

OMUVWIE ENITA

RAJI HIND

SRIPADA SAISUMANTH



DIRECT SOCIAL COMMUNICATIONS CAMPAIGN FOR REACTIVATION

OUR MISSION:

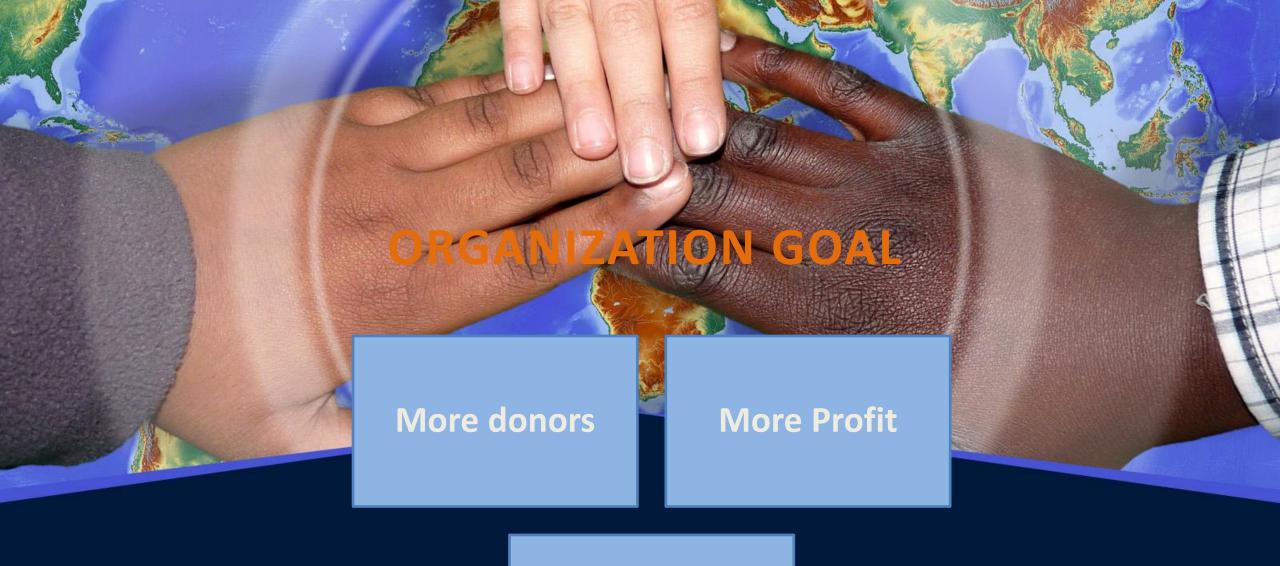
Understanding donors' growth

OUR OBJECTIVE:

To send out letters to potential donors who are capable to give something beyond €30



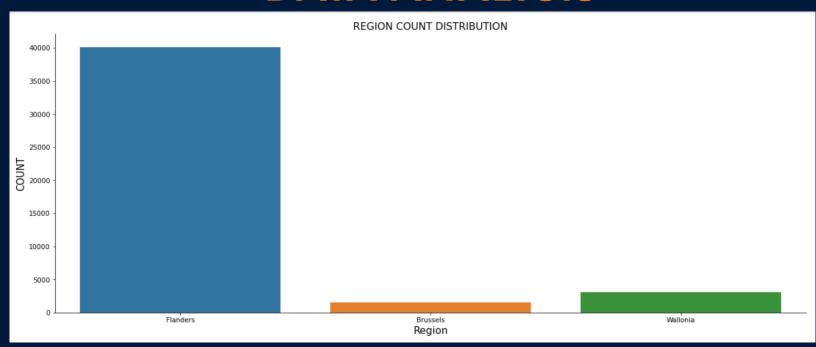
- Organization Goal
 - Campaign goal
 - Analysis Goal
 - Model
 - Analysis
 - Business Case



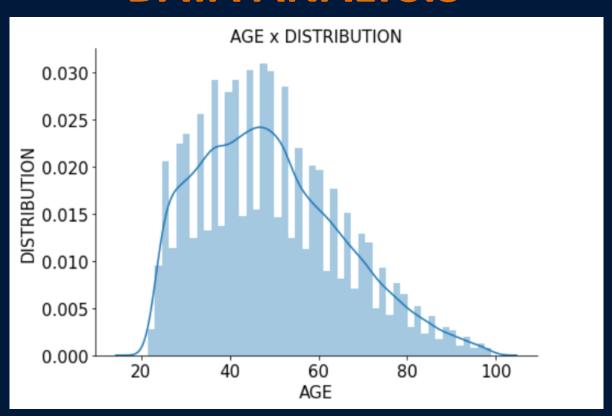
Less Expenses



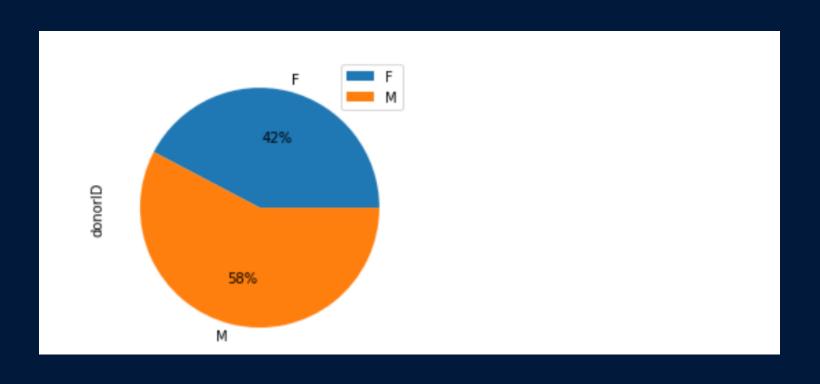
TARGET TIME **MESSAGE**



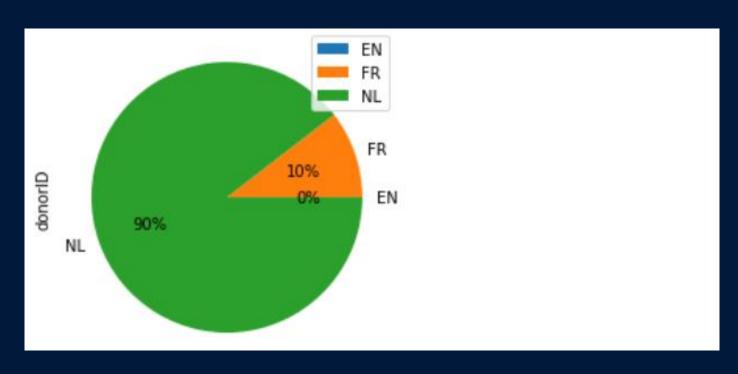
Most of the donors come from Flanders region with a count of about 40000



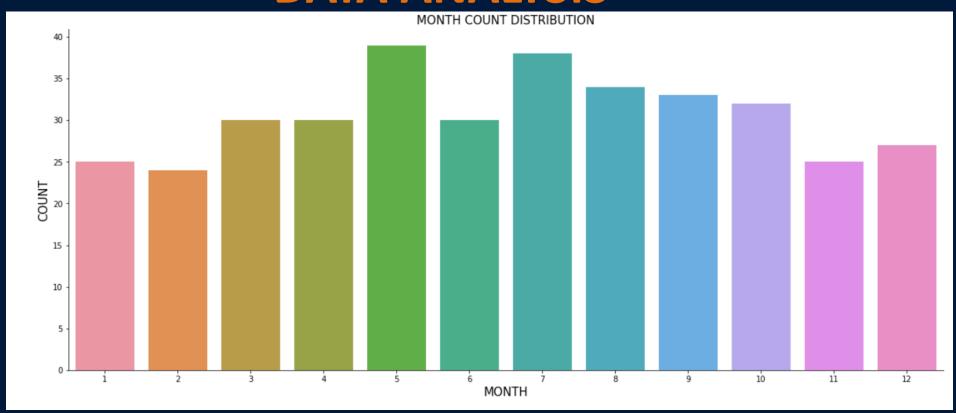
Most of the donors are between the ages of 30 and 60 years



58% of the donors are males and 42% are Females



90% of the donors speak NL and there are no EN speakers among donors



Q3 shows the best period for running campaigns

RFM ANALYSIS (RECENCY, FREQUENCY, MONETARY VALUE)

Recency

Recent donation in

the last

1 year

2 years

4 years

6 years

Frequency

Campaign Attendance

In

1 year

2 years

4 years

6 years

Monetary
Amount Donated
Annually
per Campaign

Cleaning the data and Feature Engineering

- Pearson R was used to select the best possible features based on the P-values
- Linear and Black-box models were trained and tested and based on the AUC, logistic was considered to predict the donors
- Logistic Regression was selected as it performs better compared to other models with the selected features based on Pearson R.
- Few Selected features were Donors:
 - Age
 - Gender (Male and Female dummy encoded)
 - Last Four years Donated Amount
 - When was the last time <u>Donated</u>
 - Donors with total amount Greater than 30 and 60 Euros

FEATURE PREFERENCE - PEARSON'S R

age

Age Demographics of donors

Gender_M

Has value 1 or 0 for Male or not Male

Gender_F

Has value 1 or 0 for Female or not Female

gift_last_year

Most recent year of donation

total_amt_greater_30

Donation amount over 30 euros

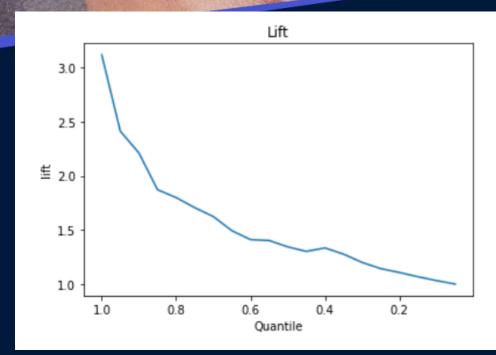
total_amt_greater_60

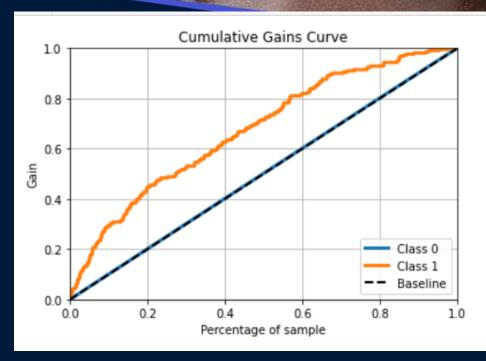
Donation amount over 60 euros

4y_camp_sum

Campaign budget spent in the last 4 years

BETTER APPROACH FOR IMPROVED PERFORMANCE

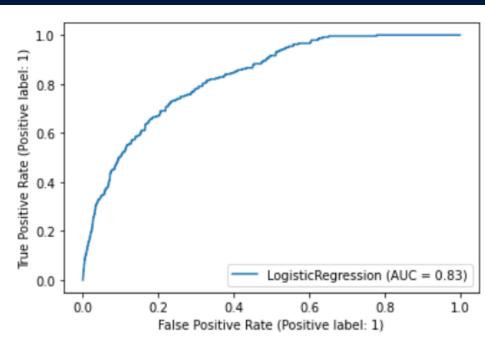


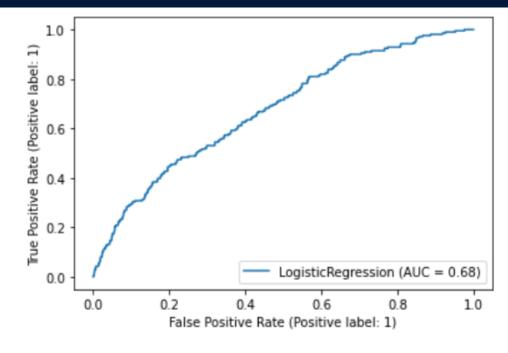


			tree	logistic ı	andomForest	boosted Tree	svm	neuralNet
Train Data		Accuracy	0.996920	0.978566	0.996663	0.986352	0.978566	0.978566
		AUC	0.999714	0.820735	0.999428	0.992769	0.772979	0.787018
Test Data			tree	logistic	randomForest	boosted Tree	svm	neuralNet
		Accuracy	0.979937	0.979243	0.982022	0.98567	0.979243	0.979243
		AUC	0.782242	0.828251	0.966405	0.99178	0.783811	0.781304

Profits increase as the model improves

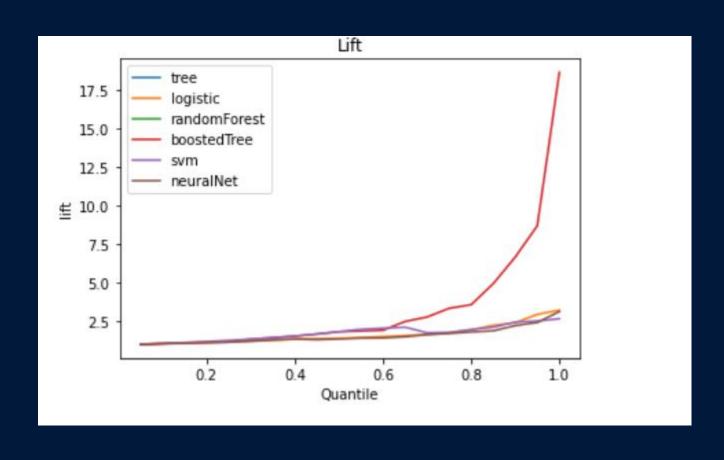
THE ULTIMATE APPROACH: LOGISTIC REGRESSION





	Train Data	Test Data
AUC	0.83	0.68

RECEIVER OPERATOR CHARACTERISTIC (ROC) CURVE



THE STRATEGIC PLAN

Targeted donors

- Donated at least once in a year higher than €3
 - Donated at least once in last 6 years
 - Donors belonging to Flanders region
 - Donors include 45% Male & 35% Female

Campaign Launch

Q3 could be the best time to launch the campaign

Campaign Donors

- Donors participate in face –to-face events
- These participators can be profiled on websites and mailing list

THE STRATEGIC PLAN

DEDICATED CAMPAIGN DONORS

- Participate in DSC occasions face to face
- People can be profiled on the official site and in the mailing list
- My assumption for the campaign is six months to get the estimated amount of donations for successful campaign

COMPUTATIONS										
		MODEL		1	RANDOM					
Amount of people contacted	Cost of offer	Gained money	Profit	Cost of offer	Gained money	Profit	Profit (model over random selection)			
5304	5.42301408	197.9400139	192.5169998	0.097344	3.553056	3.455712	189.0612878			
10608	8.70737472	317.8191773	309.1118026	0.194688	7.106112	6.911424	302.2003786			
15913	10.99878912	401.4558029	390.4570138	0.292032	10.659168	10.367136	380.0898778			
21217	11.91535488	434.9104531	422.9950982	0.389376	14.212224	13.822848	409.1722502			
26521	11.8389744	432.1225656	420.2835912	0.48672	17.76528	17.27856	403.0050312			

Benefit of model over random

MORE FUNDS RAISED; LESS EXPENSES INCURRED

- Target Donors: 26521
- Donors who helped contribute: 1191
- Actuals Test Donors: 361
- Predicted Donors: 338
- **♦** Expected ROI for Predicted: 338*0.8-30 = €240.40
- Estimate profit: ~ € 192.516

REFERENCES

DataCamp. (n.d.). Retrieved March 27, 2022, from https://app.datacamp.com/learn/courses/intermediate-predictiveanalytics-in-python



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