

# Predicting Cardiovascular Disease

- Classification Project Presentation -

Ron Lodetti Jr.  
September 19, 2023

# Overview



- Business Problem
- Data & Methods
- Modeling
- Evaluation
- Conclusions



# Business Problem

**Stakeholder:**

Private Hospital

**Context:**

New online program focused on heart disease prevention

**Problem:**

How can we identify the individuals who would benefit the program?



# Summary

## Source

- CDC

## Method

- ML with  
Classification  
Algorithms

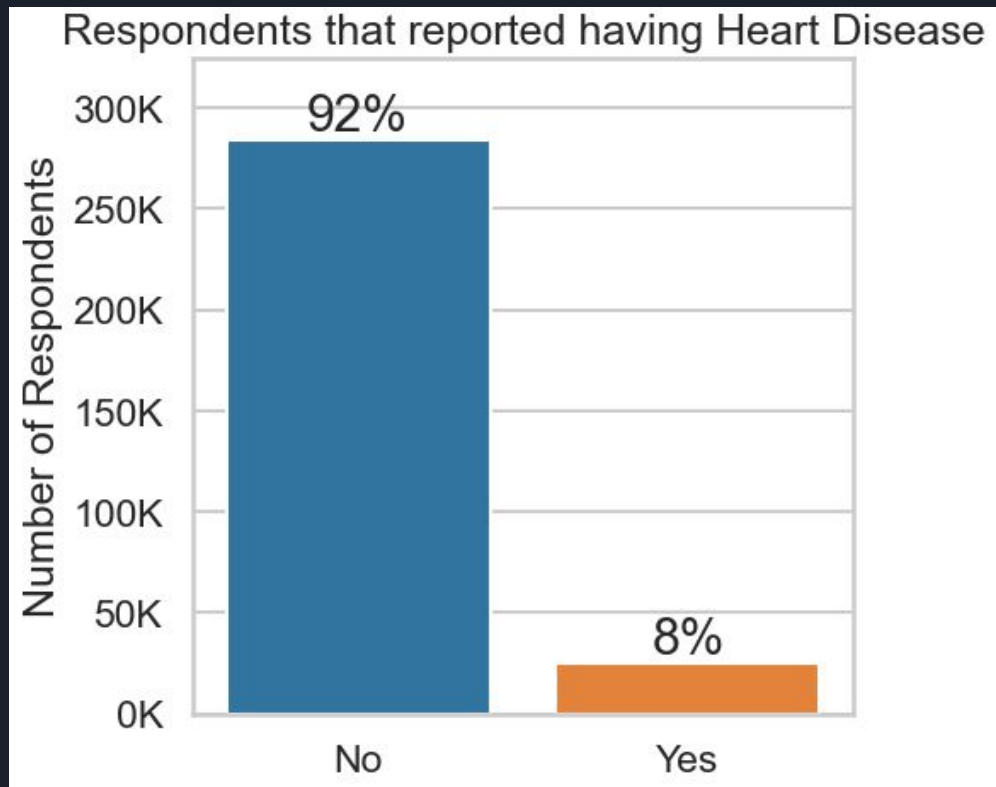
## Findings

- Correctly identify 80% of  
people with Heart Disease
- 6-question survey

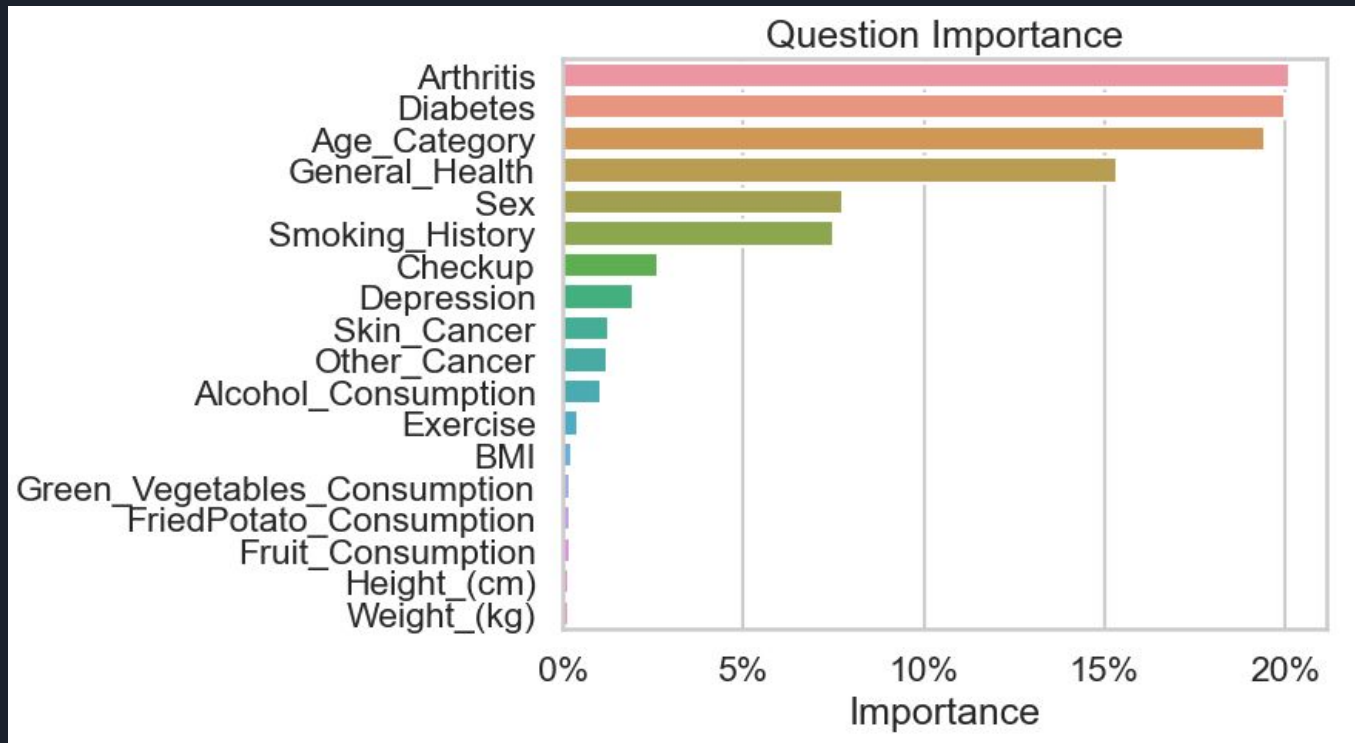
# Data & Methods

## CDC Survey

- +300K Respondents
- 18 Questions
- Imbalanced target



# Modeling





# Evaluation

# of questions	18	6	2
Correct	81%	81%	78%
Error	28%	29%	45%



# Conclusion

Develop a 6-question survey:

- Arthritis
- Diabetes
- Age
- General Health
- Sex
- Smoking History

Correctly Identify **81%**





# Limitations

- Not effective for high cost of mislabeling

## Next Steps:

- **Gather more data** to include other factors that determine Heart Disease
- **Adjust threshold** based on stockholders

# Thank you!

Email:

[ron.lodetti@gmail.com](mailto:ron.lodetti@gmail.com)

Github:

[@rlodetti](https://github.com/rlodetti)

Linkedin:

[@ronlodetti](https://www.linkedin.com/in/ronlodetti)

