

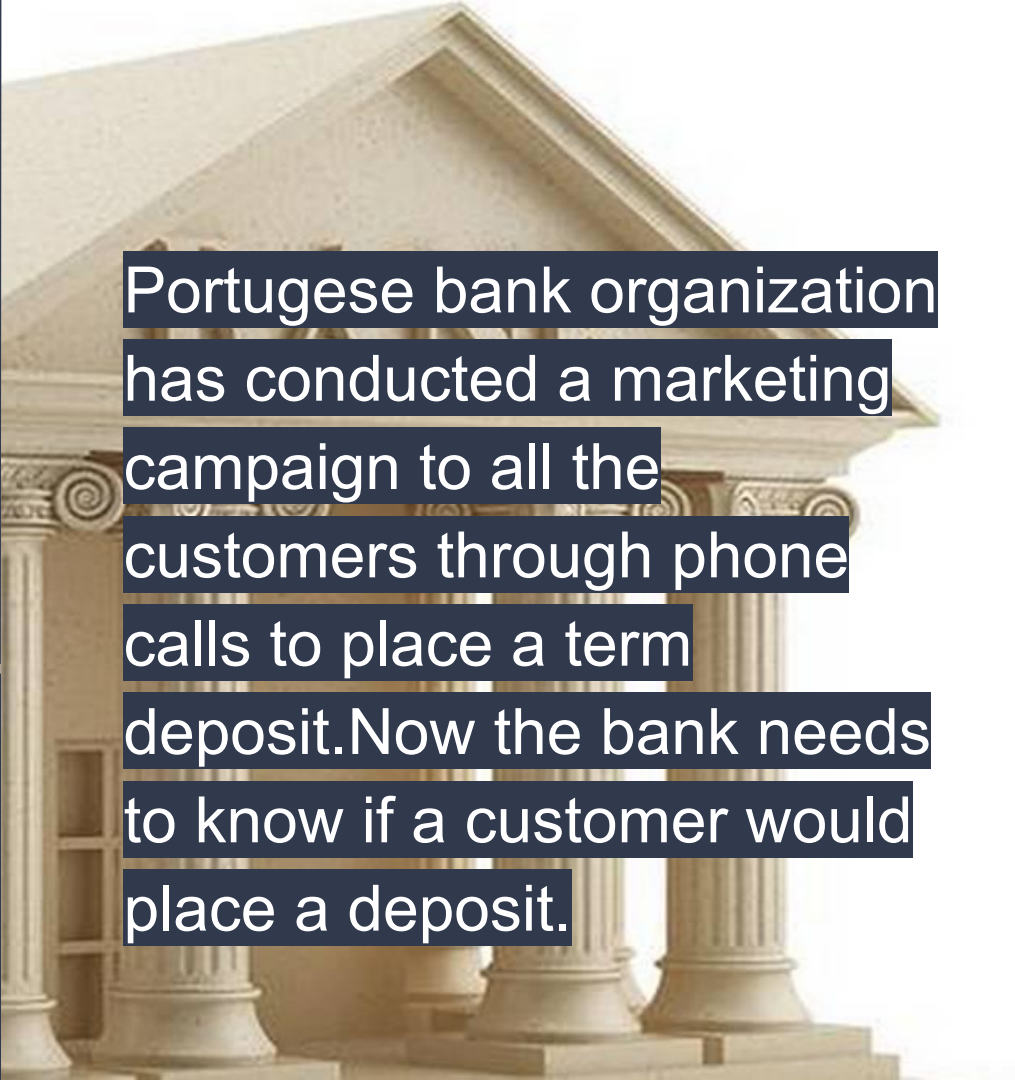
Bank Marketing Campaign Classification Prediction

Contributor: Prabagini Thambinathan

OVERVIEW

- The data is related with direct marketing campaigns (phone calls) of a Portuguese banking institution.
- We will be building a classification model to analyze the customer behavior (yes — subscribed or no — did not subscribe).
- The bank would then be able to use the same model to predict customer responses to future marketing initiatives.

BUSINESS PROBLEM



Portuguese bank organization has conducted a marketing campaign to all the customers through phone calls to place a term deposit. Now the bank needs to know if a customer would place a deposit.

DATA

- Taken the data from the UCI Dataset(machine learning repository)
- It has over 40,000 rows and 20 feature columns.

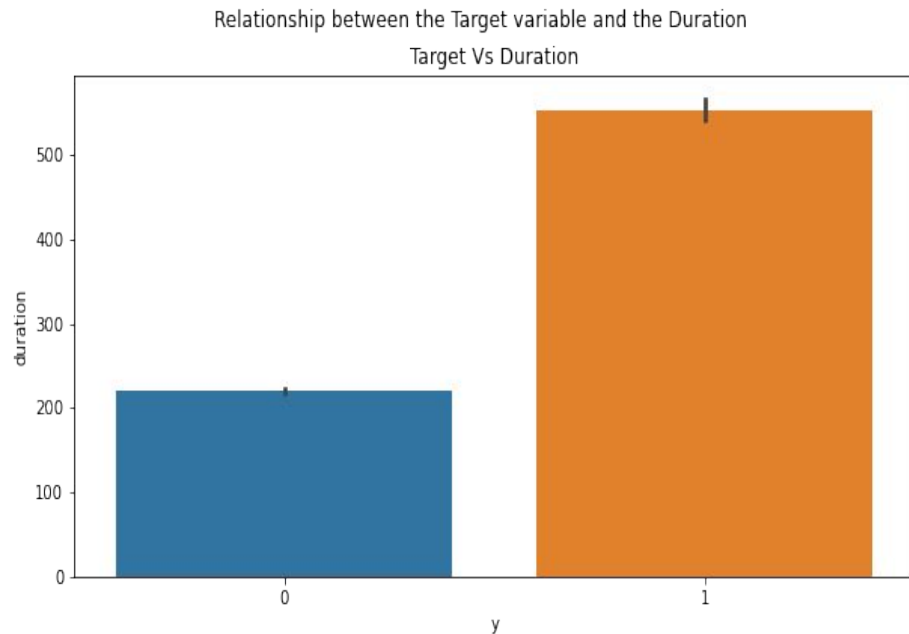
METHODOLOGY

OSEMN Framework is used in this classification analysis.

- Obtain
- Scrub
- Explore
- Model
- Interpret

ANALYSIS

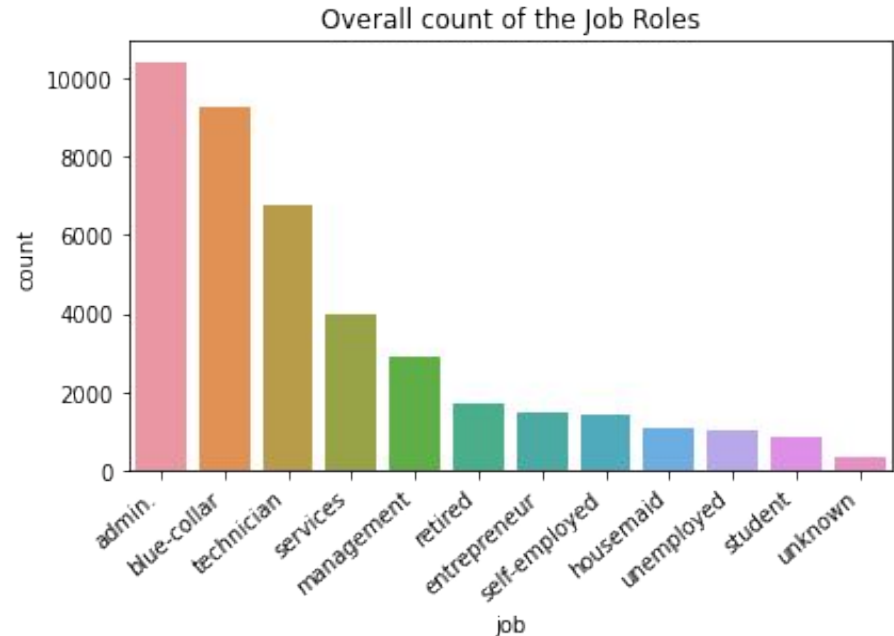
How the call duration plays a major role in our data



Duration seems to be an important feature in the dataset.

ANALYSIS

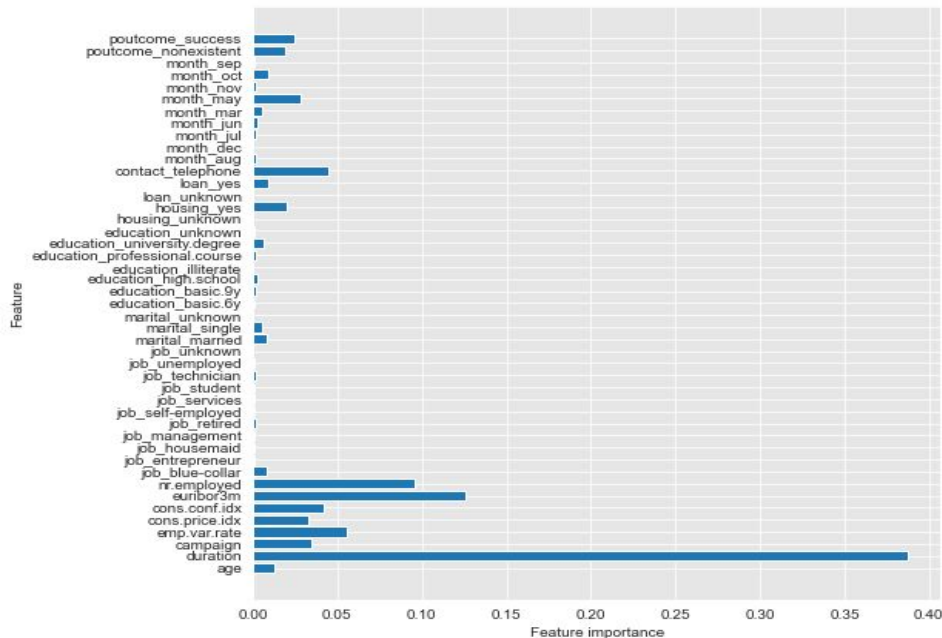
Overall count of the Job roles



Admin, Blue-collar and technicians jobs are targeted more in the campaign.

ANALYSIS

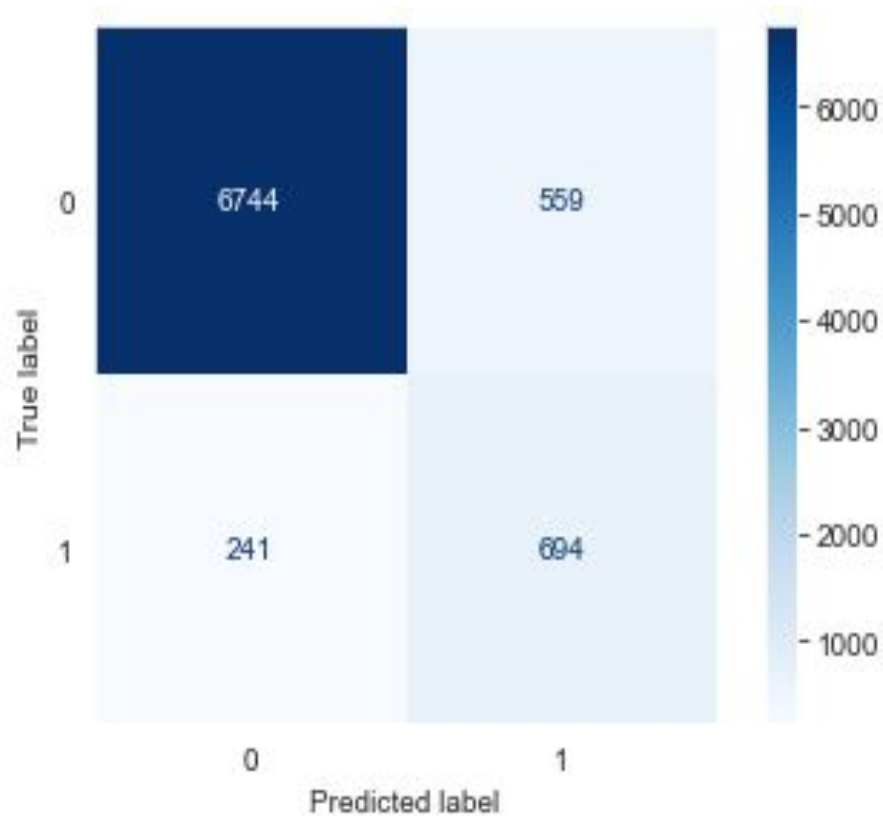
Model Prediction on Feature Importance



Our model predicts duration of the call as the top feature.

RESULT

Model Result



RESULT

- True Positive : 694(Number of customers deposited)
- True Negative : 6744(Number of customers not deposited)
- False Positive : 559(Number of customers not deposited but predicted as deposited)
- False Negative : 241(Number of customers deposited but predicted as not deposited)

CONCLUSION

- Duration of the call plays a major role in term deposit.
- Customer's job role is also important for the marketing campaign.

NEXT STEP

- Analyze the pros and cons of the phone marketing campaign.
- Minimize the False Positive and False Negative rate of the model.

Thank You!

Email: mail4prabagini@gmail.com

GitHub: [@Prabagini](#)