

UCI – BANK MARKETING ANALYSIS



UCI, a European bank

PROJECT OVERVIEW

Company

A European bank offering term deposits.

Objective

The bank wants to get some insights regarding their clientele and any information can be useful to improve their marketing campaign.

Data

The dataset used for the analysis was from UCI, containing around 45211 records. Using variables such as, age, duration, euribor3m, martial, among other variables.

Tools used: Python coding via Jupyter notebooks & Tableau.

ANALYSIS PROCESS

Pre-Analysis

- Created and organized project folders according to industry standard set up.
- Sourced data set.
- Wrangled, cleaned and merged data to a clean, coherent pickle file.
- Performed basic EDA to establish any connections with variables to perform further analysis to.
- Data preparation for regression analysis.

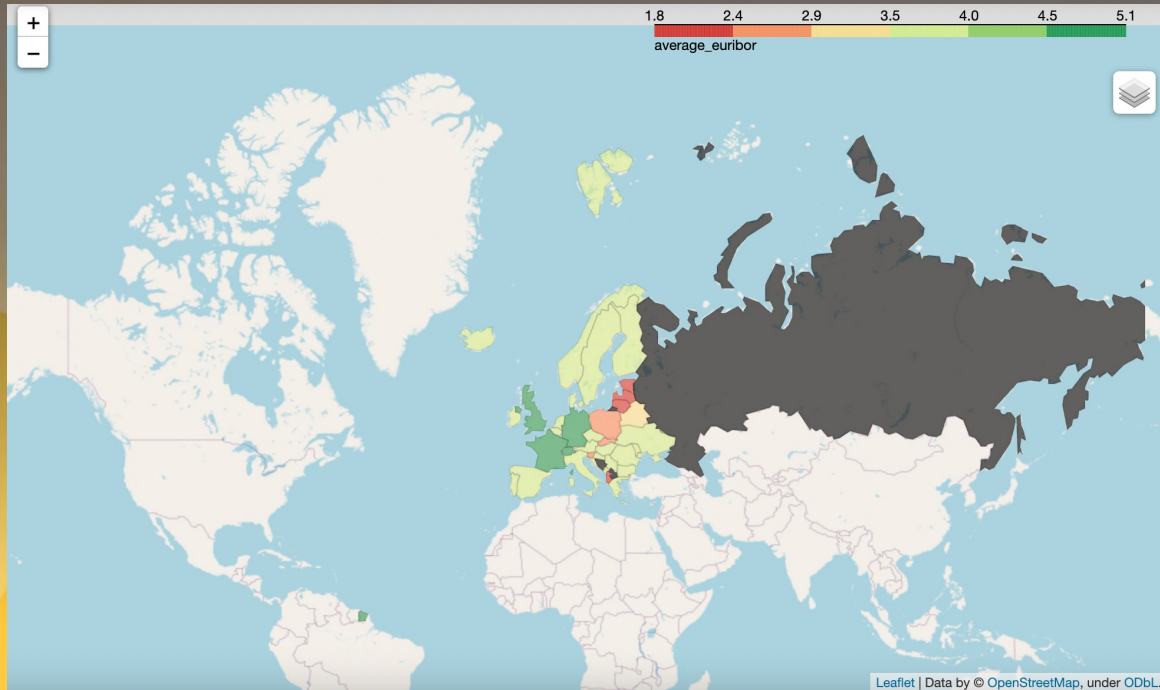
Anlaysis

- Performed regression analysis
- Performed the elbow technique and k-means clustering
- Performed time-series analysis: decomposition and testing for stationary.

Visualization

- Created Python visualization within Jupyter notebook.
- Created histograms, line, scatterplot, heatmap matrix, choropleth maps,
- Created a analysis storyboard within Tableau.

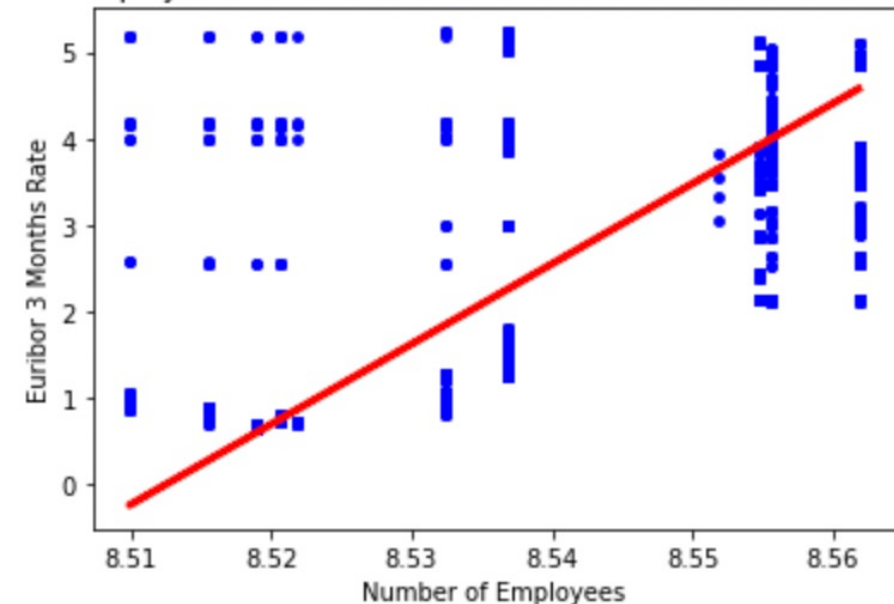
VISUALIZATION INSIGHTS



This graph shows the average Euribor 3 Months Interest Rate per country.

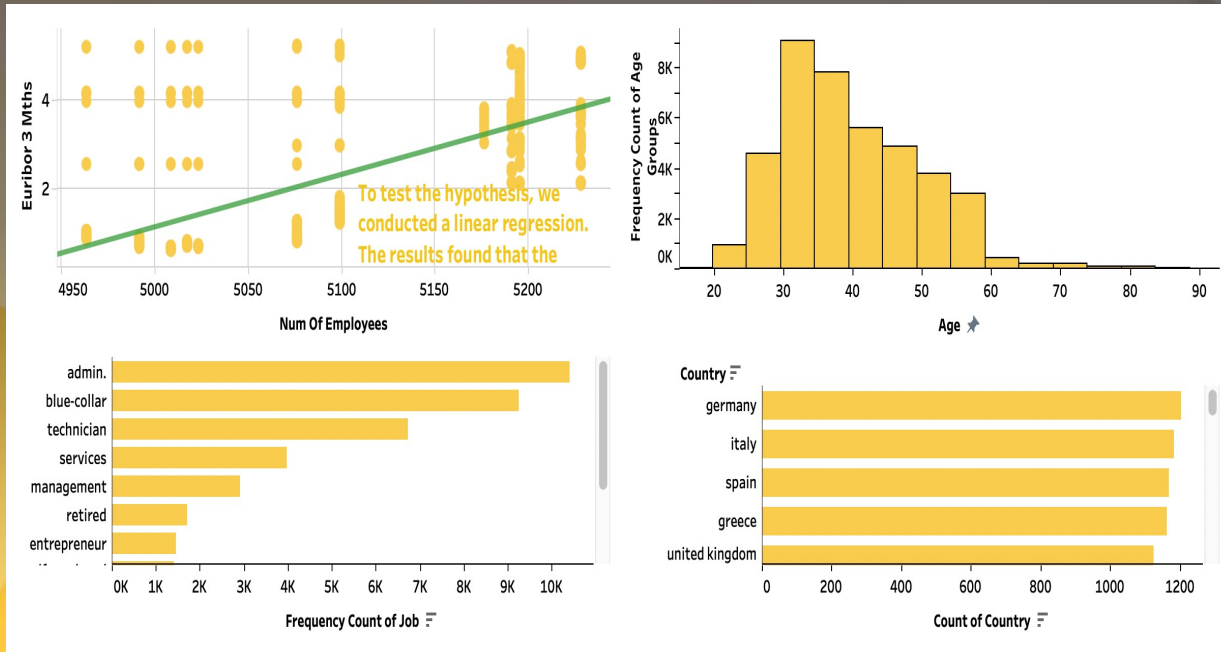
This graph shows the regression line after performing a regression analysis. Results does not show a true linear regression. I standardized the values of the Number of Employees variable using LN function in order to not massively skew the results.

Number of employees at the banks vs Euribor 3 Months Rate available (Test set)



VISUALIZATION INSIGHTS

These graphs show some insights discovered during EDA.



[GitHub Python Project Repo link](#)

[Tableau Storyboard link](#)

This graph shows one of the k-means clustering. A lot of the data points are when there are more employees.

