# WEEK 10 DELIVERABLES

Group Name: Data Lover

| Name | Email | Country | College/company | Specialization |
|---|---|---|---|---|
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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. Based on EDA, we began modelling dataset. Firstly Looped all over the dataset for find range of months, then figured out what year is it. Then added year column and merged all date to 1 column and set index date.

II. During modelling best fitting model was Gradient Boosting Classifier as Accuracy(0.89) Used pycaret for modelling.

III. Finally evaluated and finalized model, get parameters for Gradient Boosting Classifier, so we can change to manually with using sklearn library or continue

pycaret for deployment for cloud. Also pickled finalized model so we can use it anwhere we want.

## 4. REPO

HTTPS://GITHUB.COM/BATTALIU/BANK_MARKETING_GROUP_PROJECT