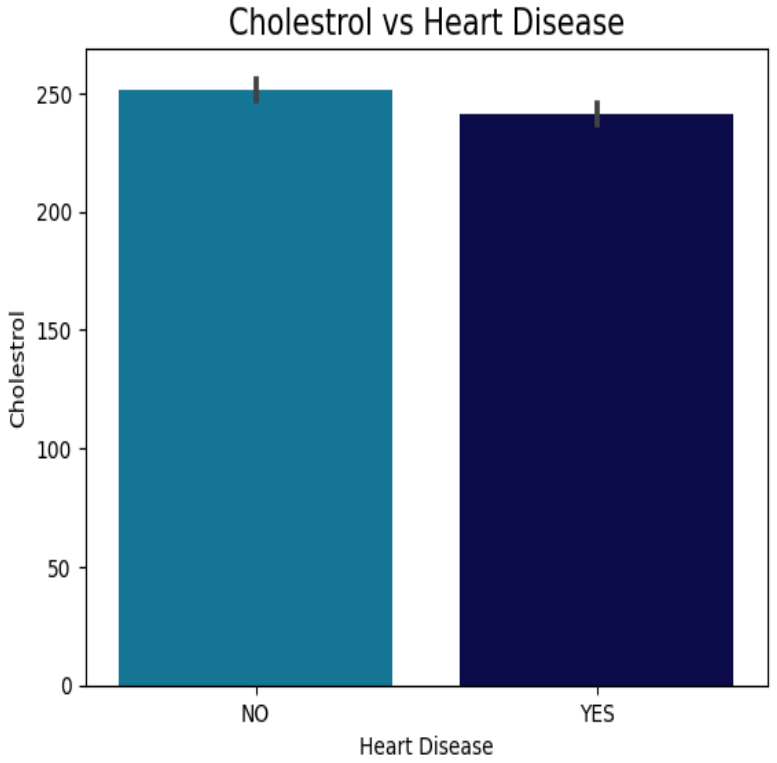
# Population experiencing Chest pains



# Different factors v/s Heart disease

# Data Insights

**Who Suffers from Heart Diseases?**

1. More than half of population suffering from Heart disease population.
2. Females are more prone to heart diseases as compared to males.
3. Middle Aged People have greater presence of heart diseases.

**People experiencing Chest pains**

1. There is very high number of Typical Anginal Pain in Elderly age Category.
2. It seems people having Non-Anginal chest pain have a higher chance of heart disease.

# Data Insights (Continued)

- Blood pressure rates are similar in both males and females.

- Males tend to have slightly higher cholesterol levels than females.

- Blood pressure tends to increase between the ages of 50 and 60 and often continues this trend until the age of 70.

- Cholesterol levels also rise in the 50-60 age group.

- ST depression typically increases between the ages of 30-40, with a higher prevalence in females compared to males.

- Exercise-induced angina is more common in middle-aged and older individuals but is relatively rare in younger individuals.

- Females have a higher prevalence of fasting blood sugar levels over 120 mg/dL compared to males.

# CONCLUSION

1. The early detection of risk factors, personalized treatment plans, and ongoing research advancements are key components in improving patient outcomes.

2. Furthermore, raising public awareness, providing medical education, and understanding demographic patterns contribute to a comprehensive approach in addressing heart disease.

# Thank You

The END