



# CARDIOLOGIST

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Your AI Cardiologist

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June 6, 2022

# Motivation

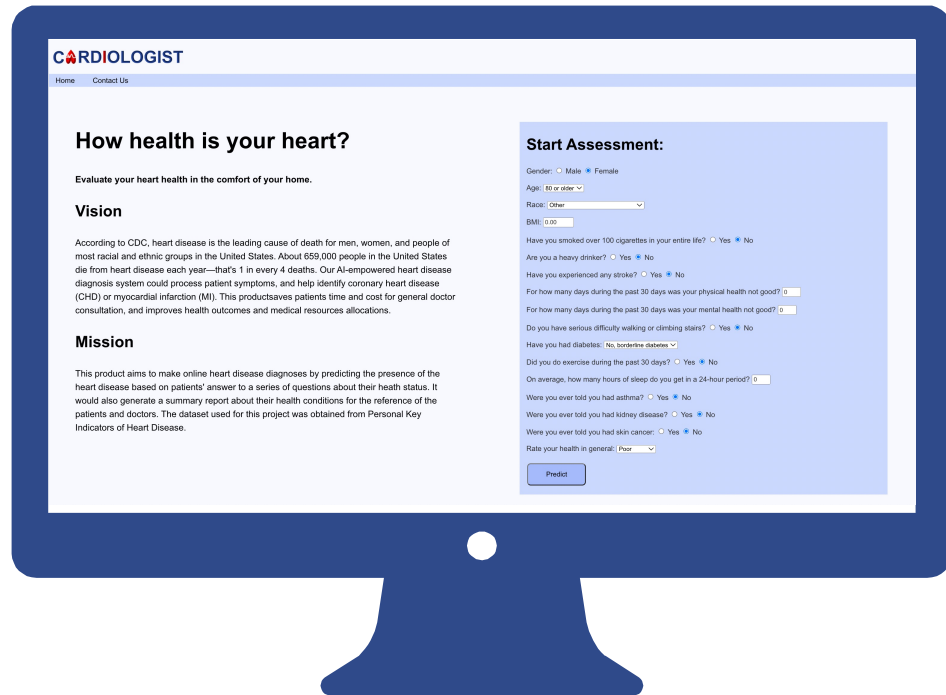
Heart disease is the leading cause of death in the United States.

CARDIOLOGIST is an AI empowered heart disease system that helps identifying heart diseases, saves patients time and cost for general doctor consultation, and improves medical resources allocations.



# VISIT THE WEBSITE!

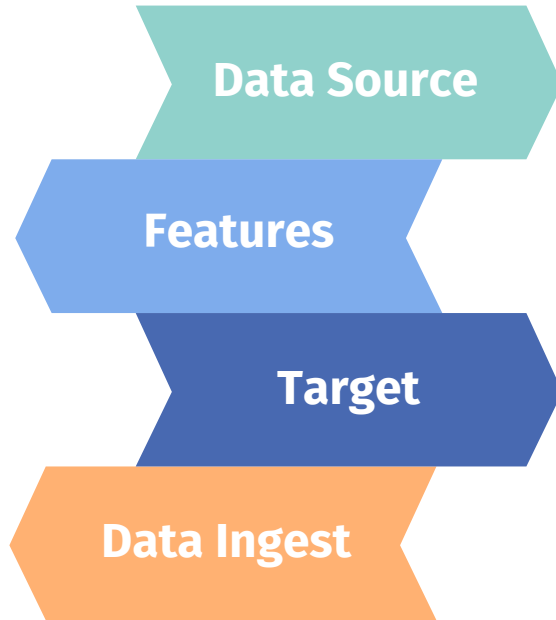
<http://msia423-2120700904.us-east-1.elb.amazonaws.com/>



# Data Overview

- Demography
- Lifestyle
- Health Condition
- Disease

RDS is used to store user input health status



319795 survey responses related to health status of US residents are obtained from Kaggle and are originally from 2020 annual CDC survey data.

The target variable is an indicator of coronary heart disease (CHD) / myocardial infarction (MI)

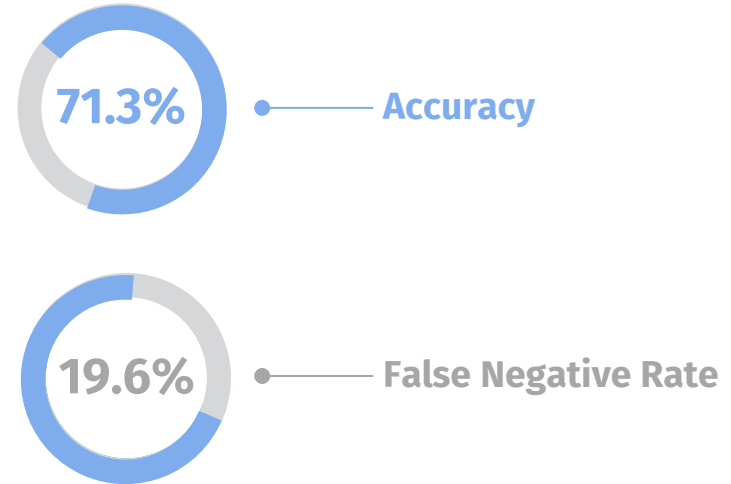
# Model Implementation & Evaluation

The heart disease diagnostic system implemented Random Forest Classifier and provided online predictions based on user inputs.

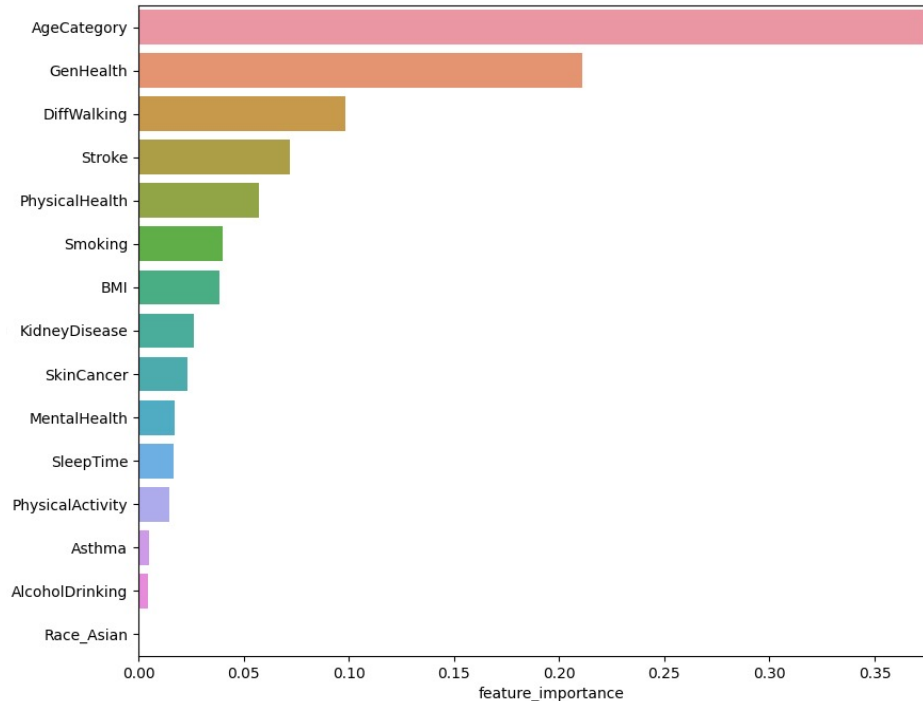
Undersampling techniques are used to deal with imbalanced dataset.

Success Criteria:

- 90% Accuracy
- 10 % False Negative Rate
- 5% Abandon rate



# Insights



91.4% people do not have heart disease

80% people who had heart diseases have age larger than 60

Age, General and physical health level, whether the patient has difficulty walking or experienced strokes are top 5 factors correlated with heart disease.

# THANKS!



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