Heart Disease Classification

Using Machine Learning to help identify patients with heart disease

Bella Scribner

Overview

- Business + Business Problem
- The Project Data
- Model Iteration
- The Final Model
- Recommendations

Photo by Robina Weermeijer on Unsplash

The Business + Business Problem

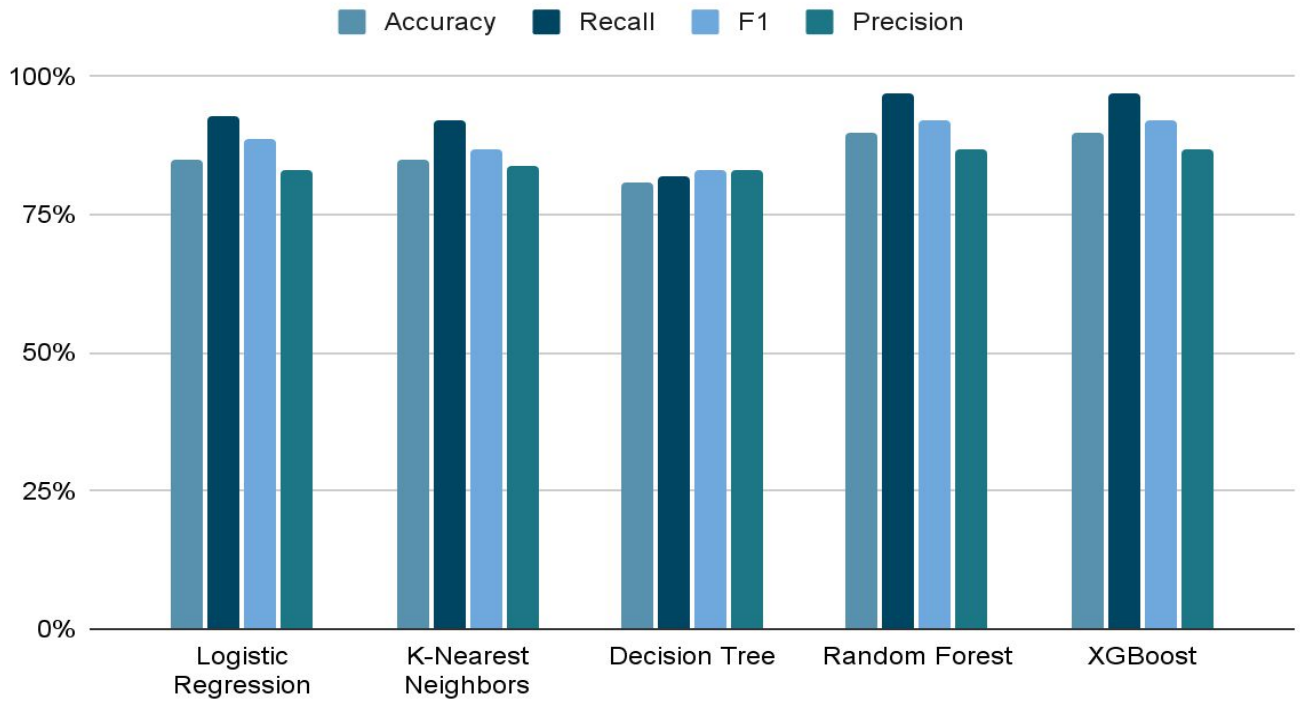
- 17.9 million lives per year
- Health Care Providers → early diagnosis + treatment
- Machine Learning Model to predict if heart disease present

Photo by Michel E on Unsplash

The Project Data

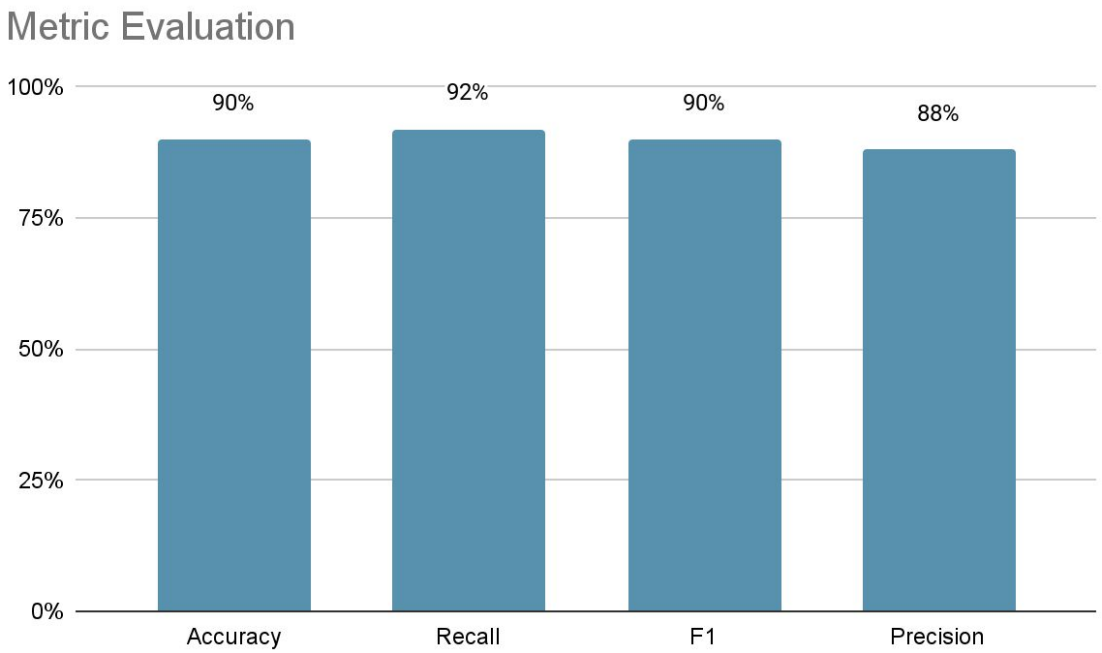
- Sourced from Kaggle → UCI Machine Learning Database
- 11 Independent Factors (patient data)
- Data Preparation – missing values for Cholesterol

Model Iteration



- Capture sick patients without undue burden on healthy patients
- Further tuning of best two models

The Final Model



Confusion Matrix		Predicted Value	
		Healthy	Heart Disease
True Value	Healthy	95	15
	Heart Disease	9	111

Recommendations

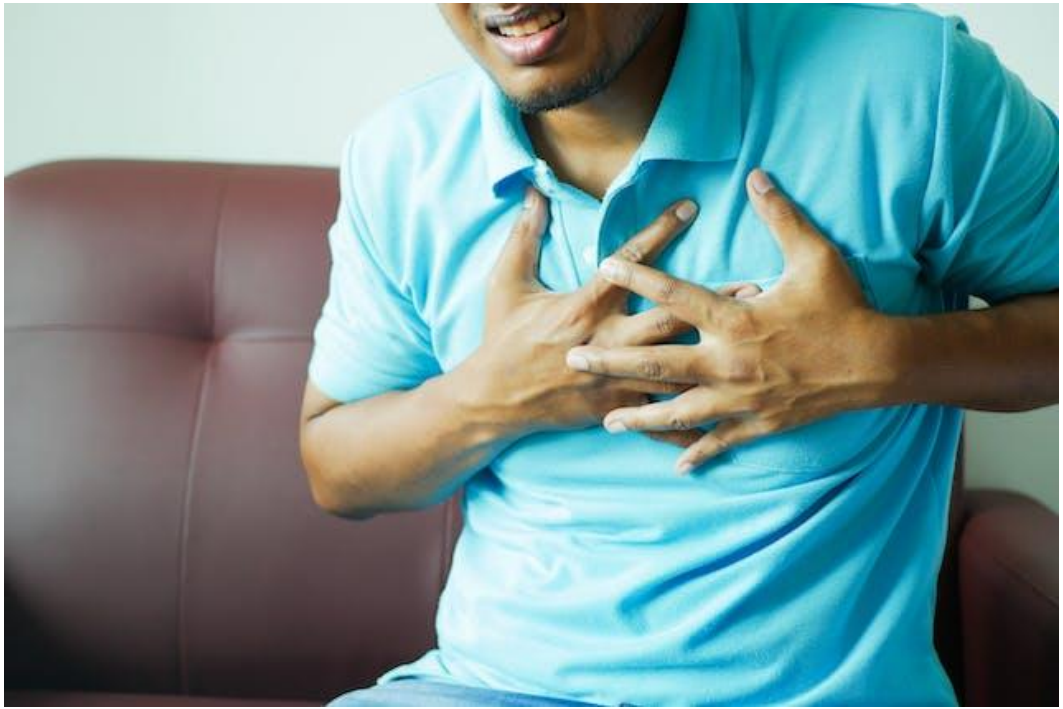
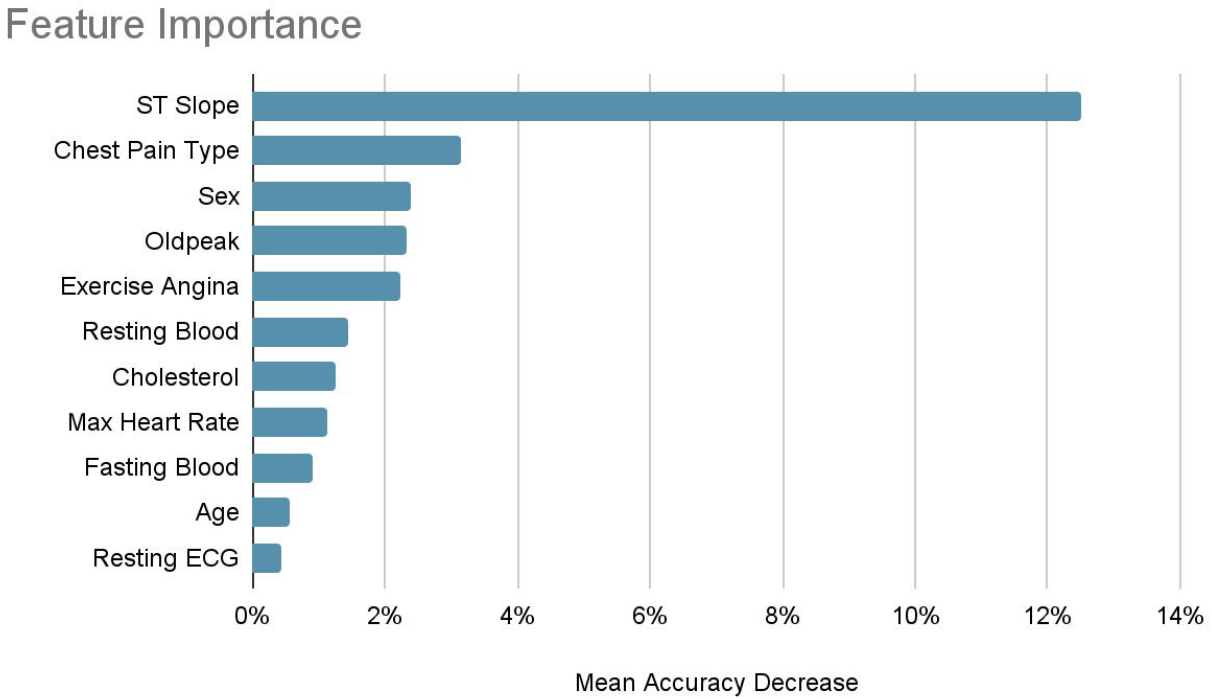


Photo by Towfiqu barbhuiya:
https://www.pexels.com/photo/close-up-of-a-man-in-blue-polo-shirt-with-hands-on-chest-14569658/

1. Use the Model!

Recommendations



2. Gather more ECG readings during exercise

3. Survey on Chest Pain

Next Steps

- Long Term Use – Random Forest or XGBoost
- Models without heart reading information
  - Tiers of modeling to save time and costs

Photo by Karolina Grabowska: https://www.pexels.com/photo/medical-stethoscope-with-red-paper-heart-on-white-surface-4386467/

Questions, Comments, Concerns?

Bella Scribner | i3scribner@gmail.com |
http:github.com/Bella3s