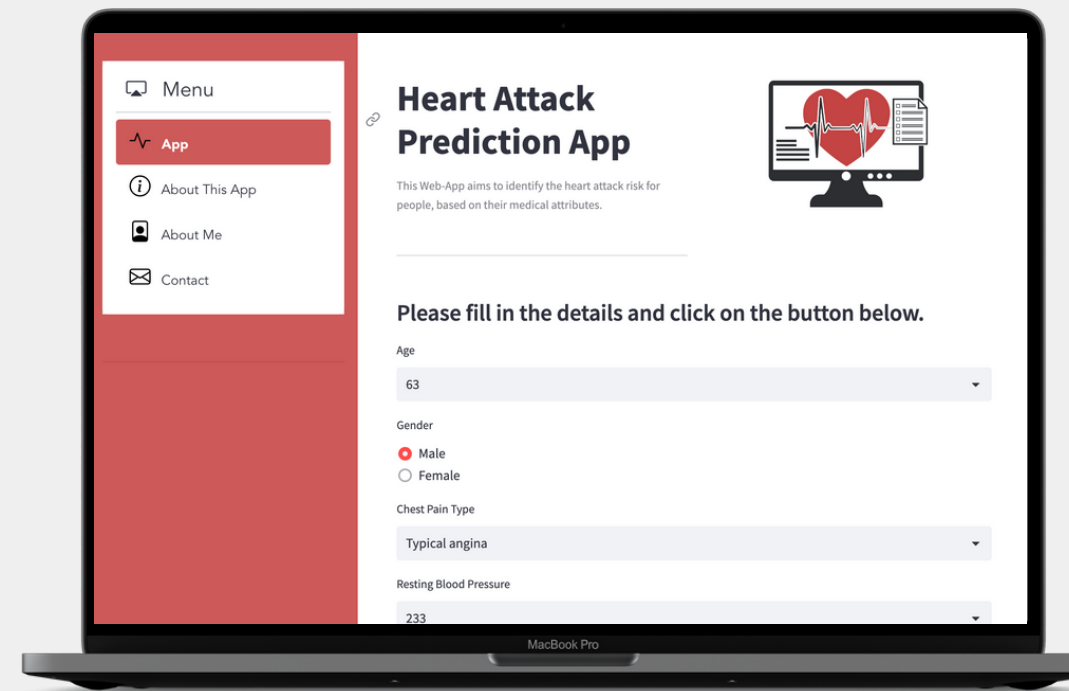


Heart Attack Prediction App

WITH MACHINE LEARNING



Gözde Barın

WBS Coding School | Data Science #13
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13 April 2023

MOTIVATION



#1

Cardiovascular diseases are the **leading cause of death** worldwide



4 out of 5

cardiovascular deaths are due to **heart attacks and strokes**



18 million

people die from heart disease every year

OBJECTIVE

This machine learning project aims
to identify the heart attack risk for people,
based on their medical attributes.



The Web-App
quickly calculates
heart attack risk
to help healthcare providers.



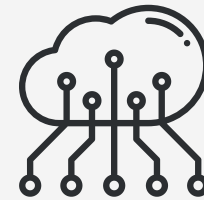
Predict

Great! The probability of having a heart attack is low. ✓

Predict

Warning ! The probability of having a heart attack is high.

CONTENT



DATA COLLECTING

The data set is gathered from Kaggle



EXPLORATORY DATA ANALYSIS

Python | Pandas, Seaborn, Plotly



CREATING MODEL

Python | Scikit-learn | Supervised Machine Learning



APPLICATION

Using Streamlit

DATASET

Heart Attack Dataset was used to perform analysis

Target



- The patient has **lower** or **higher risk** of heart attack.

302
Patients



- Patients in different age ranges and with **different medical backgrounds**.

14
Features



- Each one provides the patient's information.
- Each one is a **potential risk factor**.
- Age, cholesterol level, chest pain type, blood pressure, blood sugar level, max heart rate achieved, etc.

Data
Source

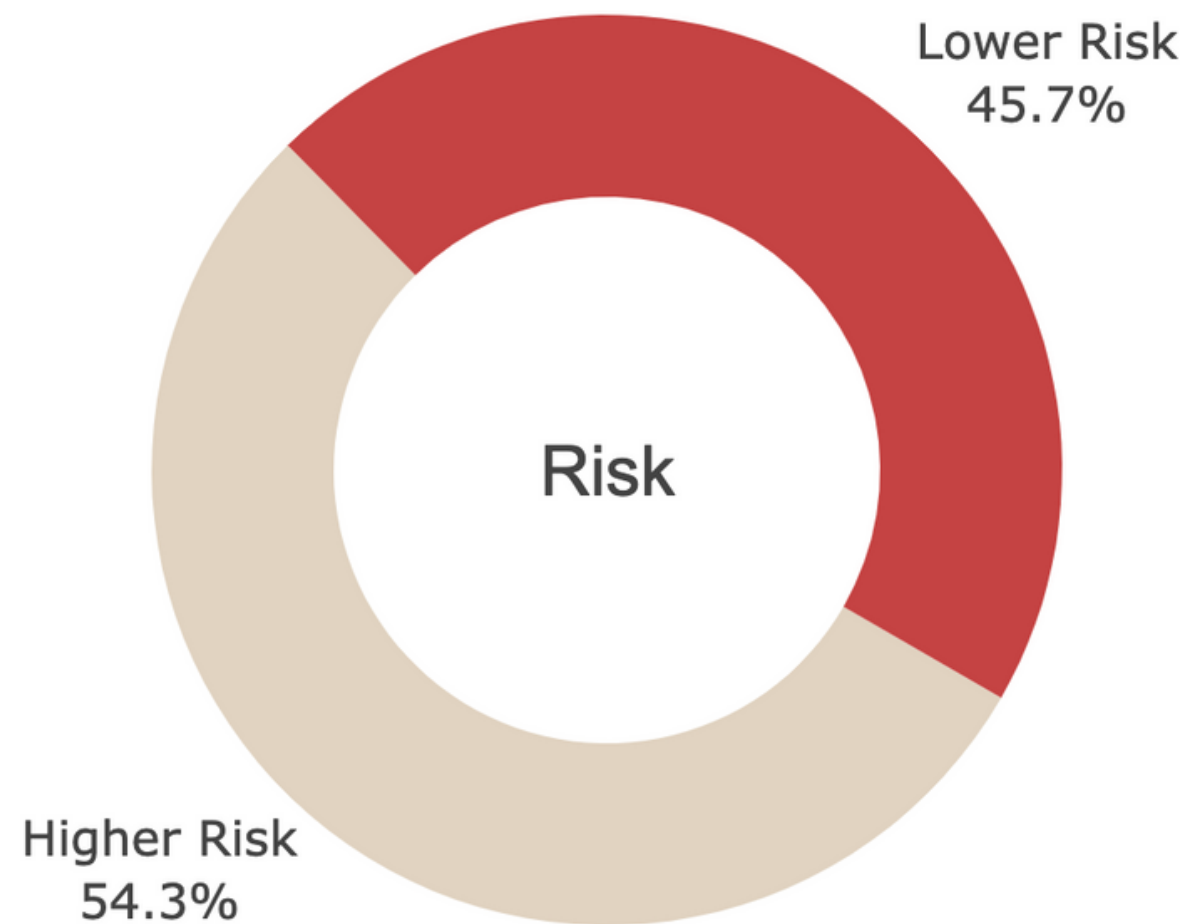


- The data set is publicly available on **Kaggle**.
- <https://www.kaggle.com/datasets/rashikrahmanpri tom/heart-attack-analysis-prediction-dataset>

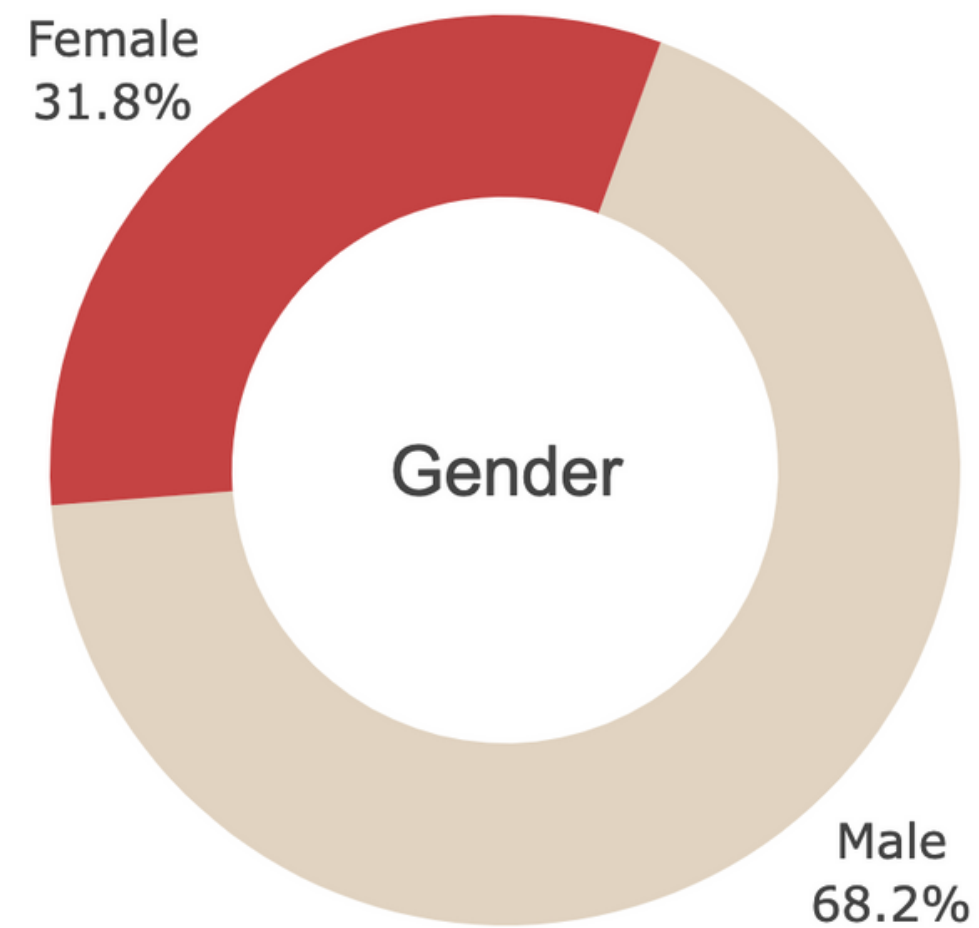
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Heart Attack Dataset was used to perform analysis

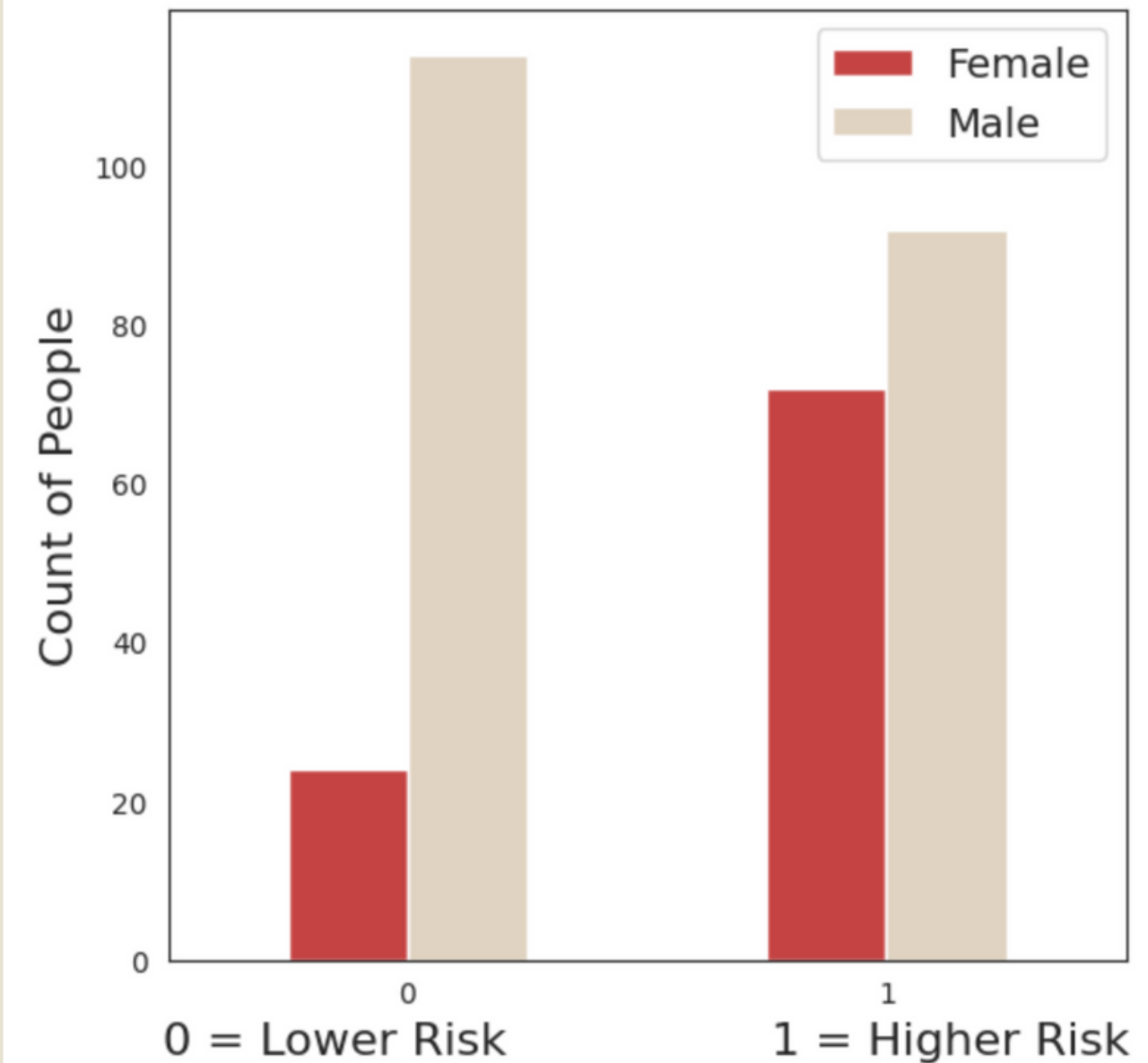
Risk of Heart Attack



Gender Distribution

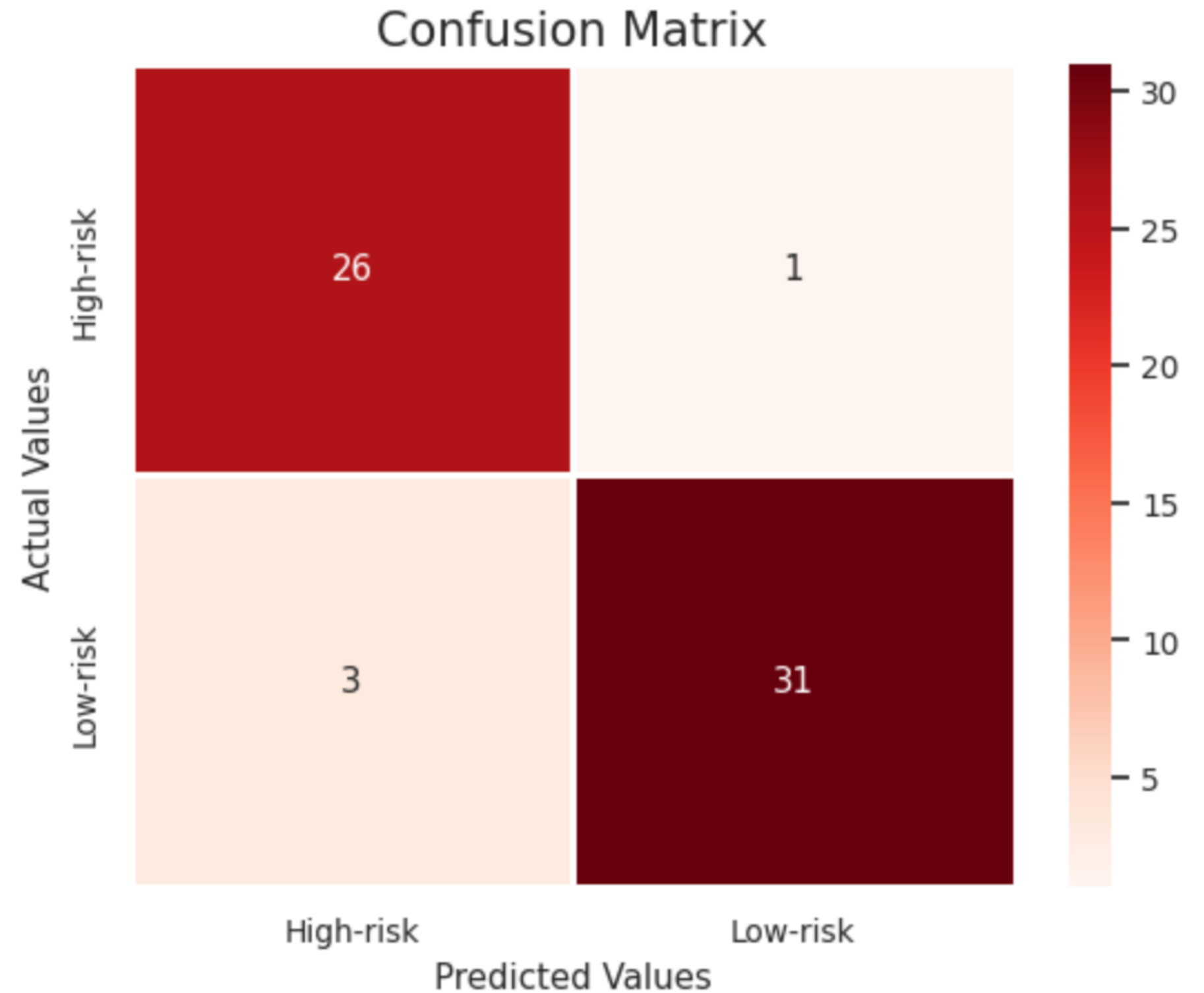


Heart Attack Risk vs Gender



PERFORMANCE OF THE MODEL

- **Algorithm:** SVC (Support Vector Classifier)
- **Accuracy Score:** 93%



Precision: 0.969
Recall: 0.912
F1-Score: 0.939
Accuracy: 93.443 %
Mean Square Error: 0.066



APPLICATION

<https://gozdebarin-heart-attack-prediction-app-app-5sjsuk.streamlit.app/>

Thank you for watching!

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