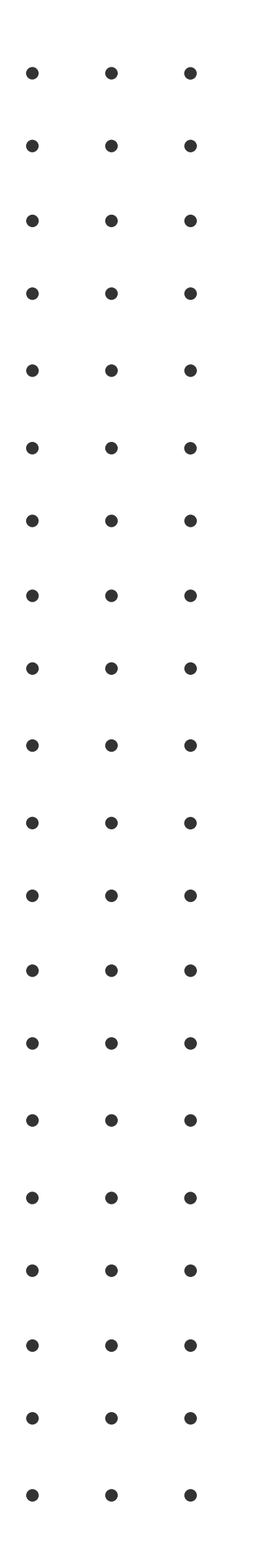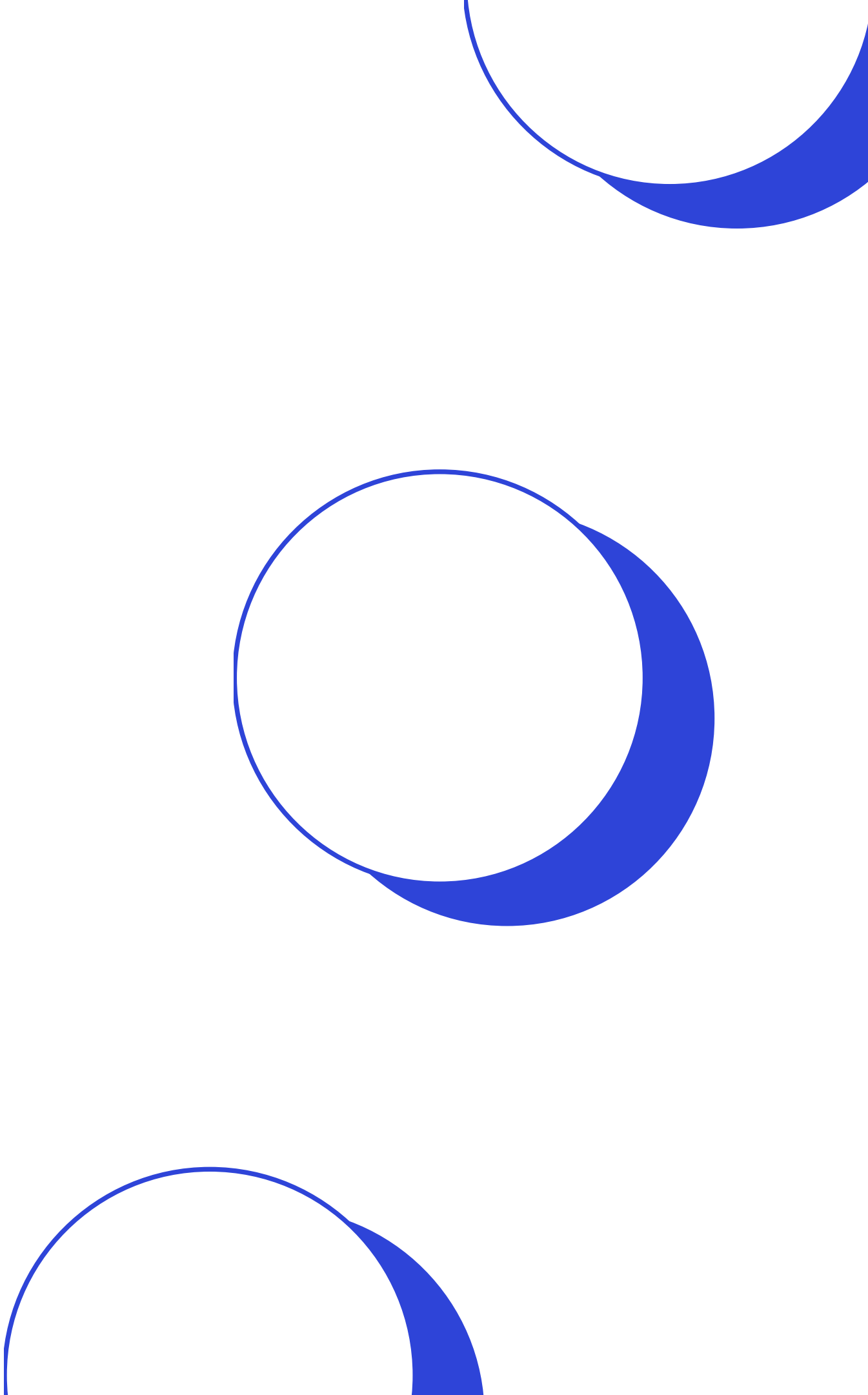# Bank Marketing Campaign Prediction

Classification Models

Today's agenda

- Project overview
- Business Problem
- Data
- Methodology
- Analysis
- Results
- Conclusion
- Recommendations
- Next Step

Project overview

This project focuses on building a classification model on a bank campaign dataset to predict how many customers will place term deposits in their bank.

Business Problem

The Portuguese banking organization has conducted a bank marketing campaign to all the customers through phone calls to place a term deposit. Now the organization needs help to know if a customer would place a term deposit or not.

BANCO DE PORTUGAL

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Data

It is a UCI dataset that describing Portugal bank marketing campaign results. It consists of around 41k bank customer information.

APPROACH

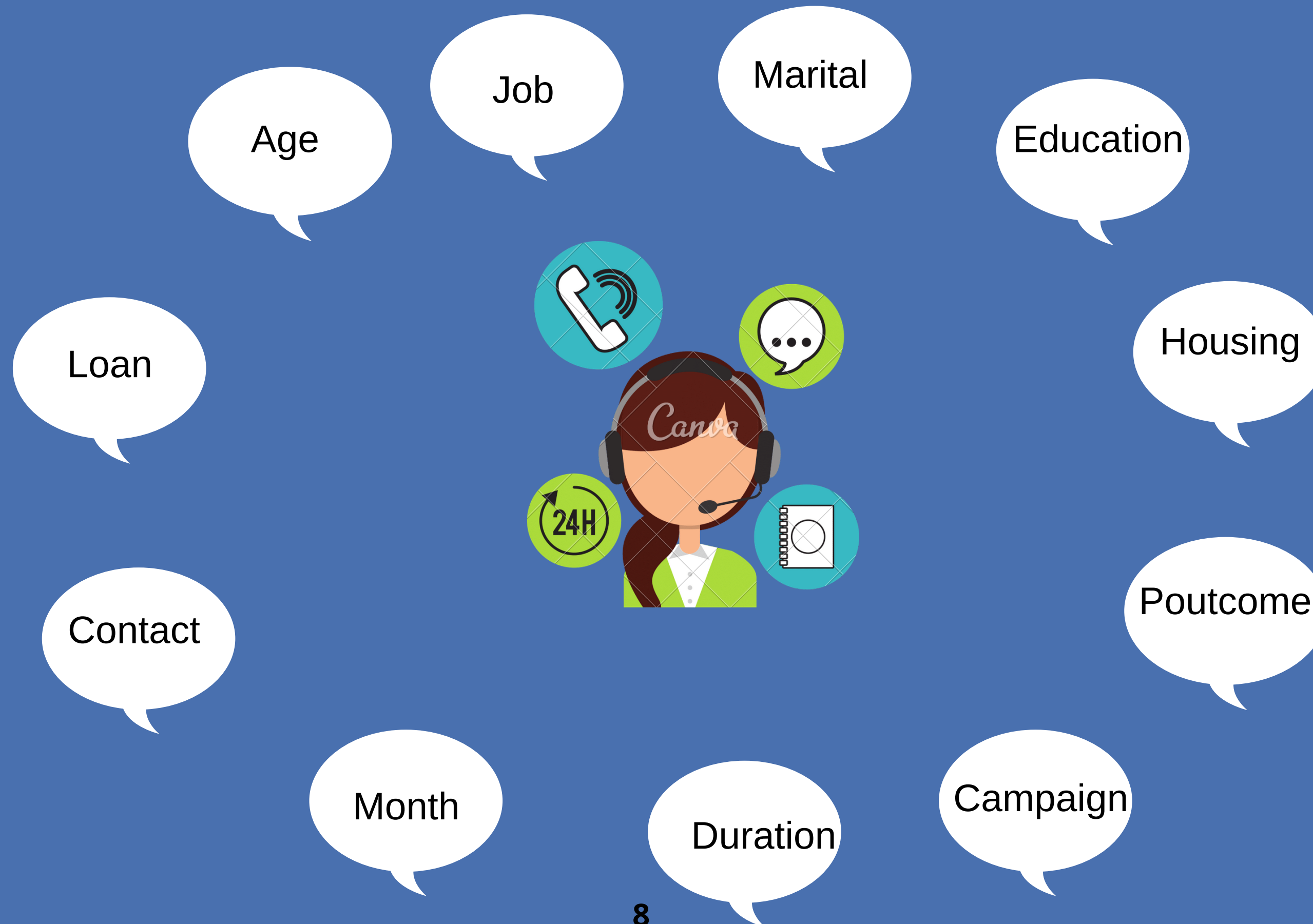1 OBTAIN

2 SCRUB

3 EXPLORE

4 MODEL

5 INTERPRET

Analysis

Information collected from the customer during the campaign

Age

Job

Marital

Education

Loan

Housing

Contact

Poutcome

Month

Duration

Campaign

Economy status information

Number Employed

Consumer confidence index

Employment variation rate

Consumer price index

Euro inter bank offered rate

9
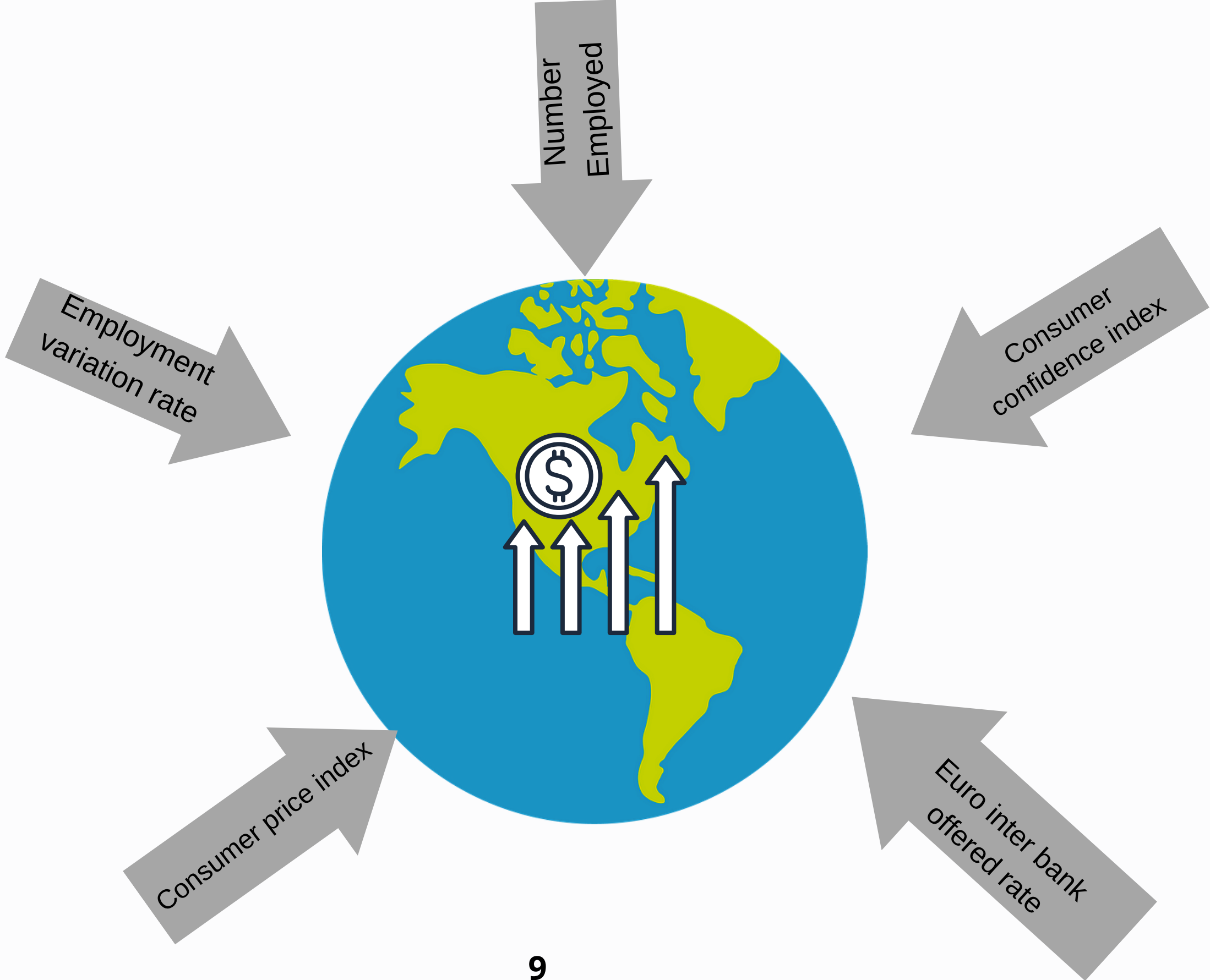
How the call Duration plays a major role in our data

Relationship between the Target variable and the Duration

Target Vs Duration

Deposited
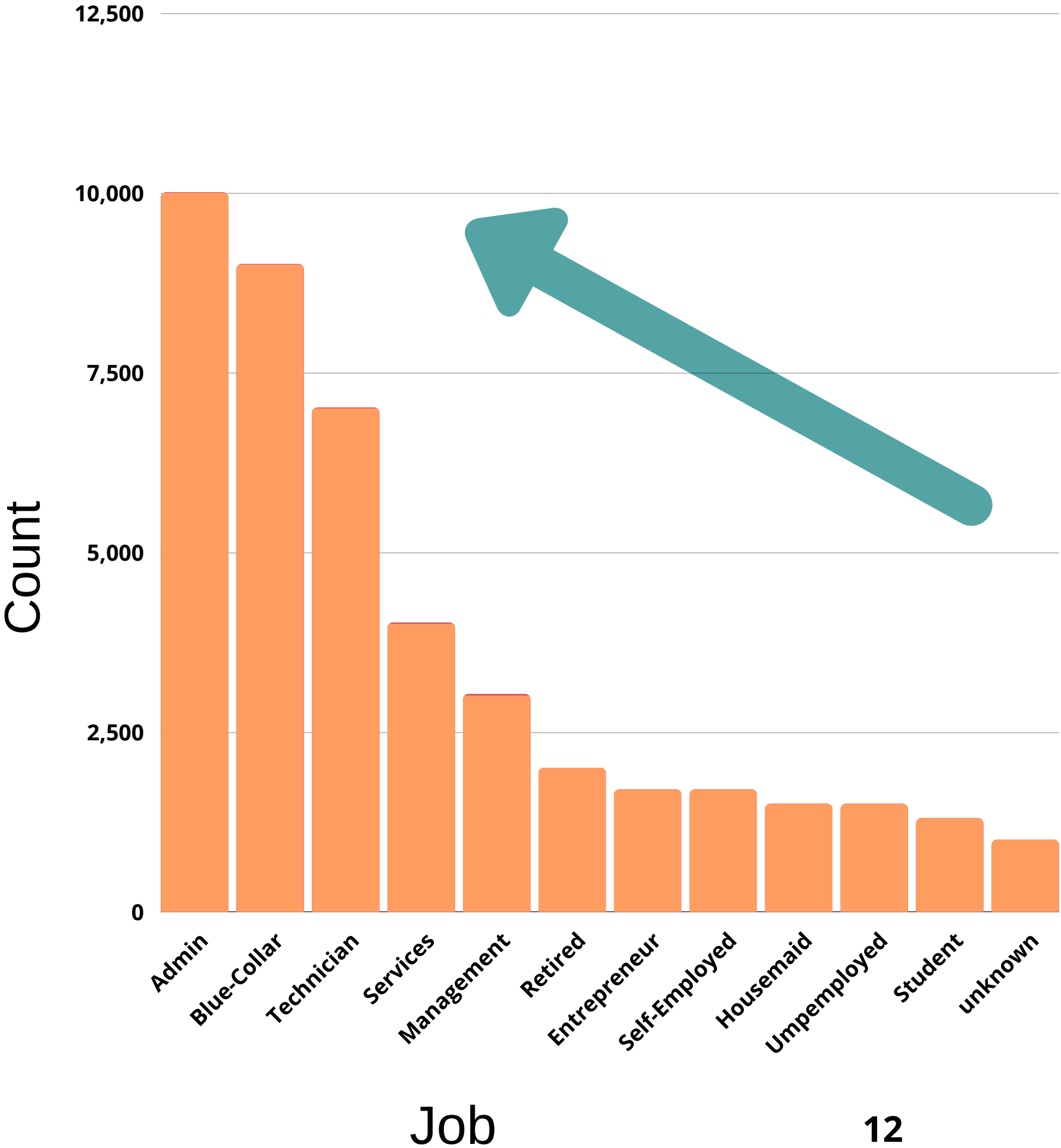
Not Deposited

duration

500

400

300

200

100

0

no

yes

y
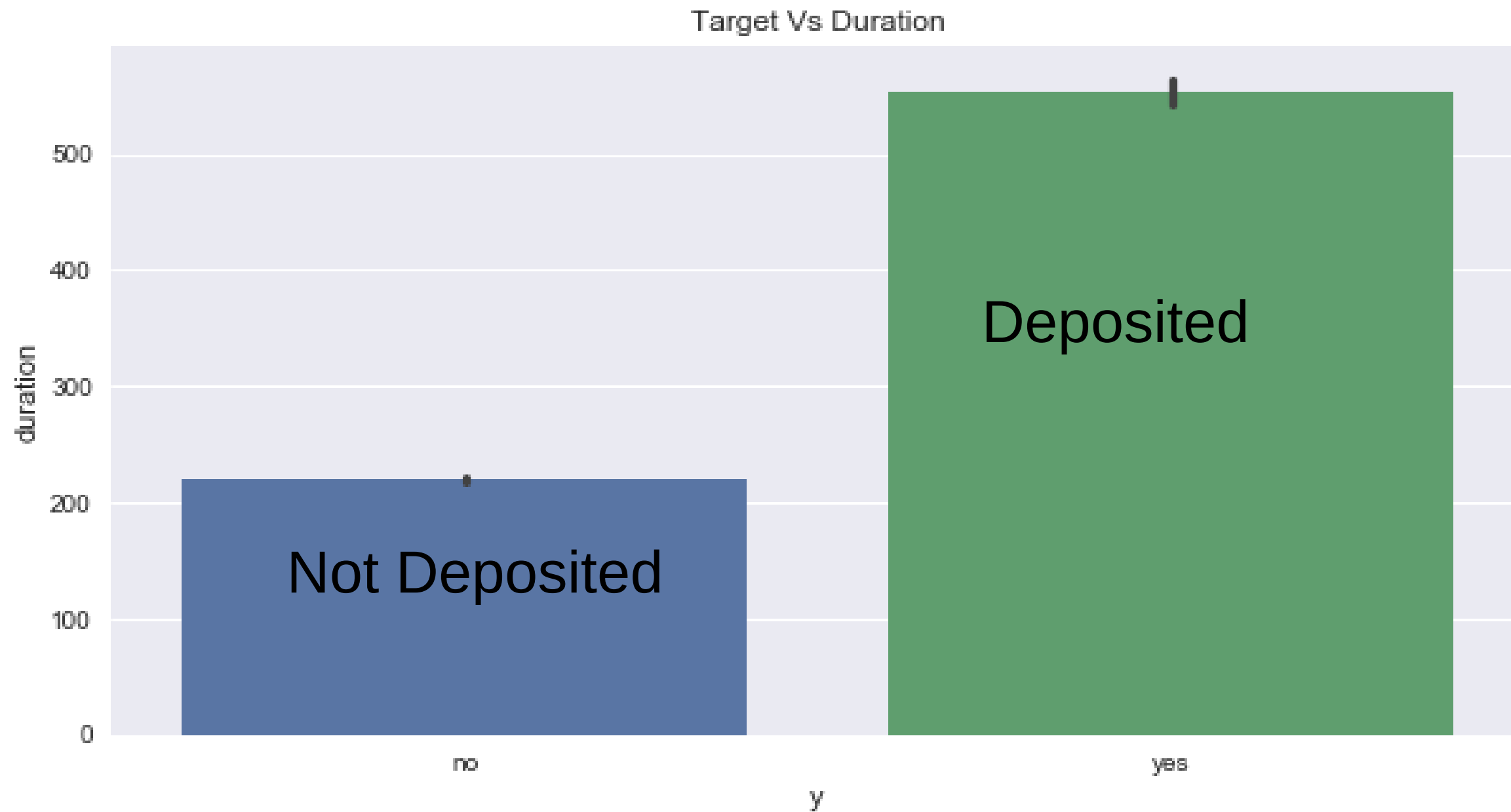
Duration seems to be an important feature in the dataset

How the State of the country's economy has a huge impact on the customers

Euro InterBank offer rate

Number of Employed

Consumer Price Index

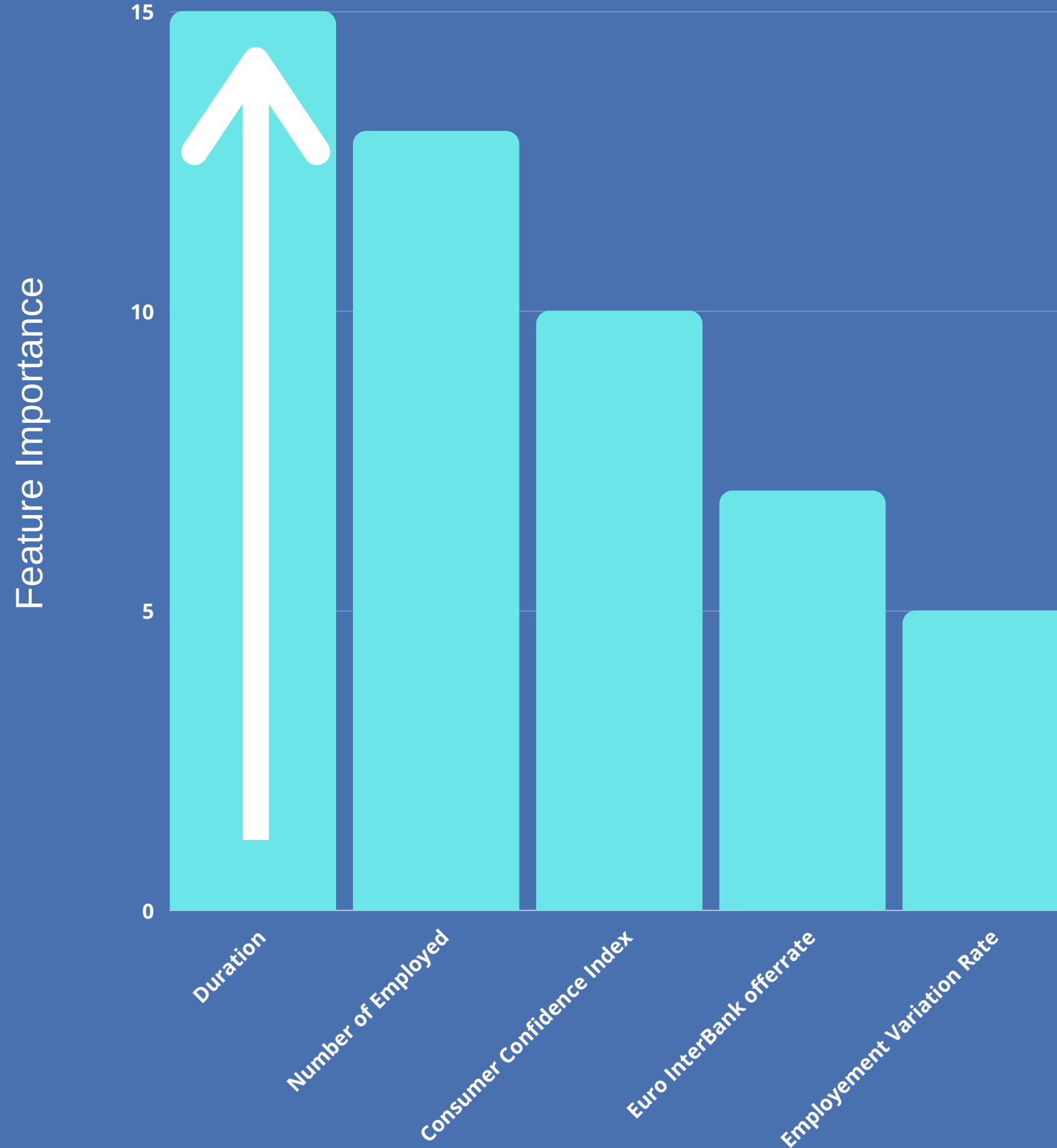Consumer Confidence Index

Country Enonomy

11

Overall count of the Job Roles

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

12

Model prediction on feature importance

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

Model Result

	Not Deposited	**Deposited**
Not Deposited	8469	675
Deposited	307	846

Actual Value

Model Predicted

Count of true deposit made by the customer and how our model predicted it correctly.

Conclusion

- Duration of the call
- Customer's job role
- Model can be used for prediction

Recommendation

- Conducting campaign at the right time
- Target Customers
- Education background

Next Step

- Analysis the pros and cons of the campaign
- To build more stable model to reduce false negative rate

Thank You !

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