**MORTGAGE LOAN ANALYSIS**

**Project Insights Report**

**Objective**: To predict who are going to close the mortgage loan before the completion of the loan tenure.

**Data Gathering:**

Collected the two datasets

* Acquisition Dataset
* Performance Dataset

**Dataset Detail:**

* Data coming from the acquisition file total number of loan are 391,209 along with 25 independent variable.
* Performance file, we collected the 36 months collected the loan id and foreclosure date.
* Join both the acquisition and performance files for all the loan ids: 391,209.

**Insights**:

1. 95% of the customers are paying the first payment after 2 months of the loan origination date.
2. For 9 records where origination date and first payment date are the same, we are excluding those records.
3. Dropping the origination date, first payment, zip and date difference.
4. 9% of the customers are paying the total loan amount before completion of the tenure date.
5. We are analyzing the data for the mortgage product of FRM
6. Drop the property state, product type and loaned
7. 0.47% customers are real estate customers on total data.
8. 4.2% Real estate customers are closing the loan before completion of tenure date.
9. 70% of customers are getting loans for 5 banks :

* BOA: 28.36%
* Others: 15%
* JPMC: 10%
* CITI: 9%
* Wells: 7%

1. 17% of FDIC customers are doing foreclosure.
2. Original interest rate ranges from 3.97 to 9.3
3. Original unpaid principal amount is from 8000 to 802000 and on average it is 197,000.
4. Original loan term is range from 60 to 360.
5. On average number of loan taken by customer is 1.5
6. 96% of the customers are having only 1 loan account.