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# Did You get the Seasonal Flu Vaccine?

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# Team



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# Agenda



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Business Understanding

2

Dataset Overview

3

Methods

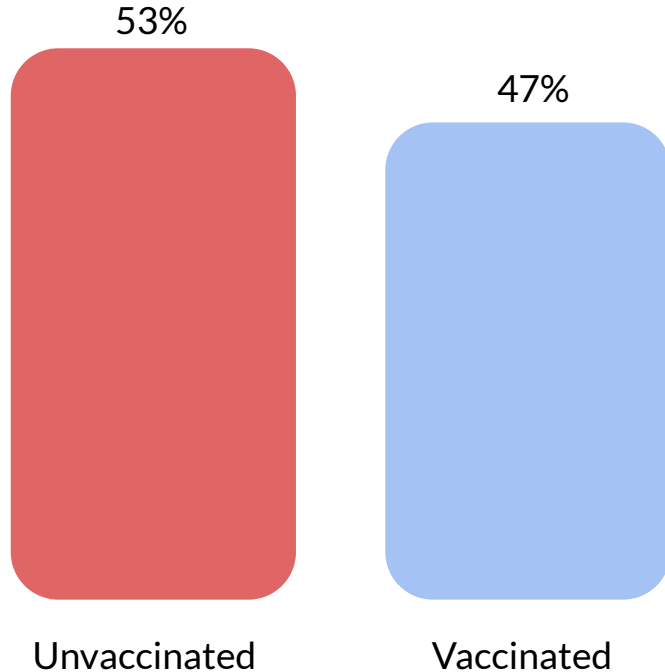
4

Data Analysis & Key Findings

5

Future Research Opportunities

# 79% Accurate in Determining Vaccination Likelihood



# Business Understanding

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# CDC against the Seasonal Flu

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- Seasonal Flu is prevalent
  - 290k hospitalizations
  - 37k deaths.
- CDC vaccination initiative
  - Who gets the vaccine?



# Dataset Overview

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# U.S. Department of Health and Human Services

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- Phone surveys conducted in 2009
- Include demographic and opinionated questions
- Focus on seasonal flu target and attributes most associated with flu





# Methods

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# Relevant and Reliable

## Relevant

- Data of seasonal flu

## Reliable

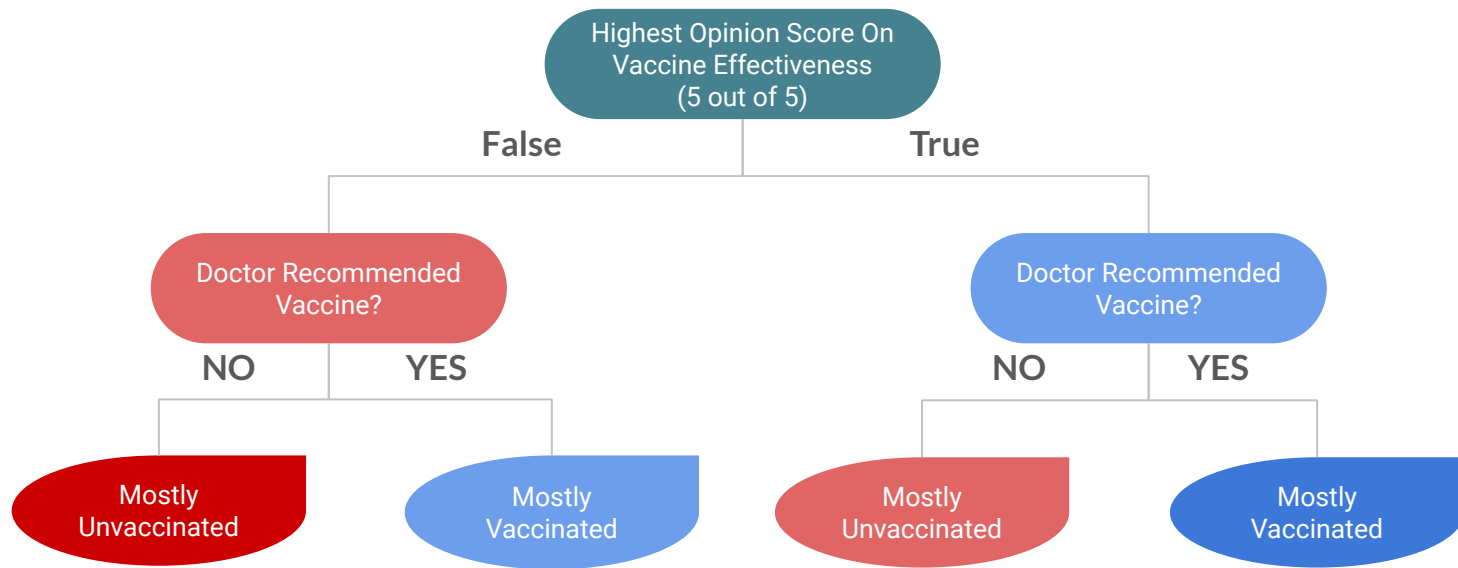
- False Positives
- False Negatives



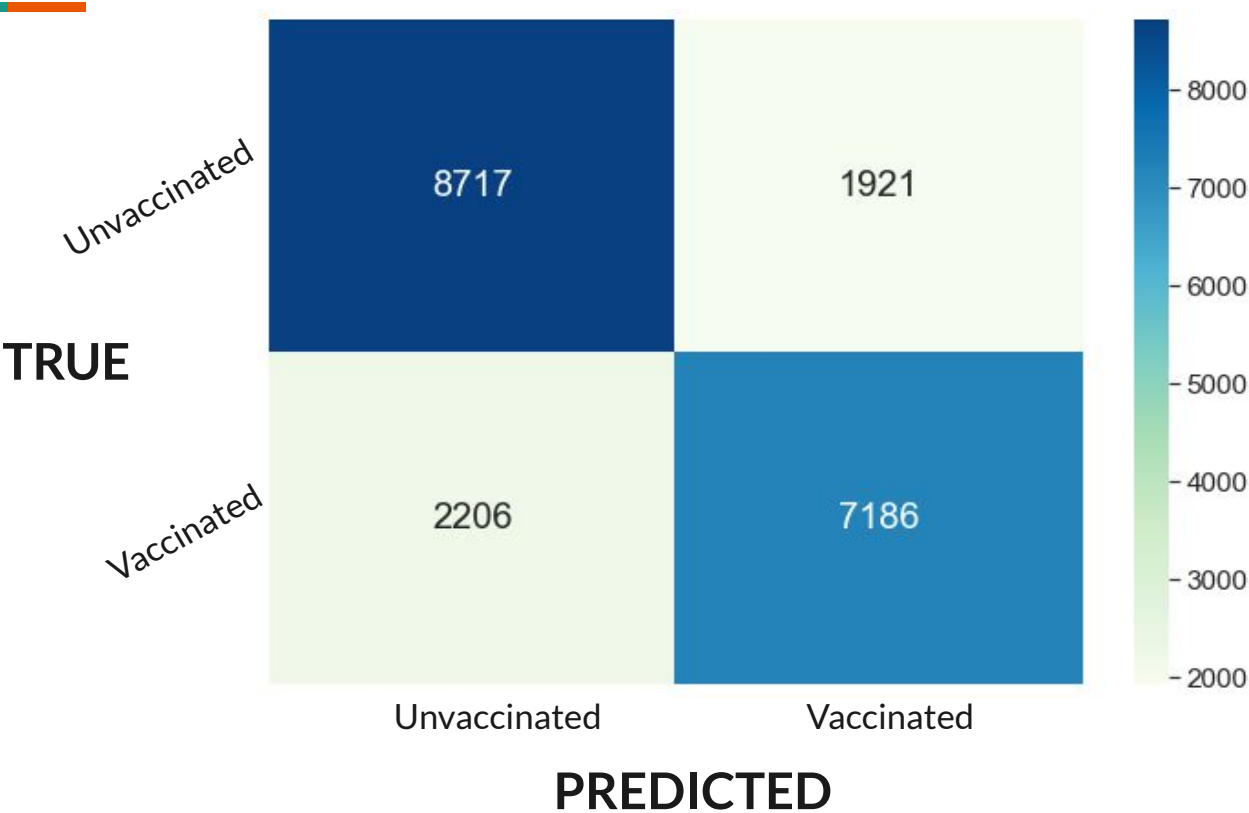
# Analysis

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# A Snapshot of the Model



# Minimize Error For Vaccinated and Unvaccinated Predictions



# Conclusion

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# Vaccine Education is Key

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- Educate on:
  - The risks of the flu
  - The efficacy of the vaccine
- Doctor Recommended
- Focus on individuals under 65



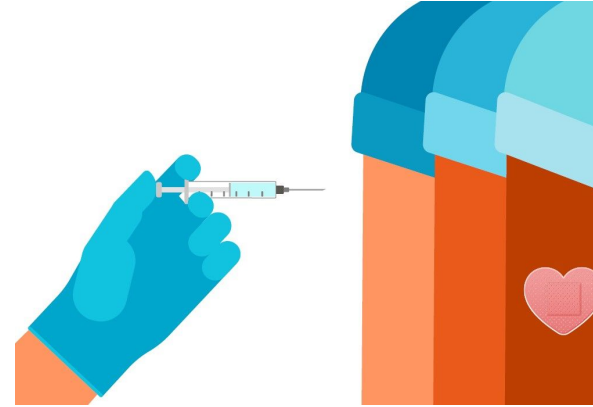
# Future Research

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# We Need More Data.. and a Better Survey

- Collect Additional Geographic Data
- Composition of \$3 Billion for Vaccine Confidence



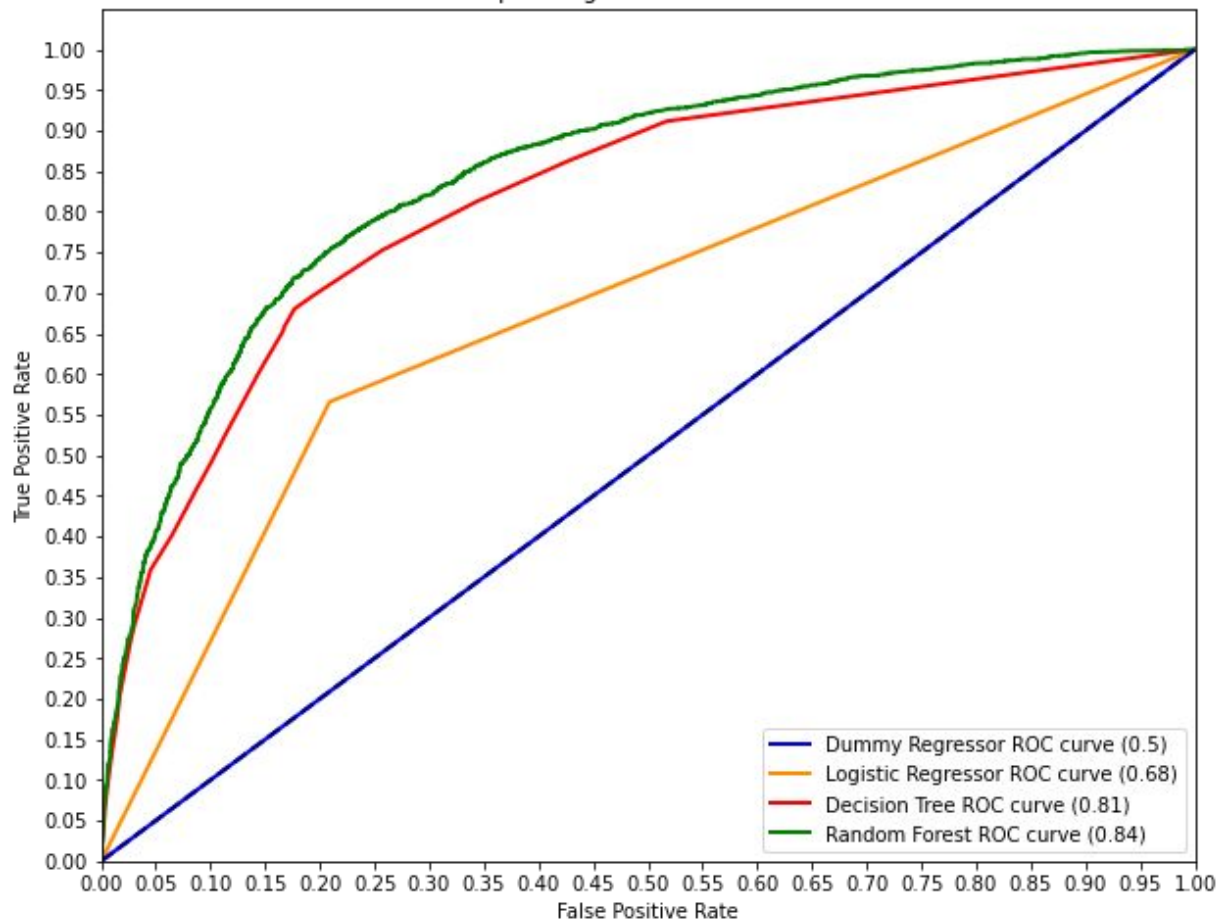
# Questions?

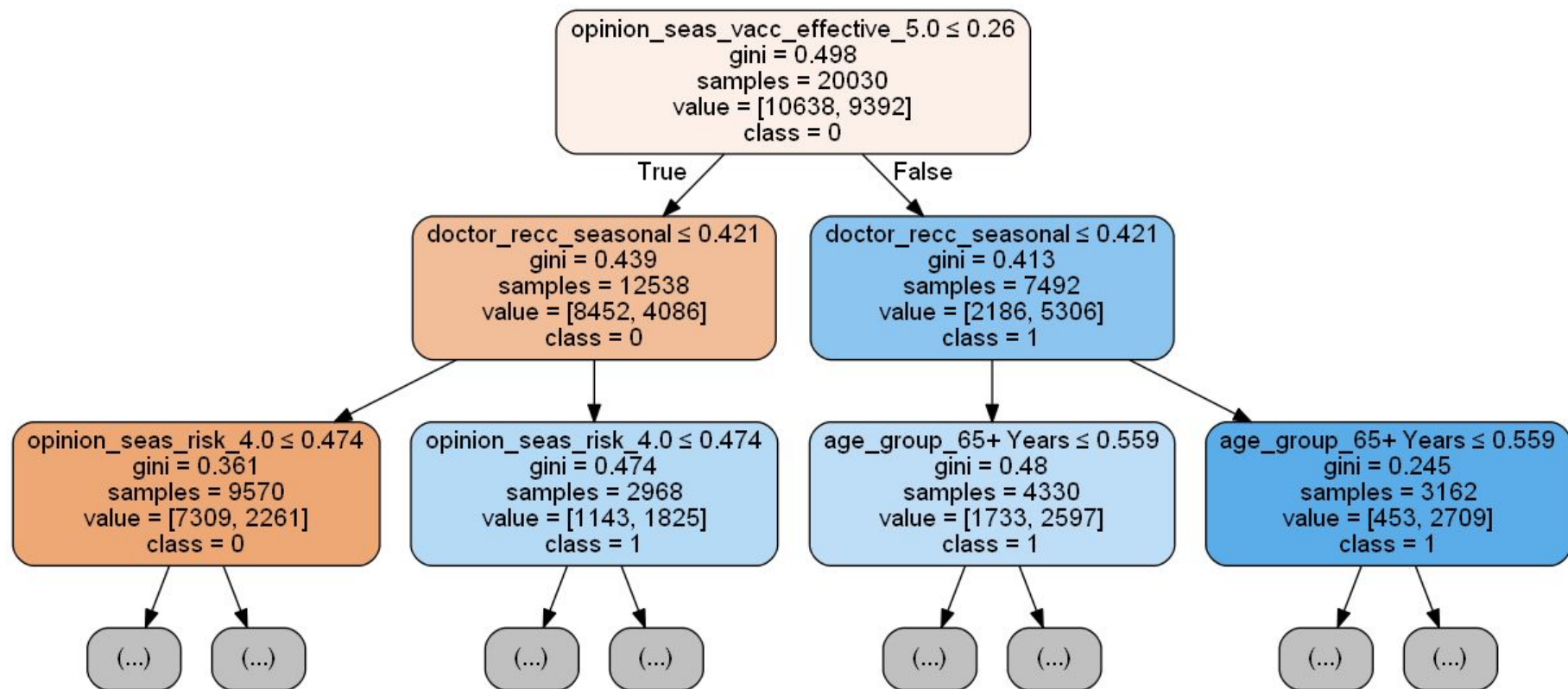
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# Appendix

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Receiver operating characteristic (ROC) Curve





## Confusion Matrices Showing Improvement to Recall and Precision

