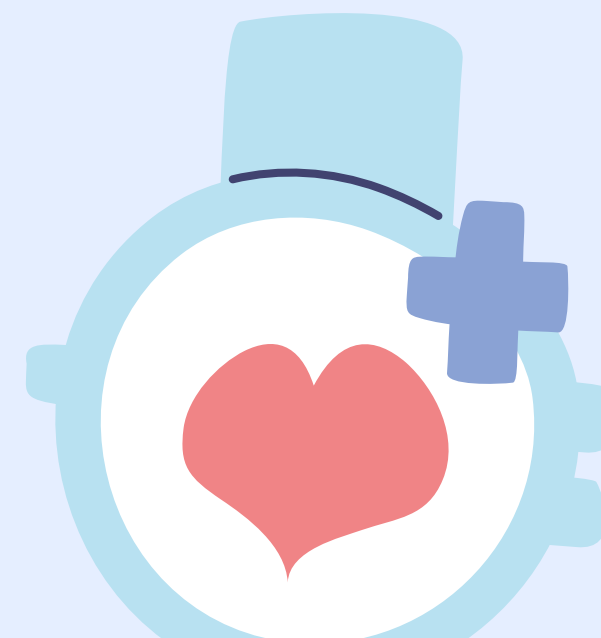


# Predicting Heart Attack Risk

Don't Guess the Signs.  
Predict, Prevent, Protect.

**By Nikhar Bhavsar**



# Heart Disease: A Leading Cause of Death in Canada

According to  
Public Health Canada

Heart disease is the second leading cause of death in Canada, accounting for over 50,000 deaths annually.

1 in 3 cases go undiagnosed until severe symptoms occur.

# Why is Early Detection Challenging?

## Doctor Shortages

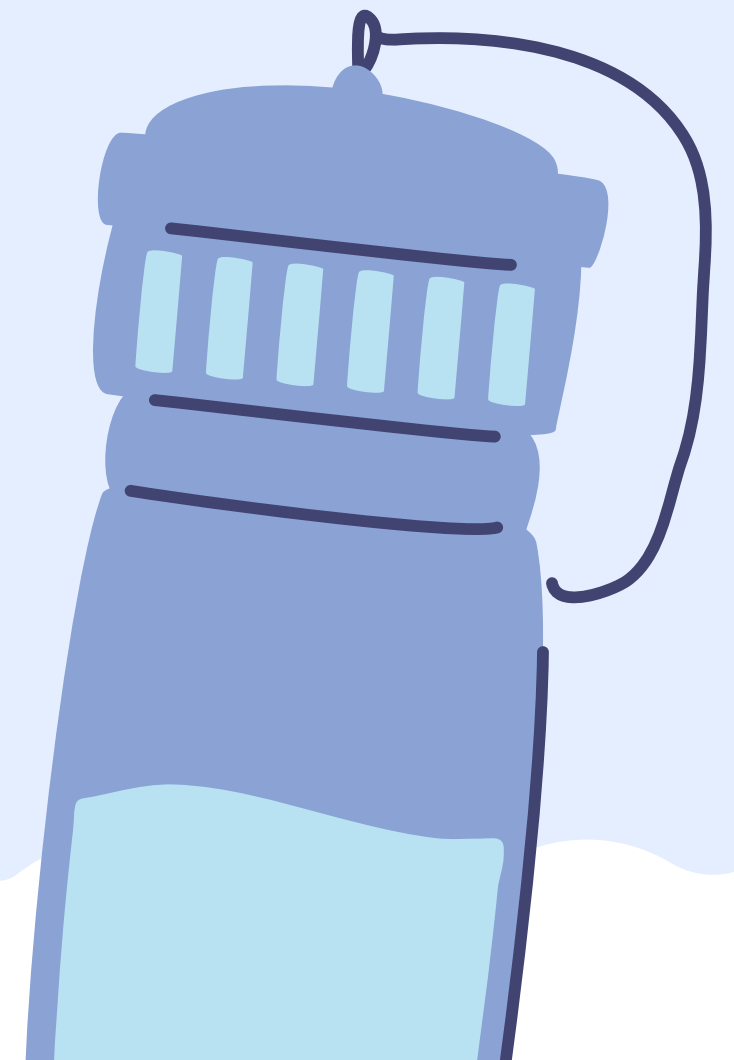
4.7 million Canadians lack a family physician (Statistics Canada 2023).

## Limited Awareness

Early warning signs like high blood pressure or cholesterol are often ignored.

## Testing Gaps

Rural and remote communities lack access to diagnostic facilities.





# Proposed Solution



## Early Risk Assessment with Machine Learning

- Analyzes health data to predict heart disease risk.
- Factors considered: Diabetic, Physical Active, BMI, etc.
- Alerts users to seek medical attention before severe symptoms arise.

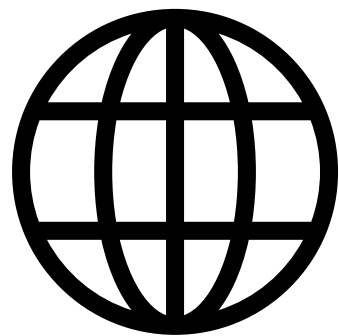


Early detection can reduce healthcare costs and save lives.



# Data Overview

Source



Kaggle

Shape



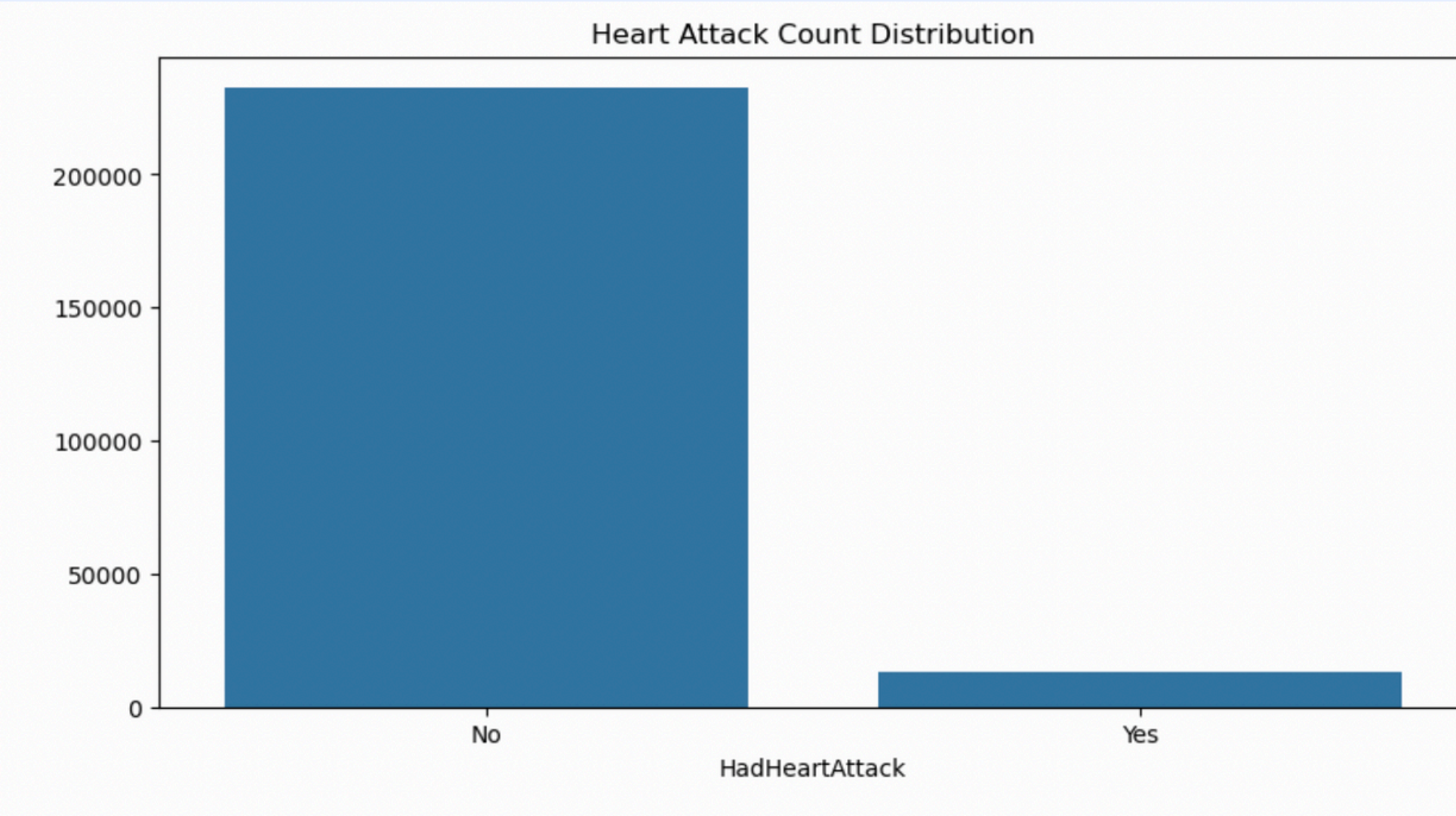
Rows - 246022  
columns - 40

Factors



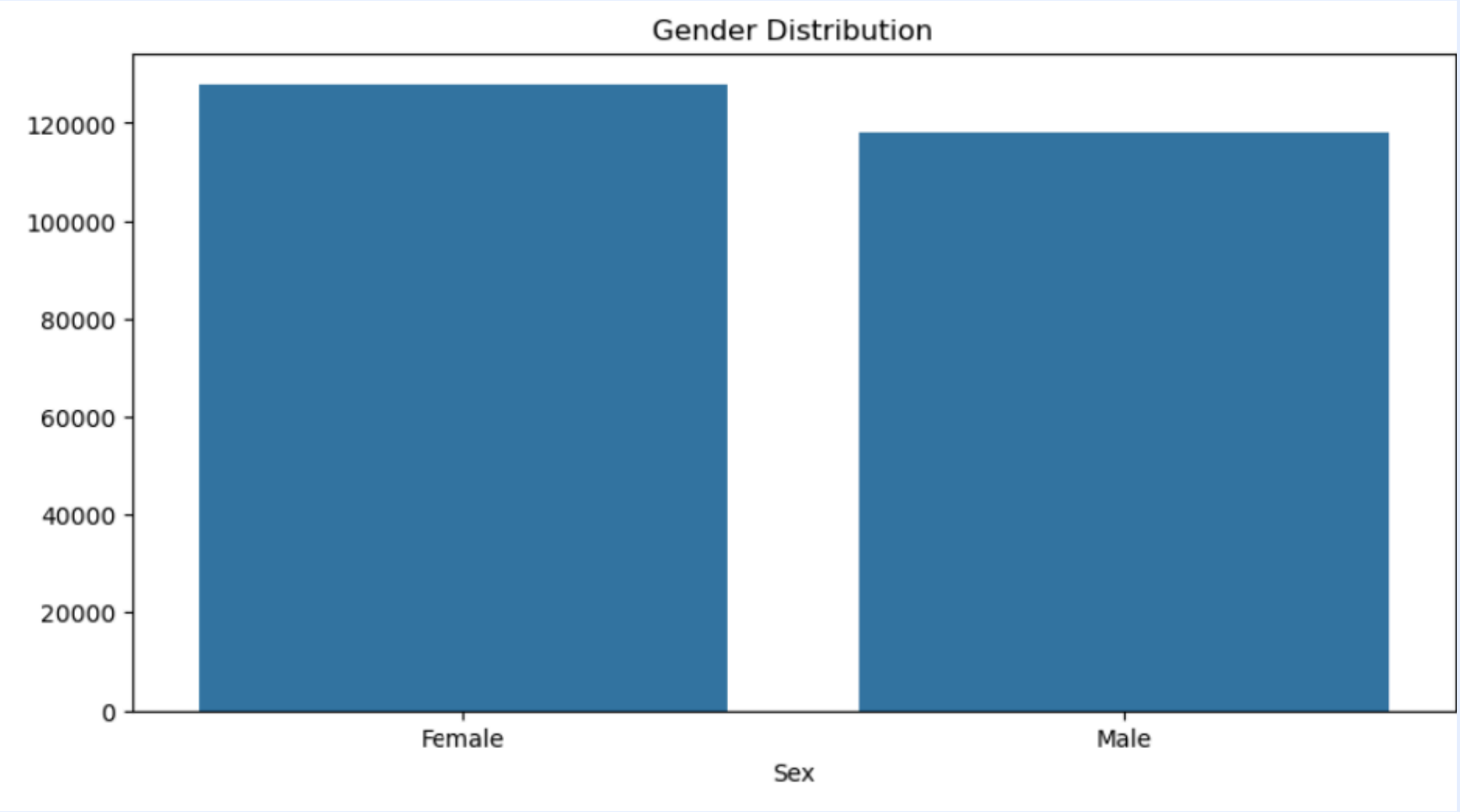
Age, Gender, Diabetic  
Physically Active etc.

# EDA Findings



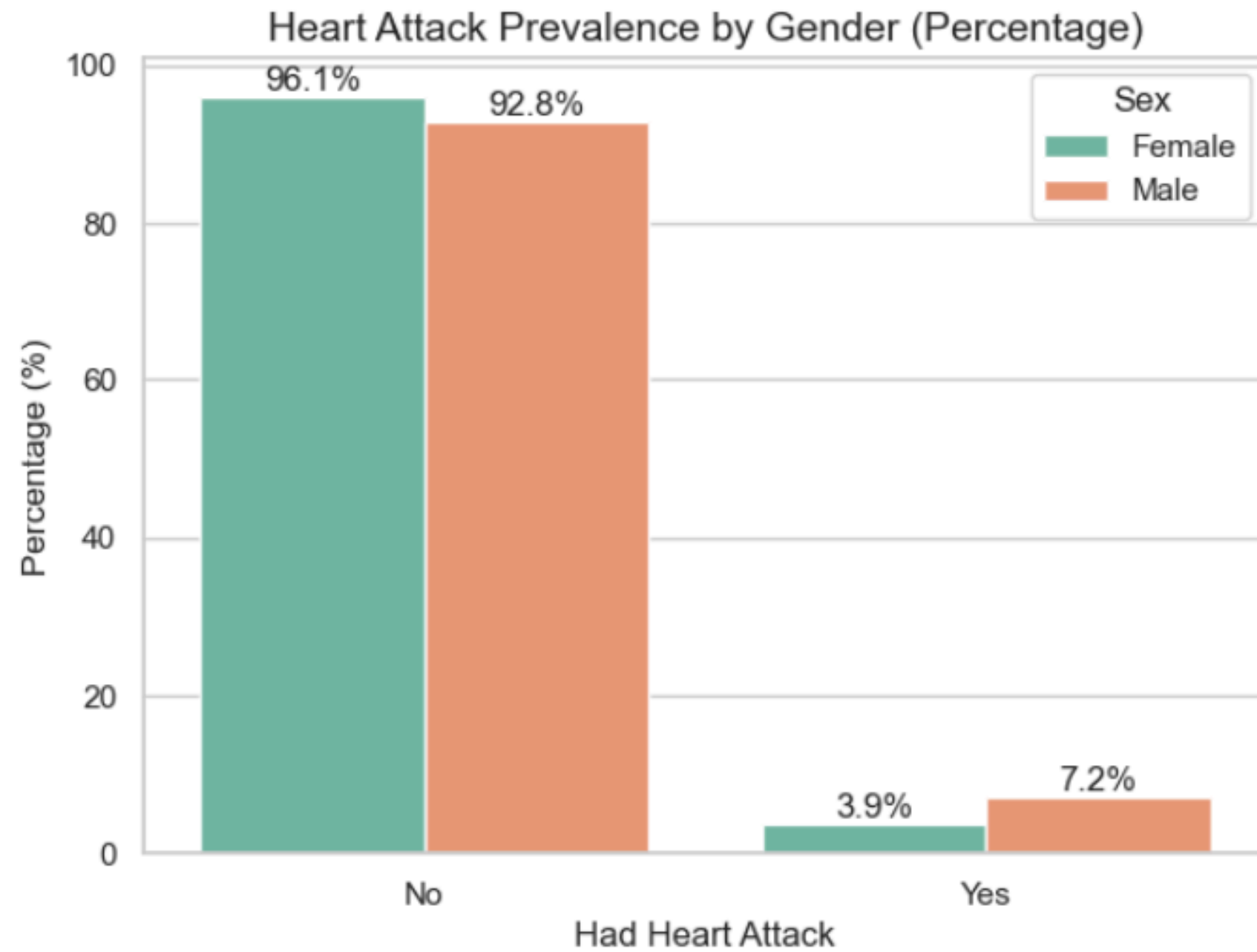
Had Heart Attack	232578	94.54%
No Heart Attack	13435	5.46%

# EDA Findings



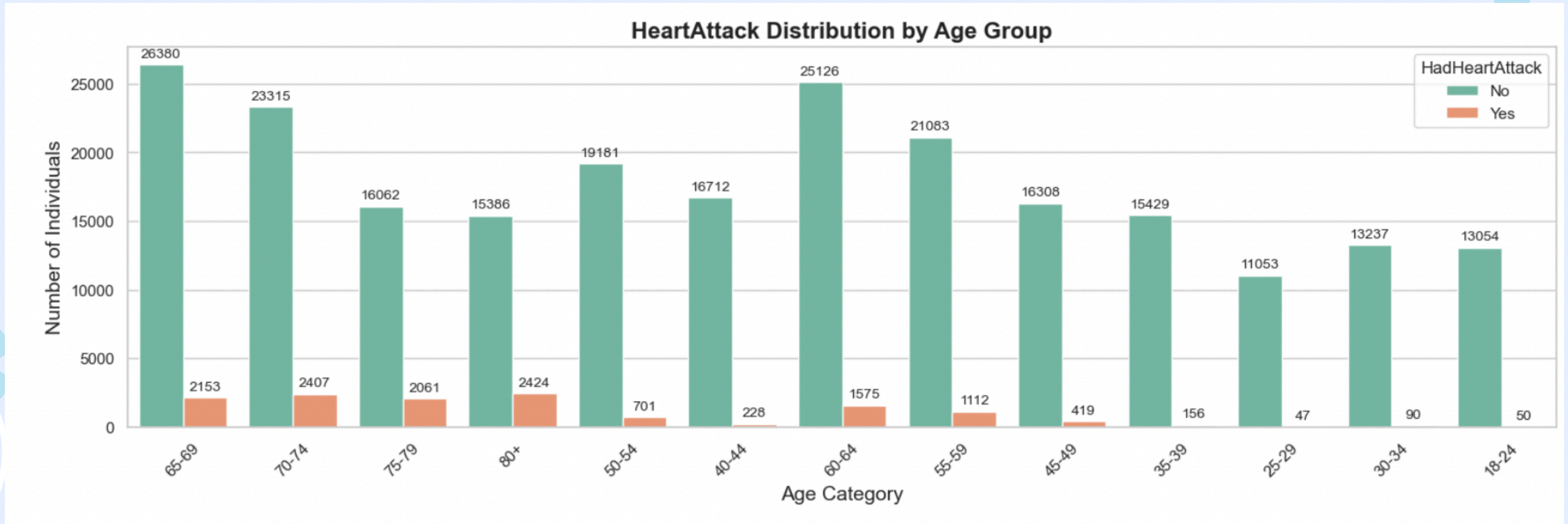
Male	118207	48.05%
Female	127806	51.95%

# EDA Findings





# EDA Findings



# Next Steps:

- 1 Feature Engineering
- 2 Handling the Imbalanced data
- 3 Apply Logistic regression as a base Algorithm
- 4 Model Optimization using other Algorithms



# Thank You

