**Capstone Project REAL ESTATE**

|  |  |
| --- | --- |
| PROJECT: | Capstone Project REAL ESTATE |
| Problem Type: | Regression |
| Samples X Features: | 27321 X 80 |
| Evaluation Metrics: | RMSE; Adj. R squared |
| Metric Achieved: | 309.78; 0.739 |

PROBLEM STATEMENT:

A banking institution requires actionable insights from the perspective of Mortgage-Backed Securities, Geographic Business Investment and Real Estate Analysis. The objective is to identify white spaces/potential business in the mortgage loan. The mortgage bank would like to identify potential monthly mortgage expenses for each of region based on factors which are primarily monthly family income in a region and rented value of the real estate.

Some of the regions are growing rapidly and Competitor banks are selling mortgage loans to subprime customers at a lower interest rate. The bank is strategizing for better market penetration and targeting new customers.

A statistical model needs to be created to predict the potential demand in dollars amount of loan for each of the region in the USA.

Also, there is a need to create a dashboard which would refresh periodically post data retrieval from the agencies. This would help to monitor the key metrics and trends.

The dashboard must demonstrate relationships and trends for the key metrics as follows: number of loans, average rental income, monthly mortgage and owner’s cost, family income vs mortgage cost comparison across different regions. The metrics are described not to limit the dashboard to these few only.

RESULTS ACHIEVED:

Achieved an RMSE of 309.78 with adjusted R Squared value of 0.739.

Link to Tableau Dashboard:

<https://public.tableau.com/authoring/RealEstate_17214975527620/Dashboard1#1>