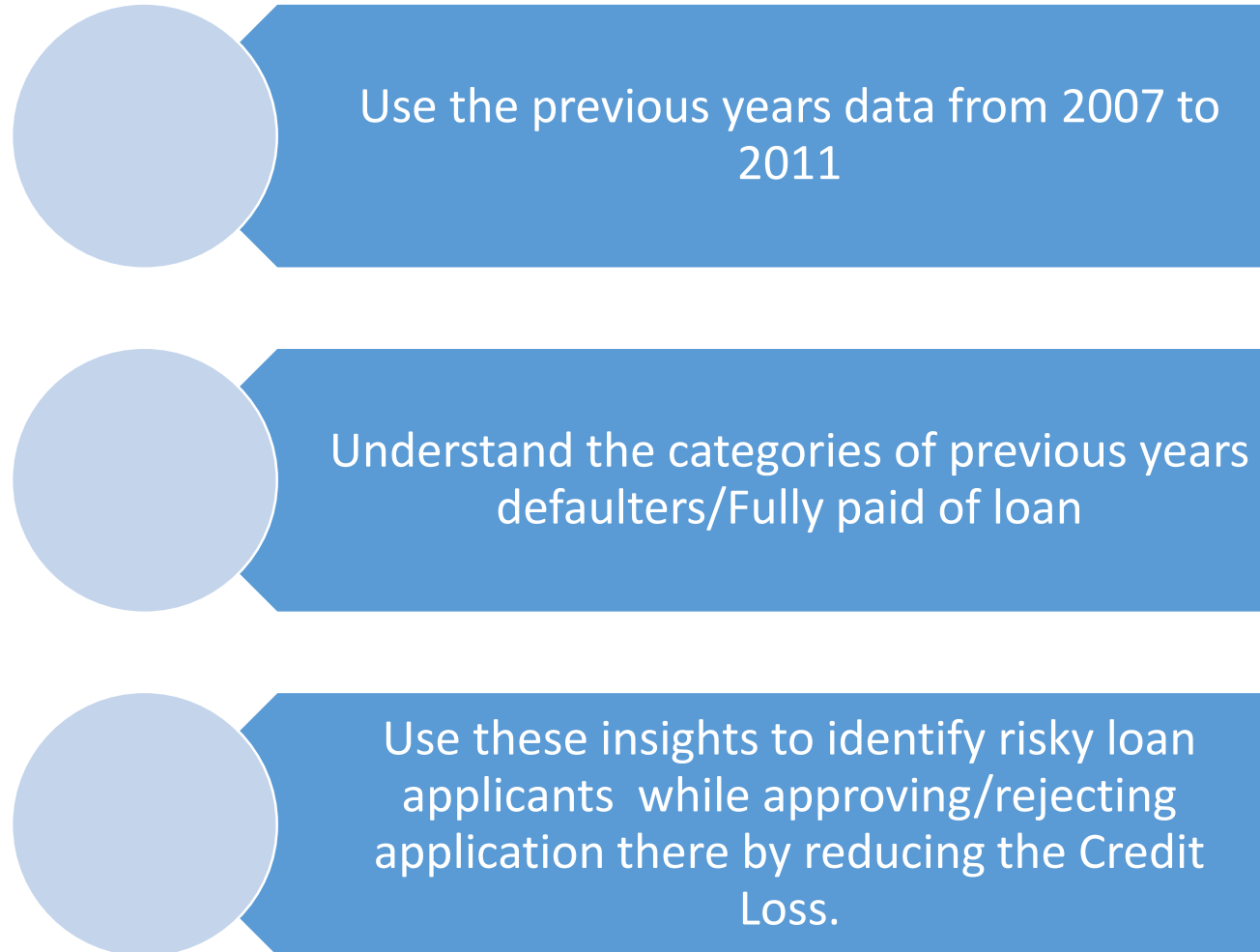# Gramener Case Study Submission

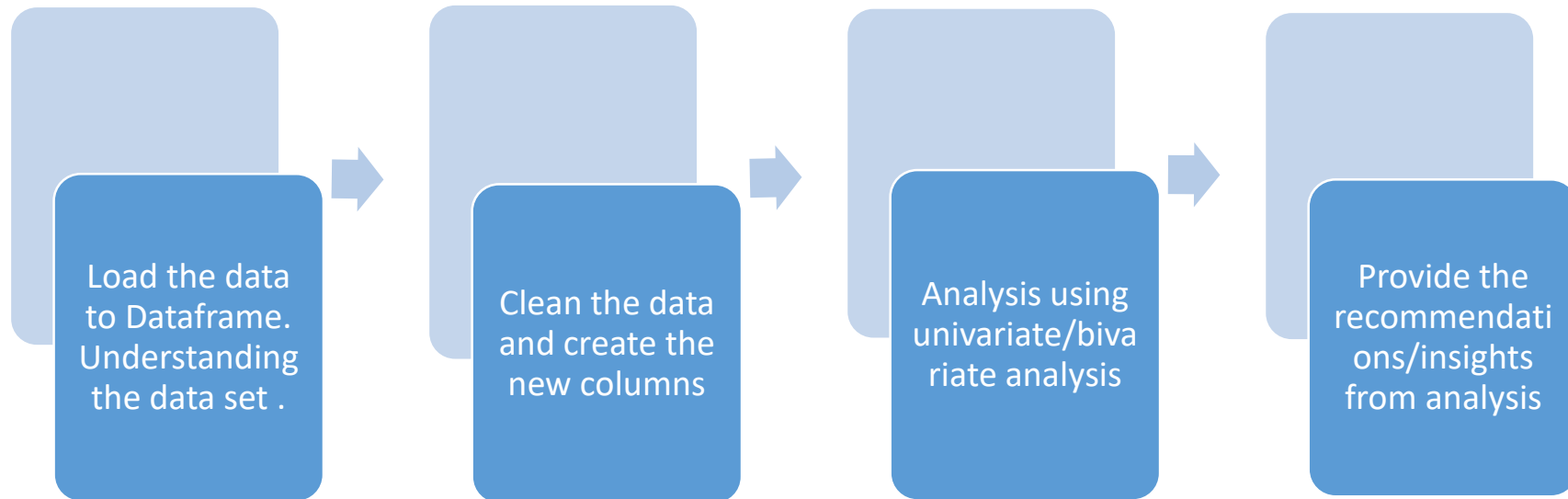Group Name:
1. Samyuktha Kota
2. Santosh Narvani
3. Shashank Shekhar
4. Mahendra K S

Analysis to Avoid/Reduce Loss of Business

Use the previous years data from 2007 to 2011

Understand the categories of previous years defaulters/Fully paid of loan

Use these insights to identify risky loan applicants while approving/rejecting application there by reducing the Credit Loss.

Problem solving methodology

Load the data to Dataframe. Understanding the data set .

Clean the data and create the new columns

Analysis using univariate/bivariate analysis

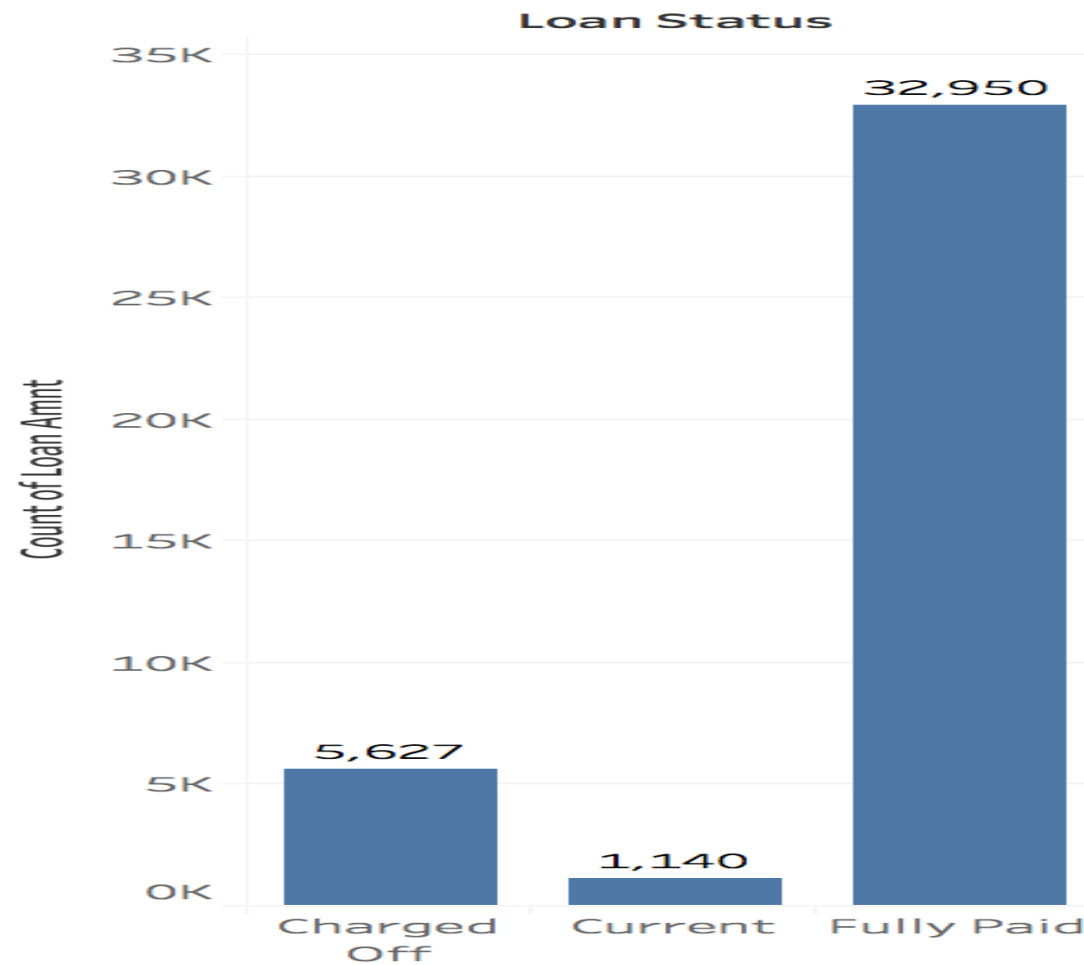Provide the recommendations/insights from analysis

Growth of Business

Growth of money lending business has increased from 2 Millions to 260 Millions from 2007 to 2011.
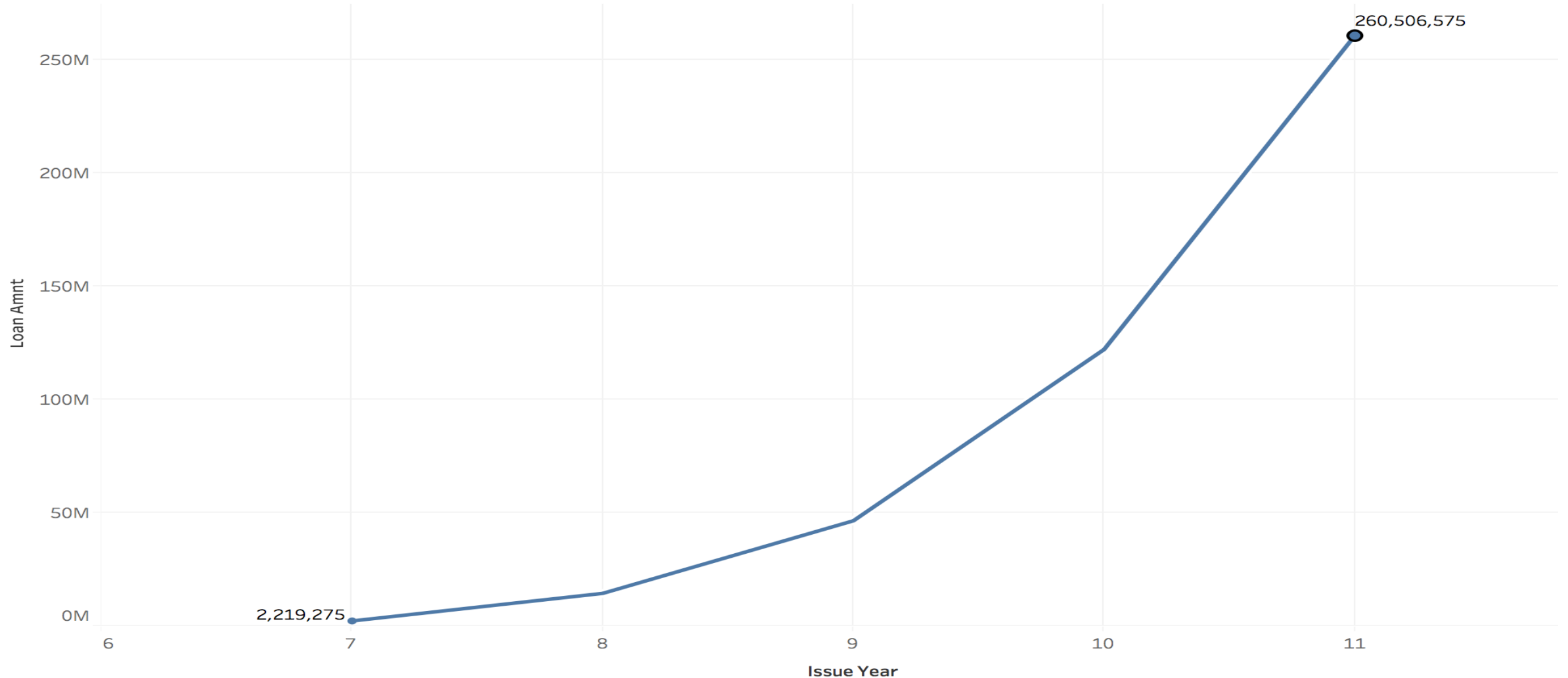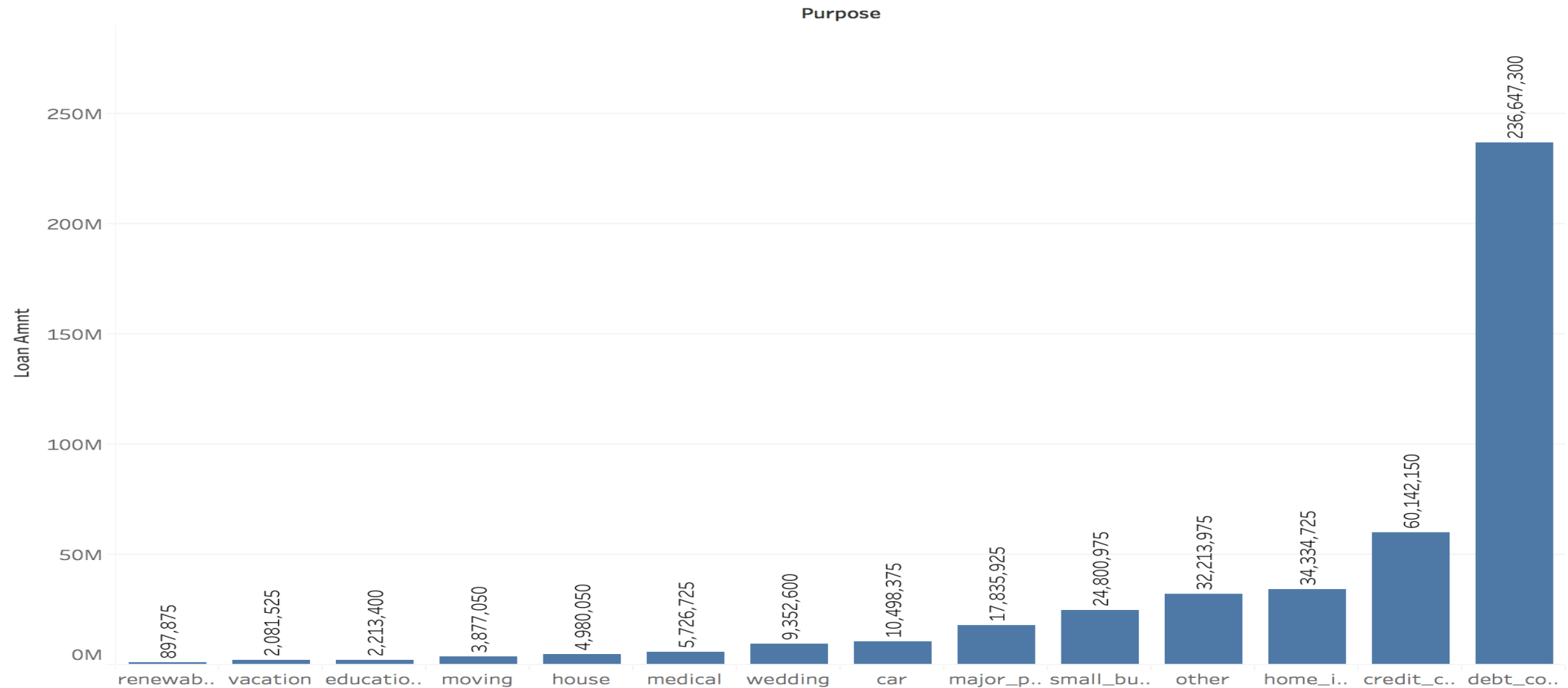
Understanding of Data

There are 14.16% of defaulters (i.e. Charged off)

Loan Distribution categories

Debt Consolidation is the category where more loan is distributed as observed below.

Purpose

pub_rec_bankruptcies over Loan Status

This defines the number of public record bankruptcies.
It is directly proportional to charged off customers.
As charged off customers tend to not pay the
debt which will result in bankruptcies.
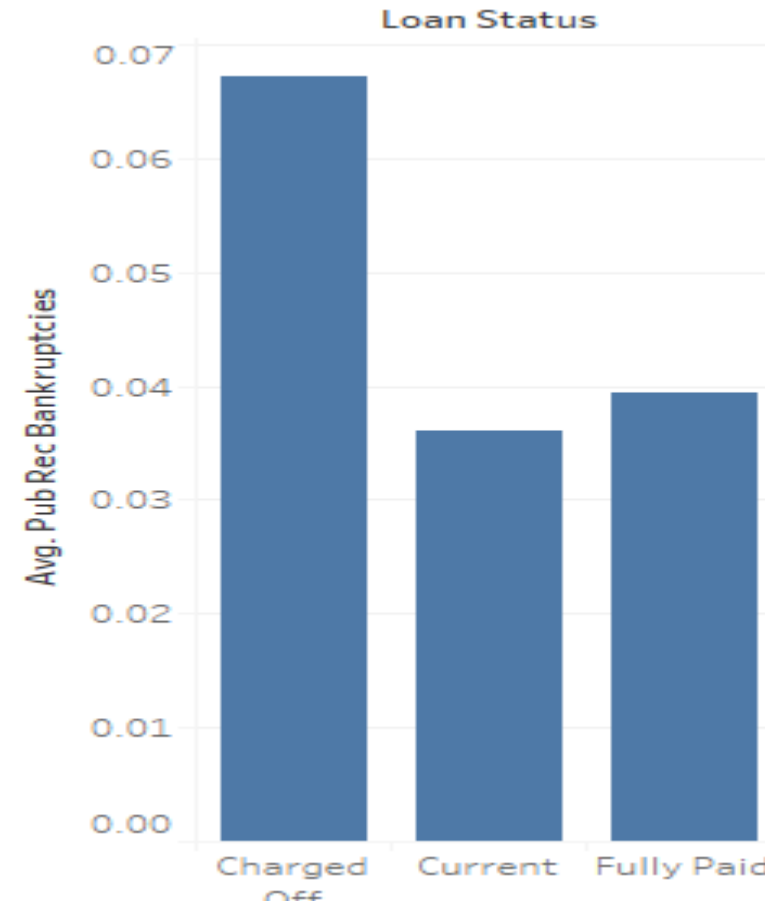

Loan Status

Total_rec_prncp influence over Loan Status

- Total_rec_prncp is inversely proportional to identify charged off or default customers. This variables defines how well customers will pay their debt amount in time to Bank.
From analysis we can see that default or charged off customers tend to miss this a lot.
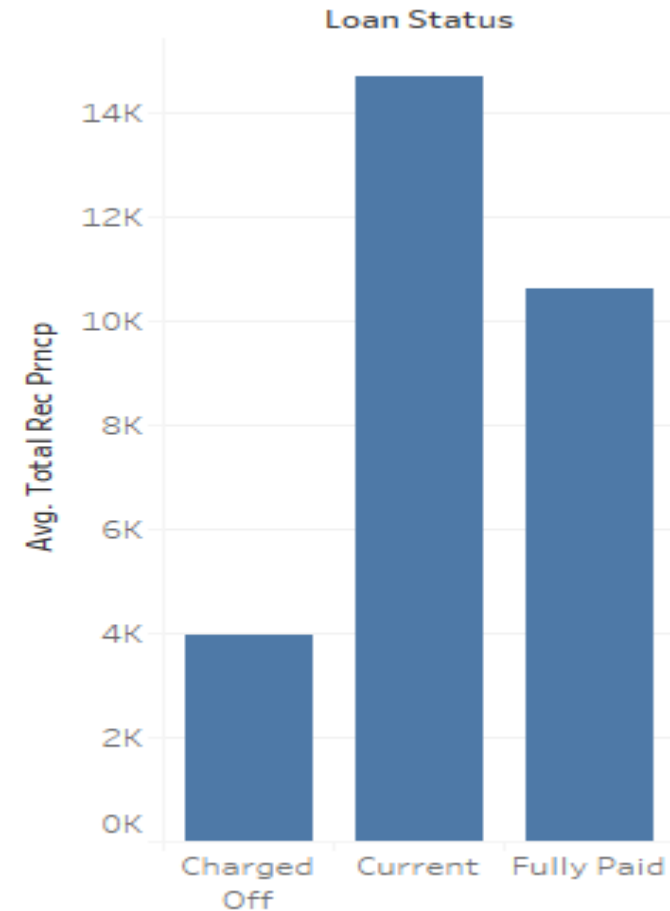
Loan Status

Total_rec_late_fee influence over Loan Status

- This is the late fees paid by customers to the bank for the Loan amount.
  We can see that from the analysis that default customers tend to this more.
  So this variable is directly to charge off customers.
 Please refer the graph for the same.
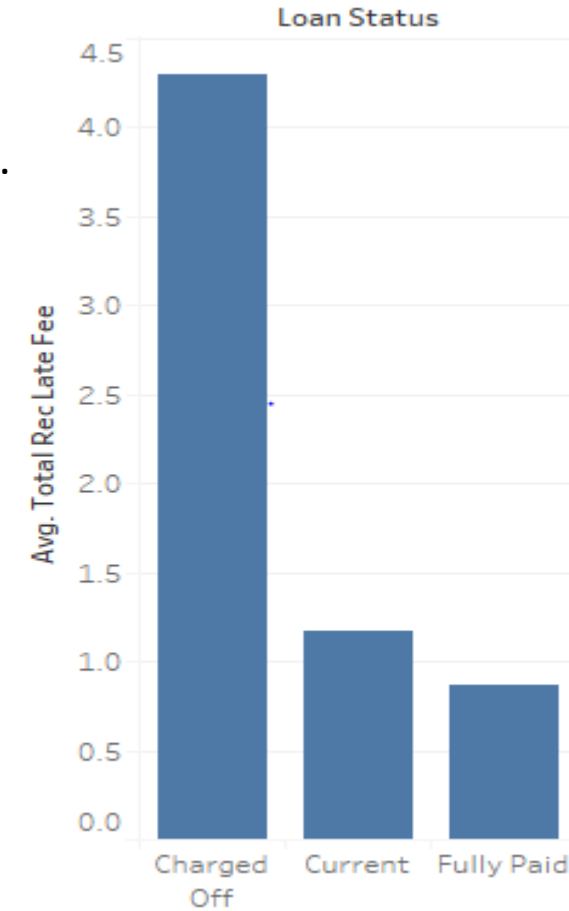
Influence of collection_recovery_fee over bank

This is only related to charged off customers. This defines the amount that bank will loose.
It is post charge off collection fee. If the value increases than bank will loose more.
Ideally for healthy banking transactions this variable tend to hold zero.
Please refer the graph for better understanding.
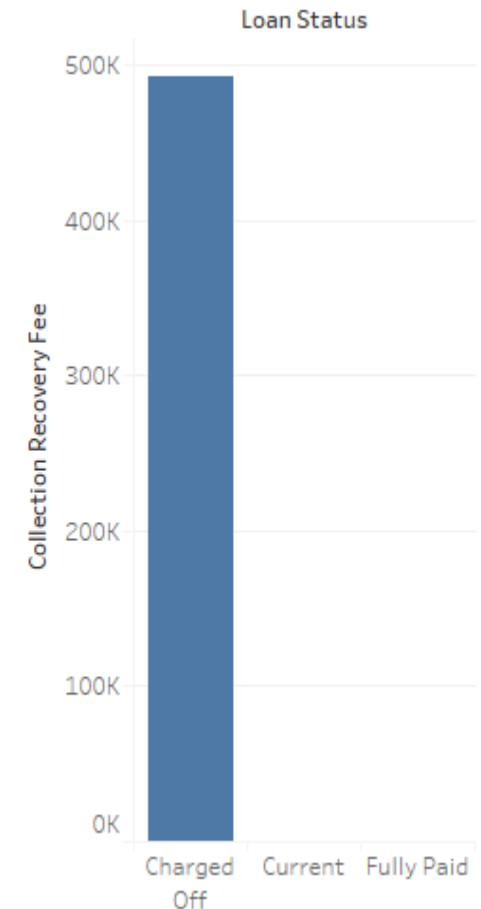
Loan Status

Comparing How Annual income will make difference in Loan Status

From below pie charts we can see that lower annual income customers tend to become default. This is the interesting insight which we gathered in the process of analysis.
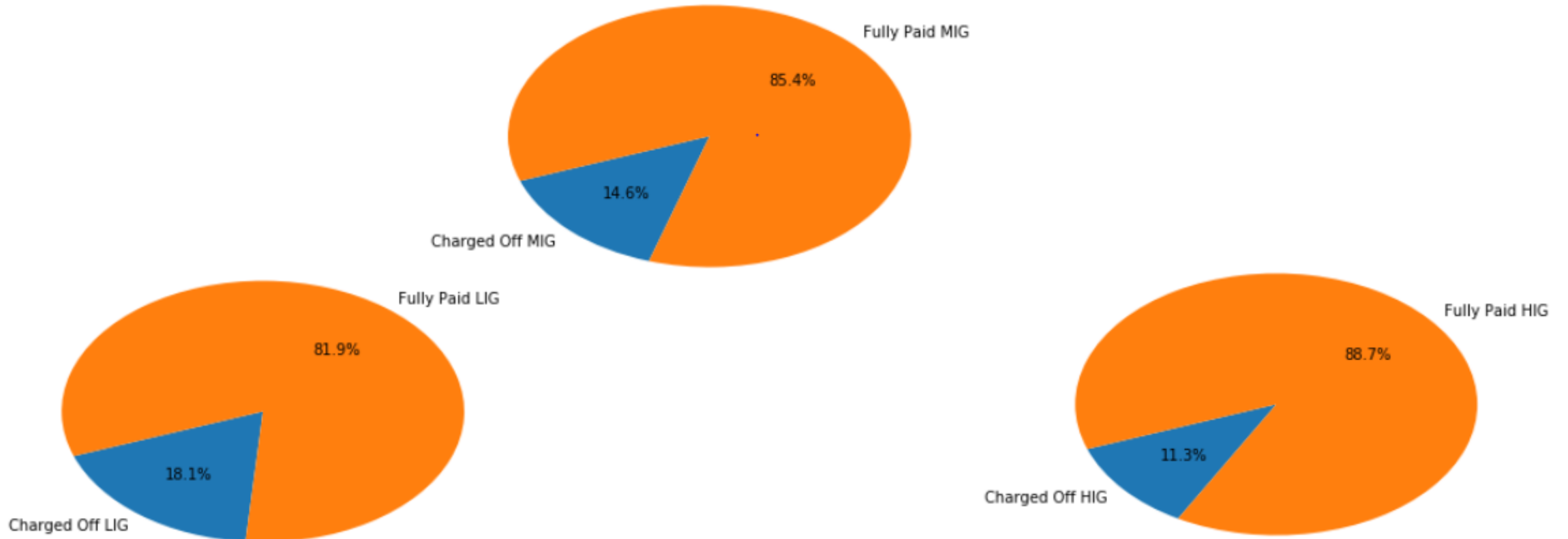
Loan amount range influence over Loan Status

Here we analyzed how loan amount range have it's influence over Loan Status. From below pie charts we can see that high loan amount range customers tend to become default over low loan amount range customers.
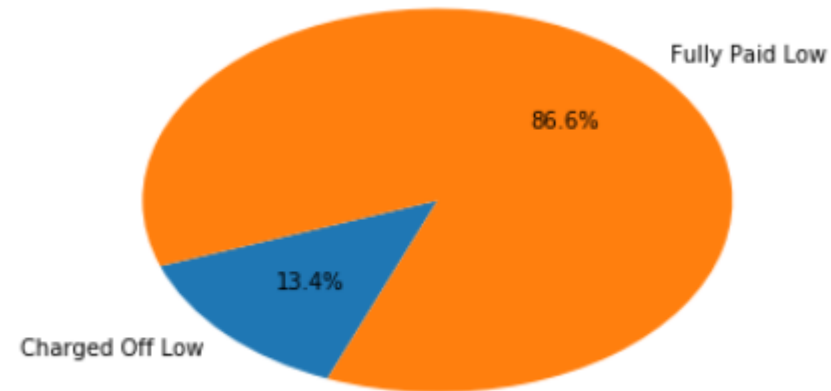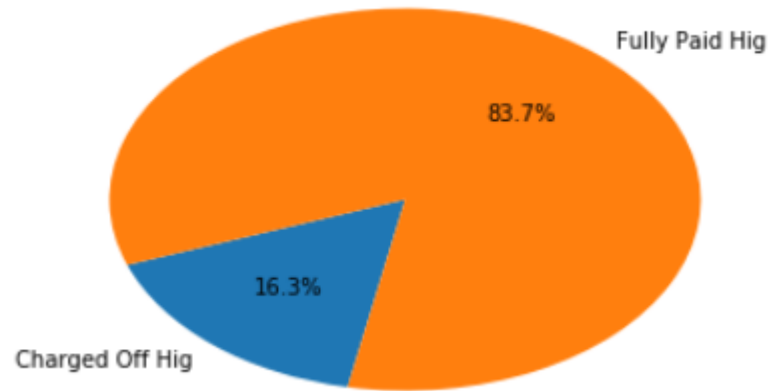
Credit loss can be reduced by rejecting the risky loans.