nonprofit organization
help
charity
money
benefit
NPO
public interest
volunteer
foundation
service organization
contribution
mission
donation
beneficiary
altruism
policy
philanthropy
poverty
government funds
fundraising
tax exemption
generosity
surplus revenues
service organization
nonprofit organization
tax exemption
religion
surplus revenues
noble
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grant
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altruism

Predictive Modeling: the importance of data in decision making for NPOs.

Presented By Haender Michael Jean Louis And John Widno

Overview and Goal

Problematic

- Instinct
- Traditional Method
- Weak Donor attention
- poor loyalty
- poor retention

Dataset

Donor dataset

Kaggle

About Datasets

contain Information about :

- donors
- donations
- campaigns
- projects results
- engagement activities

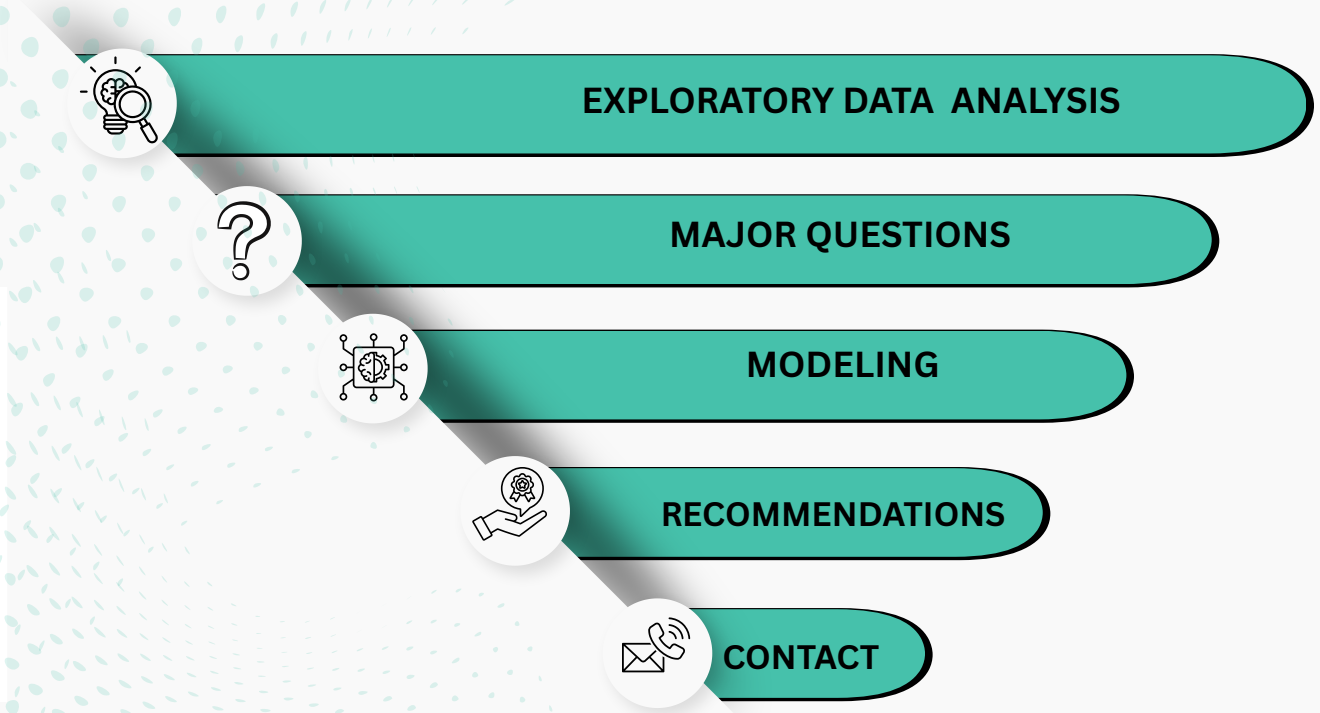
Goal

Our goal is to :

- Showcase the importance of data informed approach.
- provide meaningful recommendations

Methodology

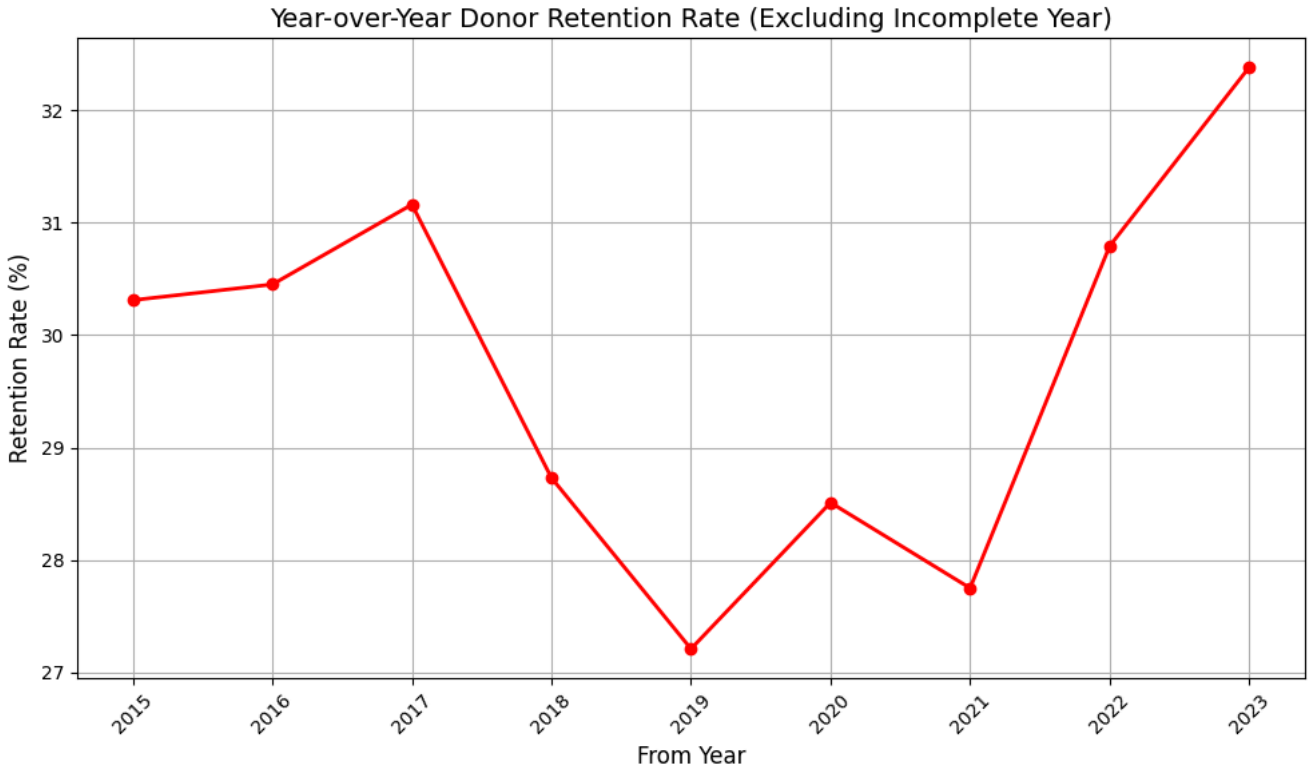
the different steps of our Analysis.



Exploratory Data Analysis

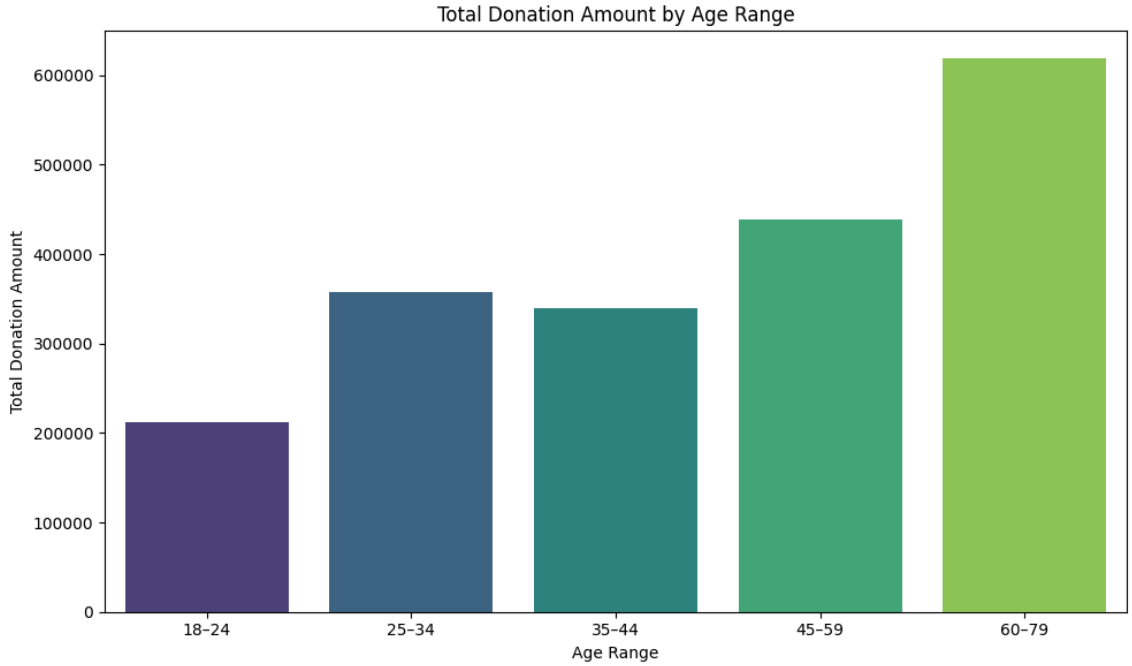
1. Dataset preparation
2. Business understanding
3. data understanding

Donor retention over time



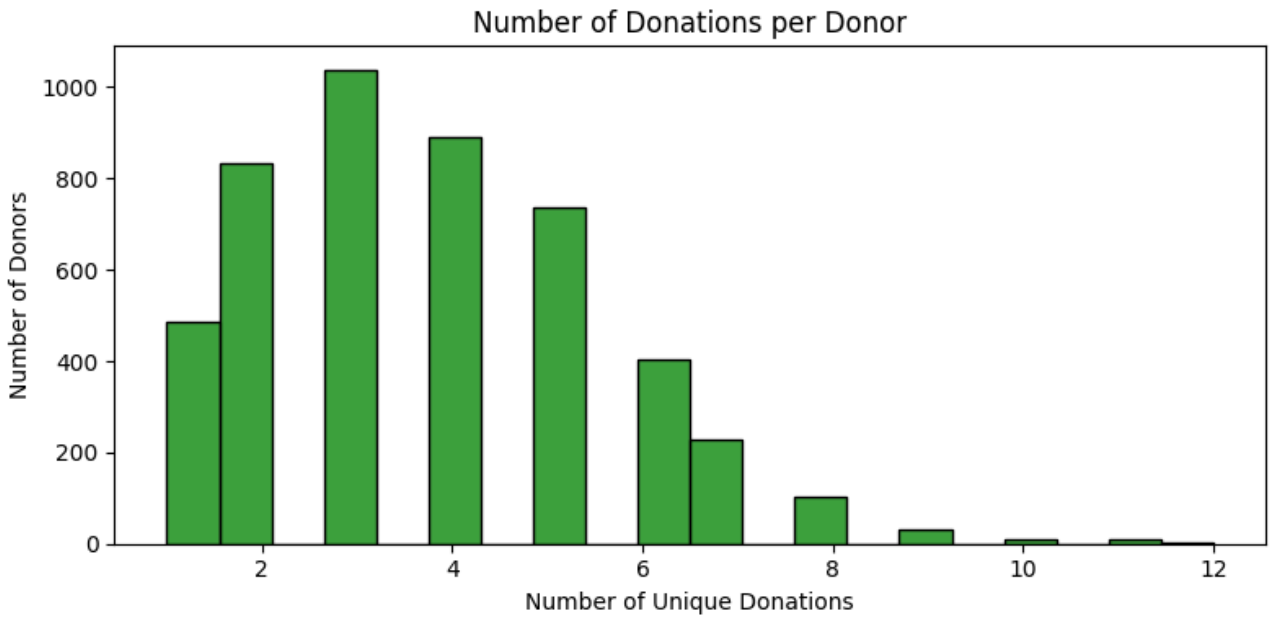
- It fluctuates Around 30%.
- why this information?

Donation frequency per age range



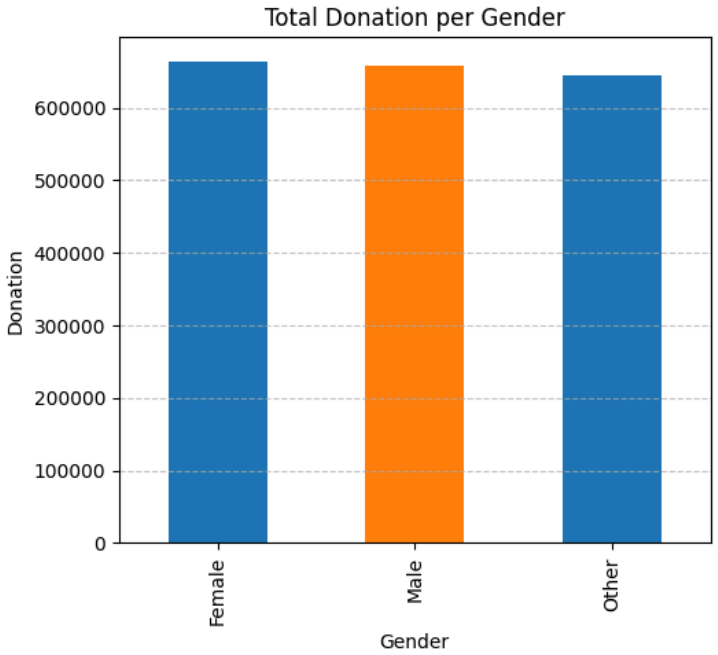
- older donors are likely to donate more
- why this information?

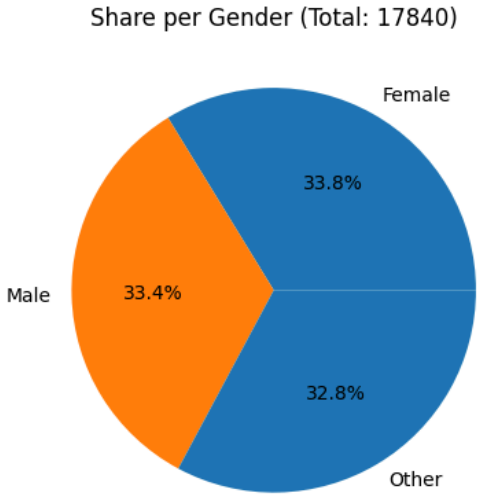
Number of donation per donor



- 2-4 donations in general
- why this information?

Donation per gender

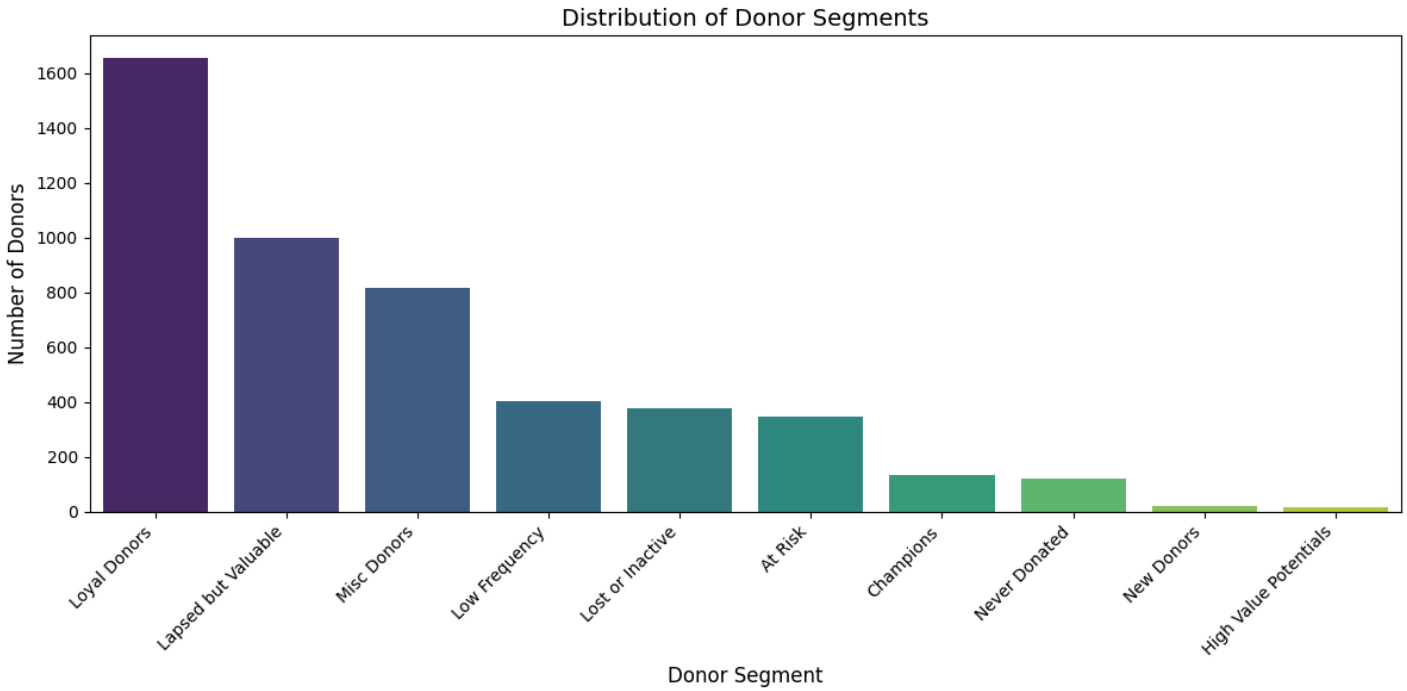




- equal repartition

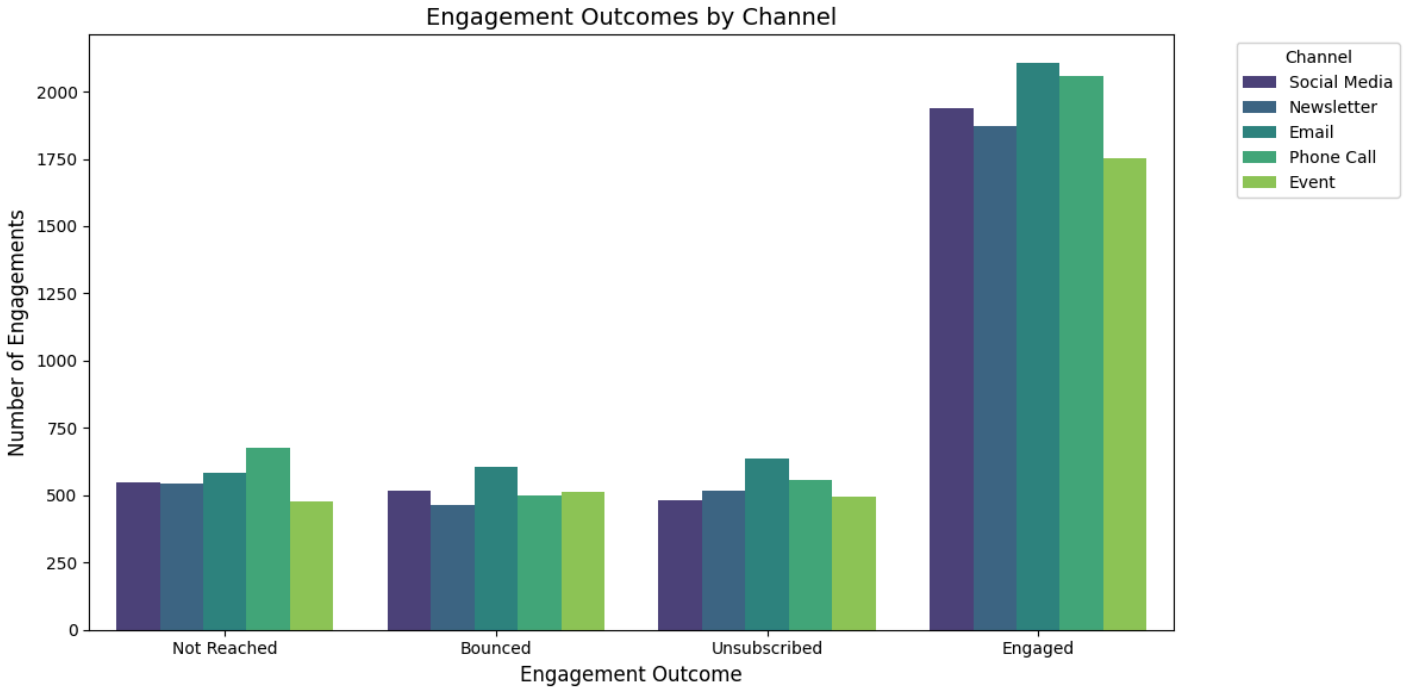
Donor Category

F= Frequency
R= recency
M= Monetary

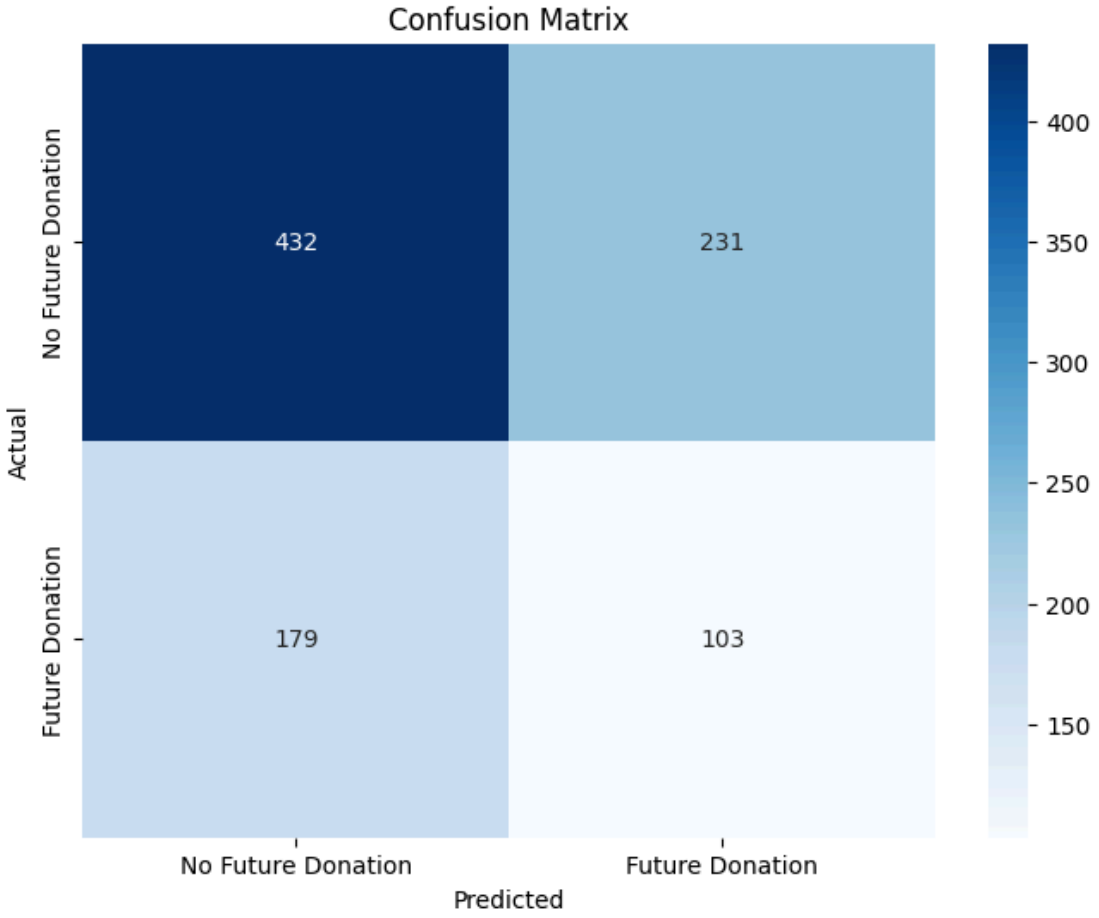


- New donor: F = 1
- champions: r< 365, F>=4, M>= 750
- loyal: r<=1095, F>= 2, M>= 250
- At risk: r>1095, F<=2

Channel effect on engagement

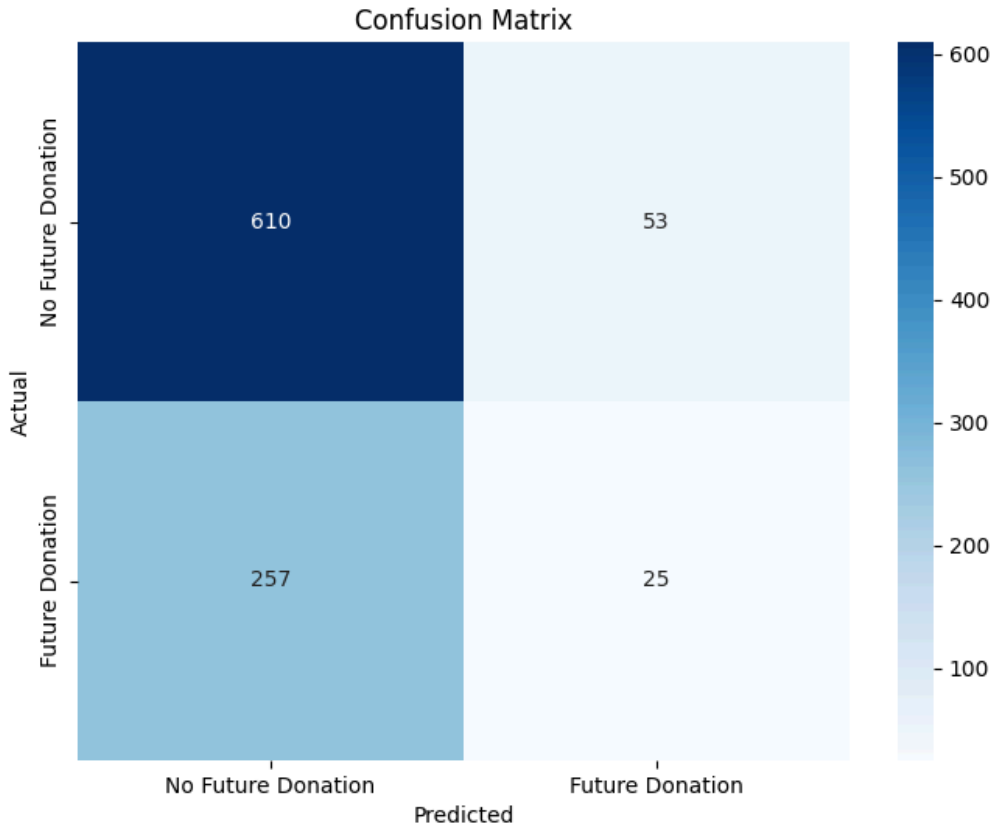


Model 1



- Xgboost
- Purpose of the model
- steps taken
- Accuracy = 57%
- Model Interpretation

Model 2



- Random Forest
- Accuracy = 67%
- Model Interpretation
- comparison to the 1st model

Model 3

- purpose of model
- Model Interpretation
- Model performace

Recommendations

- use data approach For decisions

THANK
YOU!

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