

Visualization – Bank Marketing Dataset

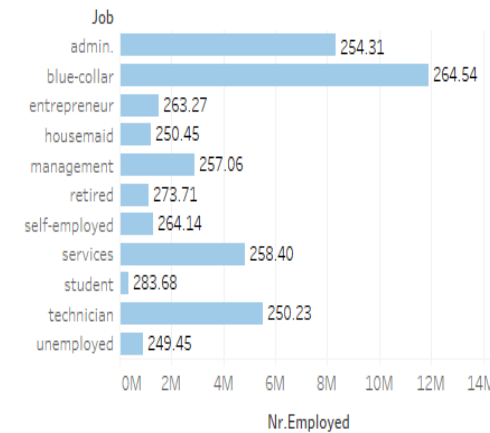
Introduction: In cutting age, competition in banking domain marketing plays an important role. Marketing is planned execution of result, which gathered from analysis of long-term customer behavior, it is more important to know that which type of customer need to focus for successful outcome.

Objective: This dataset came from a Portuguese Bank which is conducted to direct marketing campaigns to promote term deposits to their customers. The common problem could be that the bank keeps re-calling the “wrong” customers and it may cause high labor costs and be liable of harming customer relationship. So, the goal is to improve marketing effectiveness by targeting the right customers.

Problem Statement: In this project, the stakeholders are the bank marketing team, bank employees, and customers. The bank would benefit from this solution where lower marketing costs and less probability of wrong marketing targets can be achieved without the risk harming customer relationship. The customers of the bank will receive more precise solutions to their needs. However, this solution may have a cold start problem where new customers have no previous marketing records and thus reduce the size of available features.

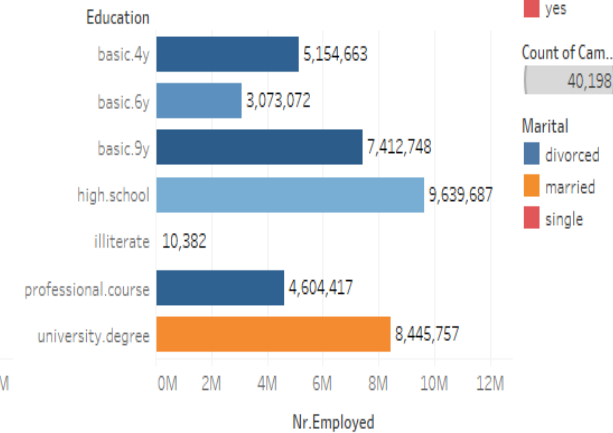
Customer information with Job, Education, loan and Marriage Status

Sheet 1



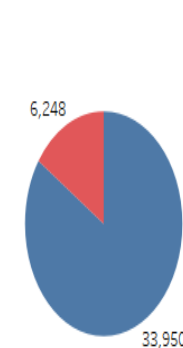
Sum of Nr. Employed for each Job. The marks are labeled by average of Duration. The view is filtered on Job, which excludes unknown.

Sheet 2



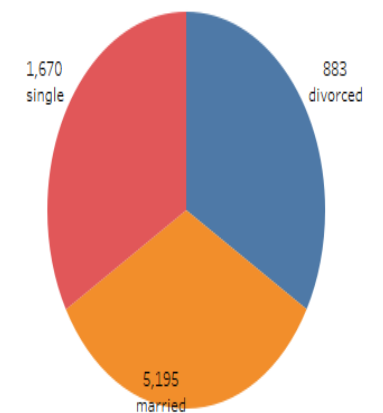
Sum of Nr. Employed for each Education. Color shows sum of Emp. Var. Rate. The view is filtered on Education, which excludes unknown.

Sheet 3



Loan (color) and count of Campaign (size). The view is filtered on Loan, which excludes unknown.

Sheet 4



Count of Nr. Employed and Marital. Color shows details about Marital. The marks are labeled by count of Nr. Employed and Marital. The view is filtered on Marital, which excludes unknown.

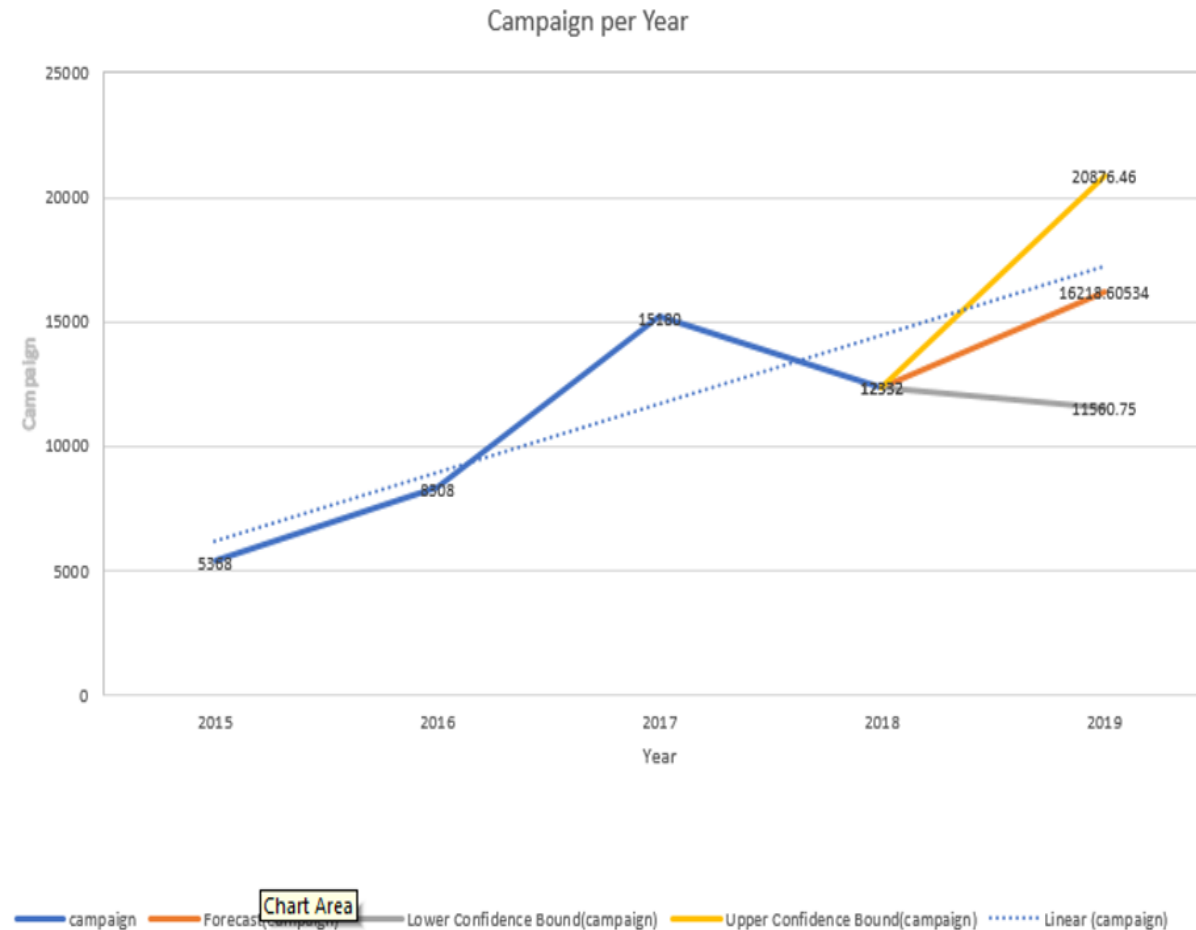
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Predictive Analysis on Forecasting:

Forecasting is the term to predict the future value. It is a statistical technique which helps in predicting future value.

For predictive forecasting, the technique used is exponential smoothing. This technique observes the older observations and captures the emerging trend of the data and explore them to the future. The result of forecast becomes a visualization to the user.

Prediction Forecast of number of contacts being campaigned in a year



Conclusion: Initially, EDA is done on this data and there were meaningful insights where it has been found that term deposit subscriptions for personal loan are accepted by customers who are educated, employed, married and housing loan. After moving to predictive analysis on forecasting, it can be conclude that the banks are very particular about the increasing their telemarketing campaigns to their customers. The conducts frequent campaigns which helps the customer to think about their promotion on term deposits.