Predicting Customer Subscription to Financial Products

Capstone Project

Zach Cherna
February 2023

Client Objective

- Increase Term Deposit Revenue
- Marketing Efficiency

My Goals

- Identify Strategic Opportunities
- Predict Customer Sign Up

Outline

- Business and Data Understanding
- Modeling
- Evaluation
- Strategic Recommendations
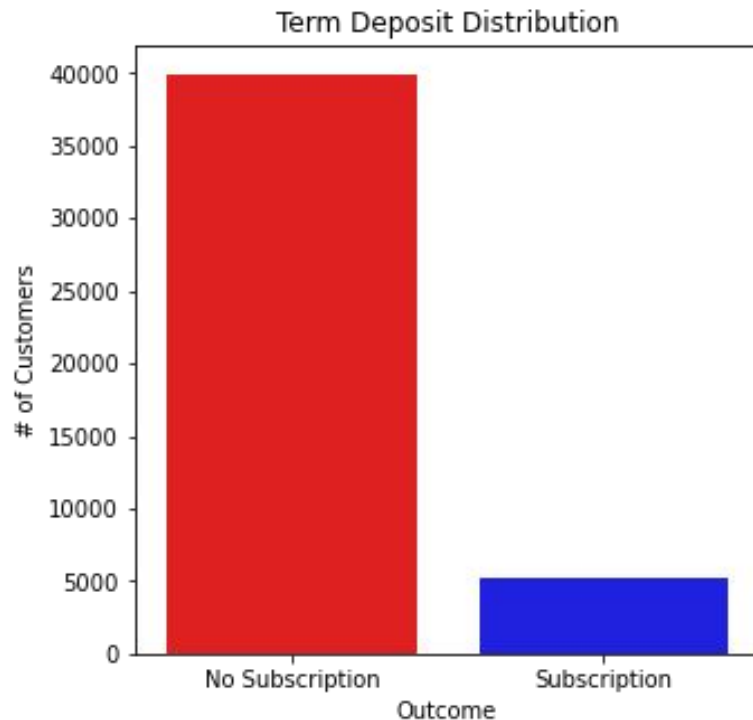- Next Steps

Business Understanding

What's The Problem?

- Niche Product Offering
- Expensive Customer Acquisition

Data Understanding

What Are We Working With?

- Banking Dataset - Marketing Targets
- 45,211 Customers
- Demographic Attributes
- Previous Results ~ 12%

Term Deposit Distribution

Modeling

Type

- Classification
- Gradient Boost

Use Cases

- Target Marketing / Promotions
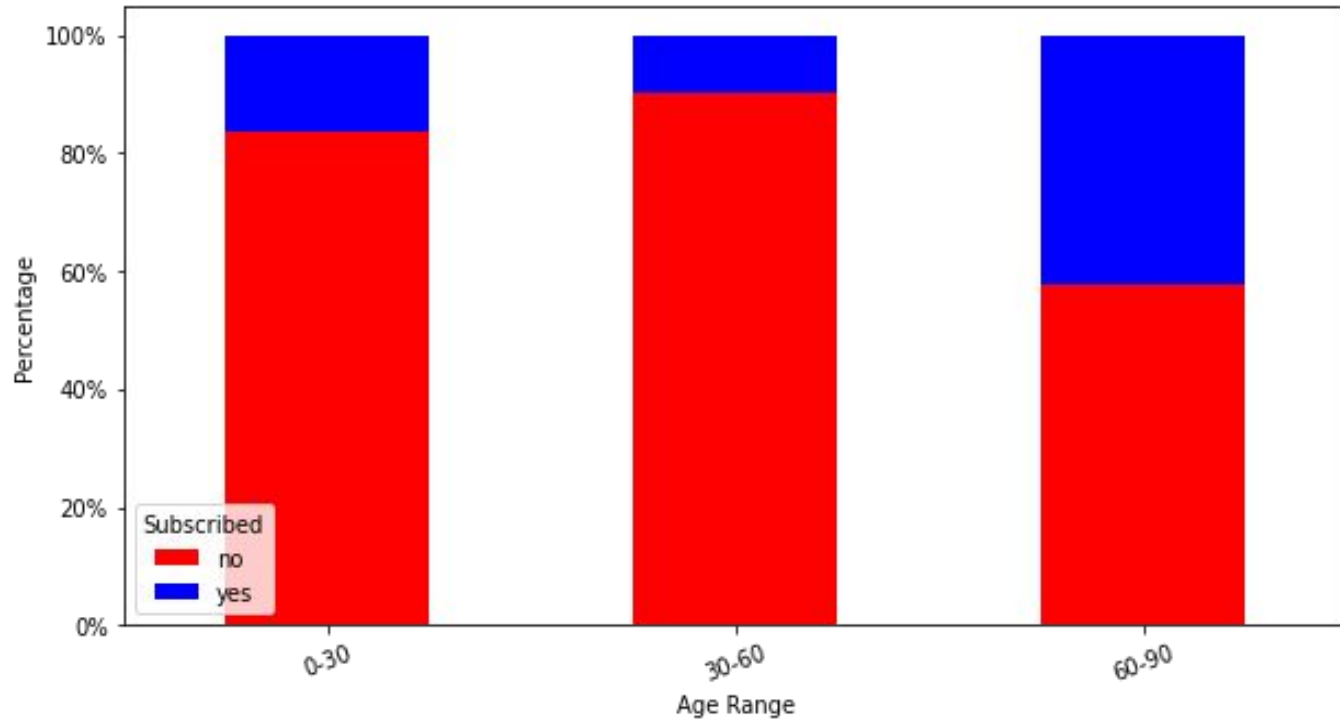- Resource Allocation
- Automation

Evaluation

Metrics

- Accuracy ~ 90%

Key Insights
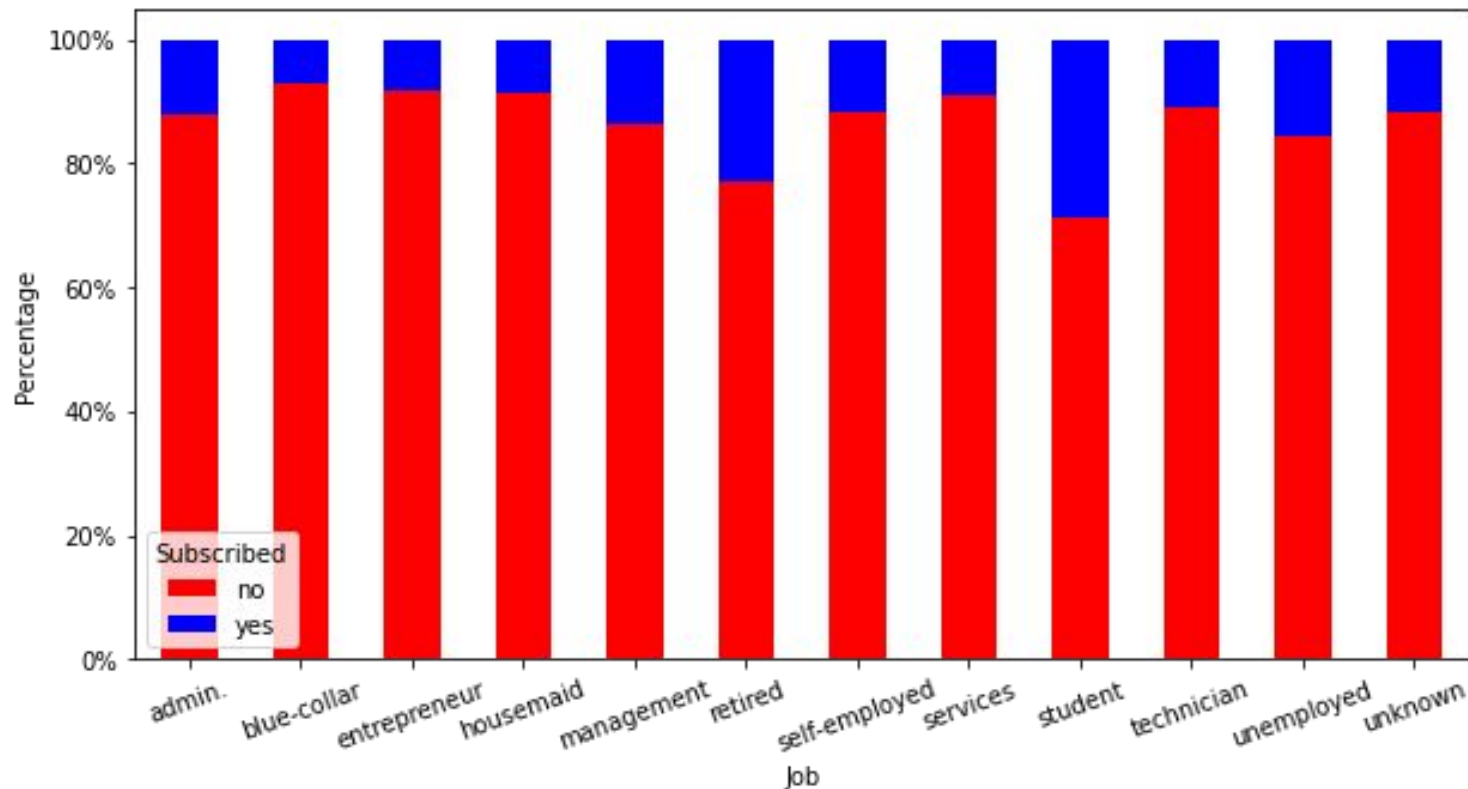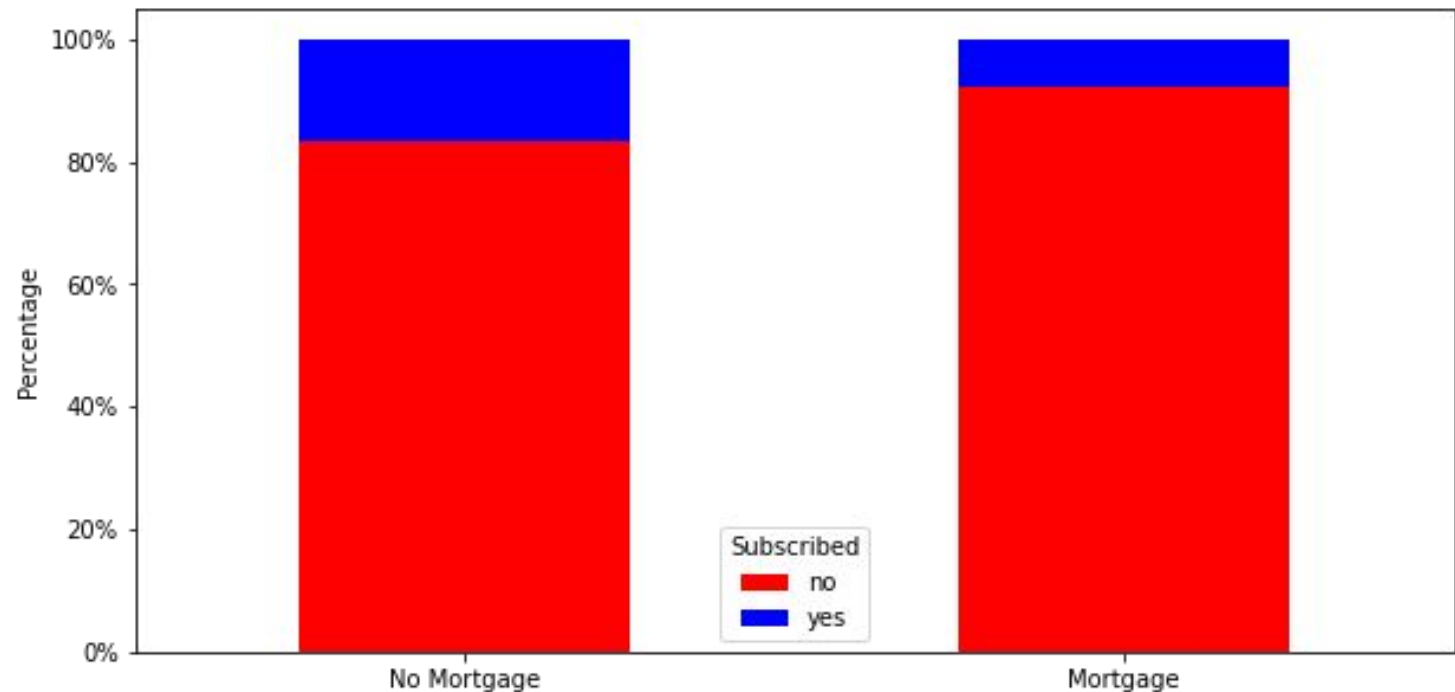
- Age
- Employment
- Mortgage Status

Age

Employment

Term Deposit Subscription by Job Type

Term Deposit Subscription by Mortgage Status

Strategic Recommendations

- Group Customers by Opportunity
- Lean & Dedicated Call Center
- Automate Low Yield Email
- Flexible Deposits

Limitations & Next Steps

- Fine Tuning
- Continued Data Collection
- Streamlit Model App

Thank You!

Zach Cherna

zacharycherna@gmail.com

Github Link:

https://github.com/zcherna/Predicting-Customer-Subscription-to-Financial-Products