



WEEK 9 DELIVERABLES

Group Name: Data Lover

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1. PROBLEM DESCRIPTION

ABC Bank wants to sell its term deposit product to customers, and before launching the product, they want to develop a model which help them in understanding whether a particular customer will buy their product or not (based on customer's past interaction with bank or other Financial Institution). ABC bank has given responsibility to the Data Science Data Lover Team to develop an automated process of classification and asked to develop a ML model to shortlist customers with higher chances of buying the product, so that ABC's marketing team can focus on them and save the time and money.

2. DATA PREPRATION

The dataset has number of missing values, which appear 'unknown'. At first, by analysis, we change some of them to the real value. Then, according to the fact that they belonged to categorical variables, we replaced them with the mode of the feature.

In addition, twelve duplicated rows have been removed. We dropped "previous" column that is 75% or more similar and does not vary much through observations. In addition, according to the data description, "duration" was deleted when it comes to predictive model.

3. EDA

- I. Only 3 customers have experience default, so this feature has not predictive power and can be deleted.
- II. The features that are 75% or more similar, that is – they do not vary much through the observation, can be deleted. Therefore, "previous" should be deleted.
- III. People who are contacted with cellular answered 'yes' to the campaign, compared to ones with telephone.

- IV. December, March, October, and September are months on which individuals are most likely to accept the campaign. The day of week did not affect on the customers' opinion about the campaign.
- V. If individual has answered 'yes' to the previous campaign they will accept the current one with higher chance, compared to ones who have not experience before.
- VI. Retired, unemployed, and students responded to campaign better than other groups.
- VII. Although the number of 31-40 year old customers are higher than others, the 17-30 and over 60+ said 'yes' to the campaign more than others. And, 41-50 year old are the worse group.

4. REPO

[HTTPS://GITHUB.COM/BATTALIU/BANK MARKETING GROUP PROJECT](https://github.com/BATTALIU/BANK_MARKETING_GROUP_PROJECT)