# Assessment 2

# Mortgage Approval

Group Number: 01

Group members present (Name, ID):

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## Business/public problem formulation

The idea behind the mortgage approval project is provide the business solution to the banks as many banks are struggling with the hundred of house loan applicants whether to select their application or reject them. To understand the problem, create a solution and to implement in that solution in a way that has and immediate impact on the business.

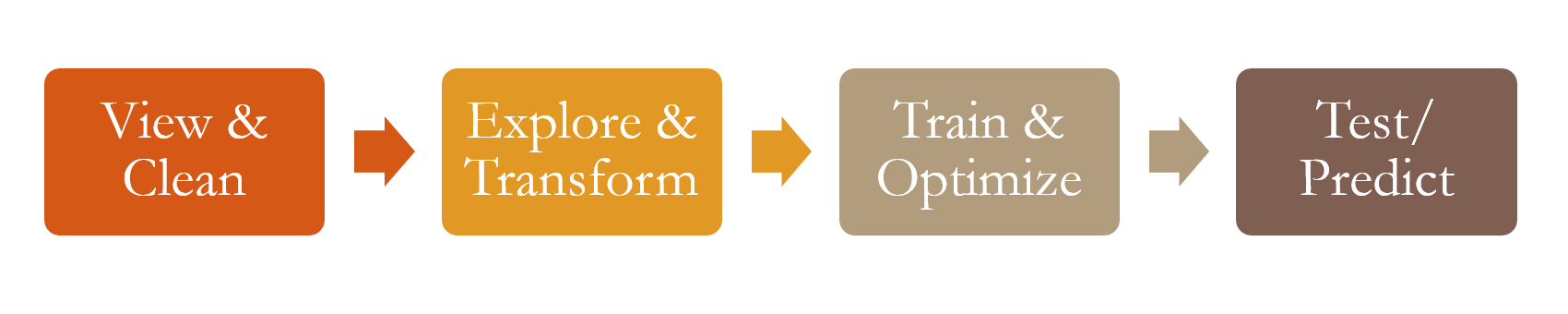
The business problem for bank is how to deal with the mortgage application and with the help of the tool and technique and getting dataset from bank or open data analytics can provide or lead problem to the solution.

Once we have all the data ,we have spent a lot of time understanding and cleaning and getting the data for the model that we are going to use. We have to understand the business requirement for the bank as well as the data side equally to provide solution to them. Basically, with the support of data pattern, techniques, model we will predict the approval of the application.

So, Theaability to examine information or aasituation in detail in order to identify key or important elements,atheir strengths and weaknessesaand use these to compile a persuasive argument,amakearecommendations or solveaa problem.

## Data set

The data set is from Federal Financial Institutions Examination Council, or better known as the FFIEC that is open government data from 2007- 2016.



## Data Cleaning

Our dataset has many missing values and outlier to be deal with which we will perform in python. In our dataset we have null values and the negative value instead of particular value by -1 which we will correct them.

## Data Techniques and Model

We will be using Regression Analysis data technique and Classifier Technique also we will also try to implement and learn from Cat booster Classifier. The reason we are using this data techniques the main reason behind that is Regression is best tool for prediction and we are predicting whether to accept or reject the application of mortgage approval.

Also, the catboostclassifier can be used for both regression and classifier challenge

## Data Visualization

Data visualization tool we will use tableau for that as tableau is the powerful and fast-growing data visualization which will helps us to simplify the raw data and check the most corelated feature in the data set.

## Result

The success of this project to predict on the basis of the feature importance and how bank select the applicant and the mortgage loan approval work whether the loan applicant is selected or rejected.

## References

* <https://spivey.io/samantha/portfolio/predicting-home-loan-approvals-2019-05-09>
* <http://www.ffiec.com/>