LENDING CLUB case study

1. Puneet Grover

2. Chandirakumar Muthu

The Problem

Company

Lending club is the largest online loan marketplace, facilitating personal loans, business loans, and financing of medical procedures. Borrowers can easily access lower interest rate loans through a fast online interface.

Context

Understand the driving factors (or driver variables) behind loan default, i.e. the variables which are strong indicators of default. The company can utilise this knowledge for its portfolio and risk assessment.

Problem statement

Analyze the dataset using EDA to understand how consumer attributes and loan attributes influence the chances of default
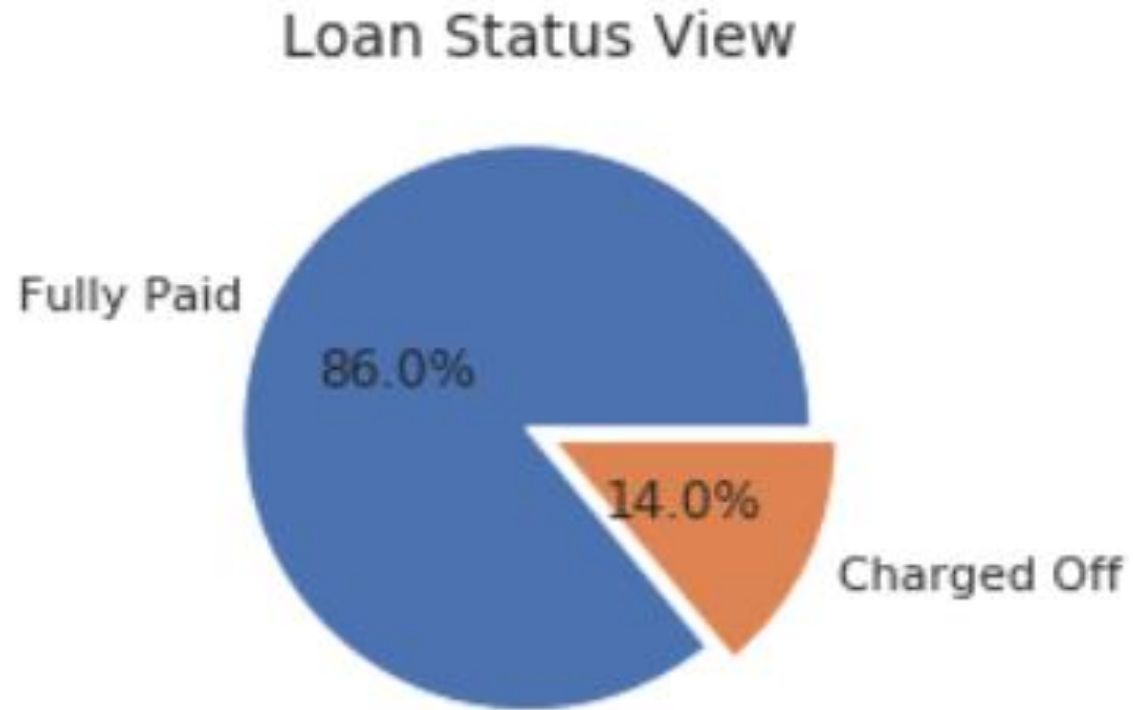
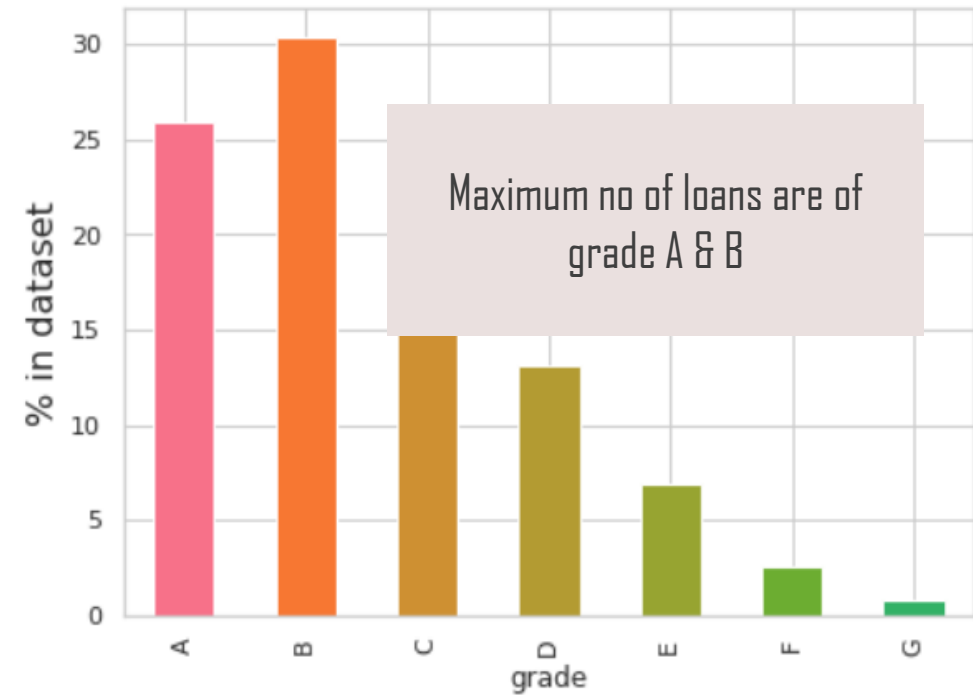# Approach

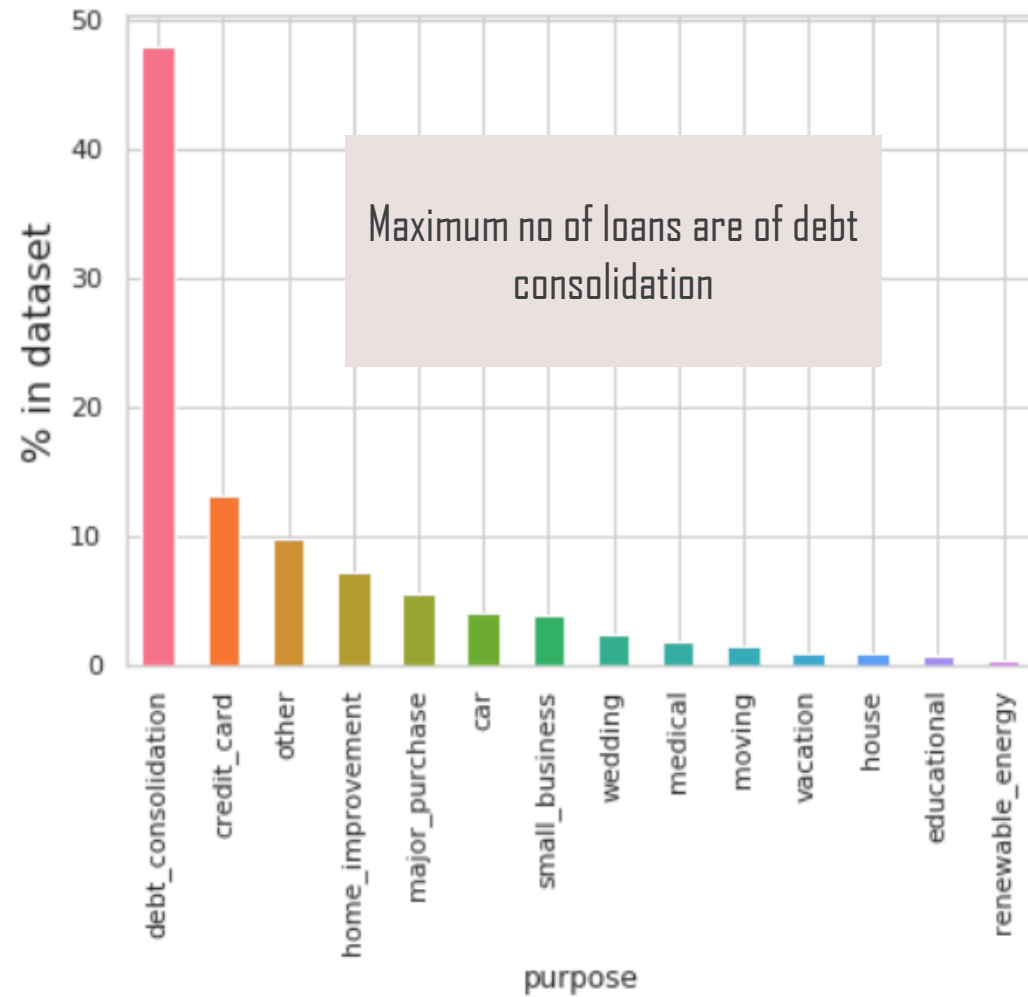Data cleaning ➤ Univariate analysis ➤ Bivariate analysis ➤ Recommendations

Overall loan bird-eye view

Loan Status View

Fully Paid

86.0%

14.0%

Charged Off

Approximately 14% of the loans are defaulted.

Loan analysis

Maximum no of loans are of debt consolidation

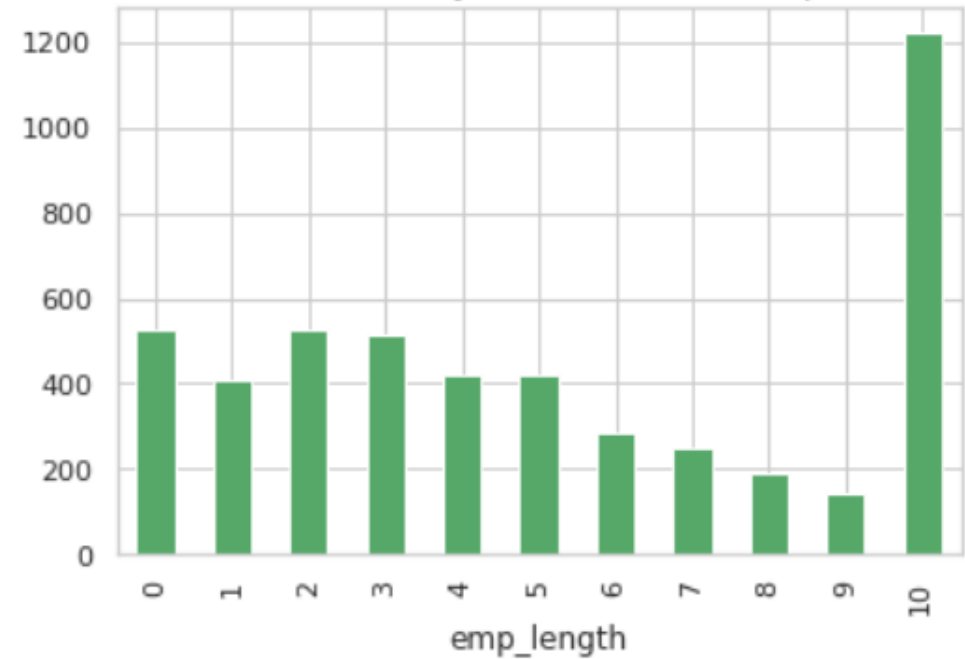Maximum no of loans are of grade A & B

Loan analysis

Defaulters count by self report Annual Income by Borrower
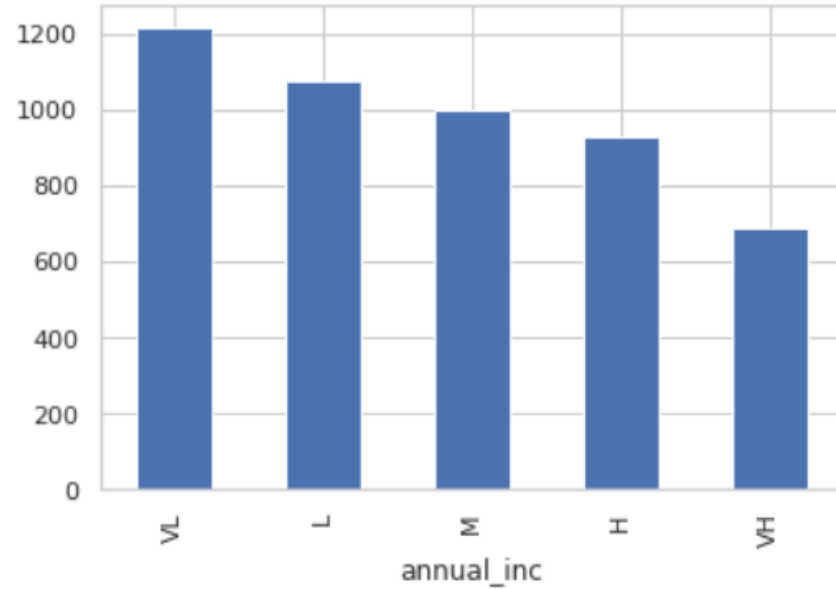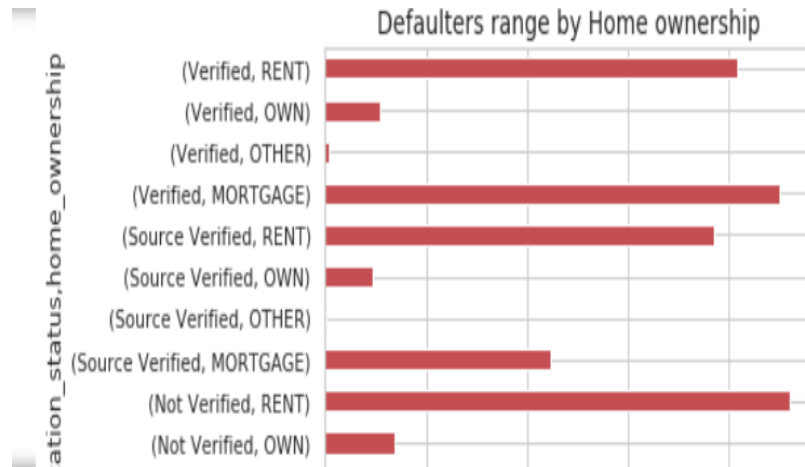
Lower the income, higher is the chance of default

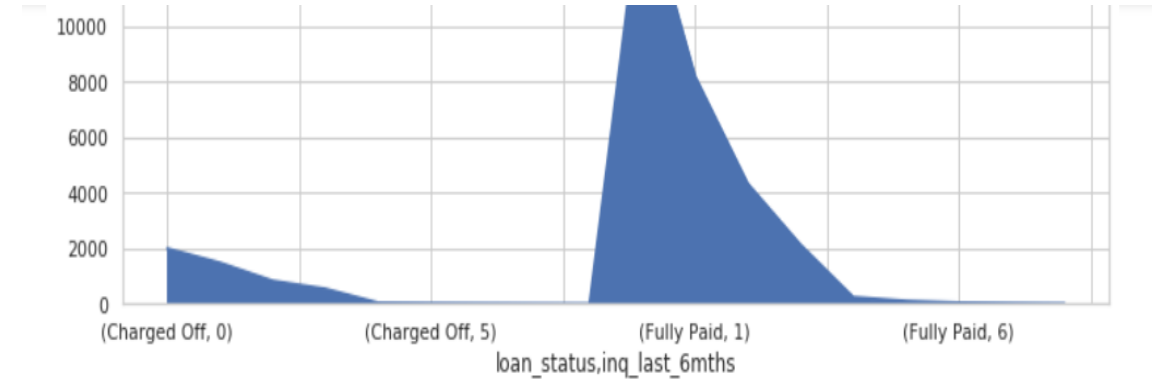Defaulters count by Borrower Work Experience

More experienced the person, higher is the chance of default

Loan analysis

Defaulters range by Home ownership

- (Verified, RENT)
- (Verified, OWN)
- (Verified, OTHER)
- (Verified, MORTGAGE)
- (Source Verified, RENT)
- (Source Verified, OWN)
- (Source Verified, OTHER)
- (Source Verified, MORTGAGE)
- (Not Verified, RENT)
- (Not Verified, OWN)

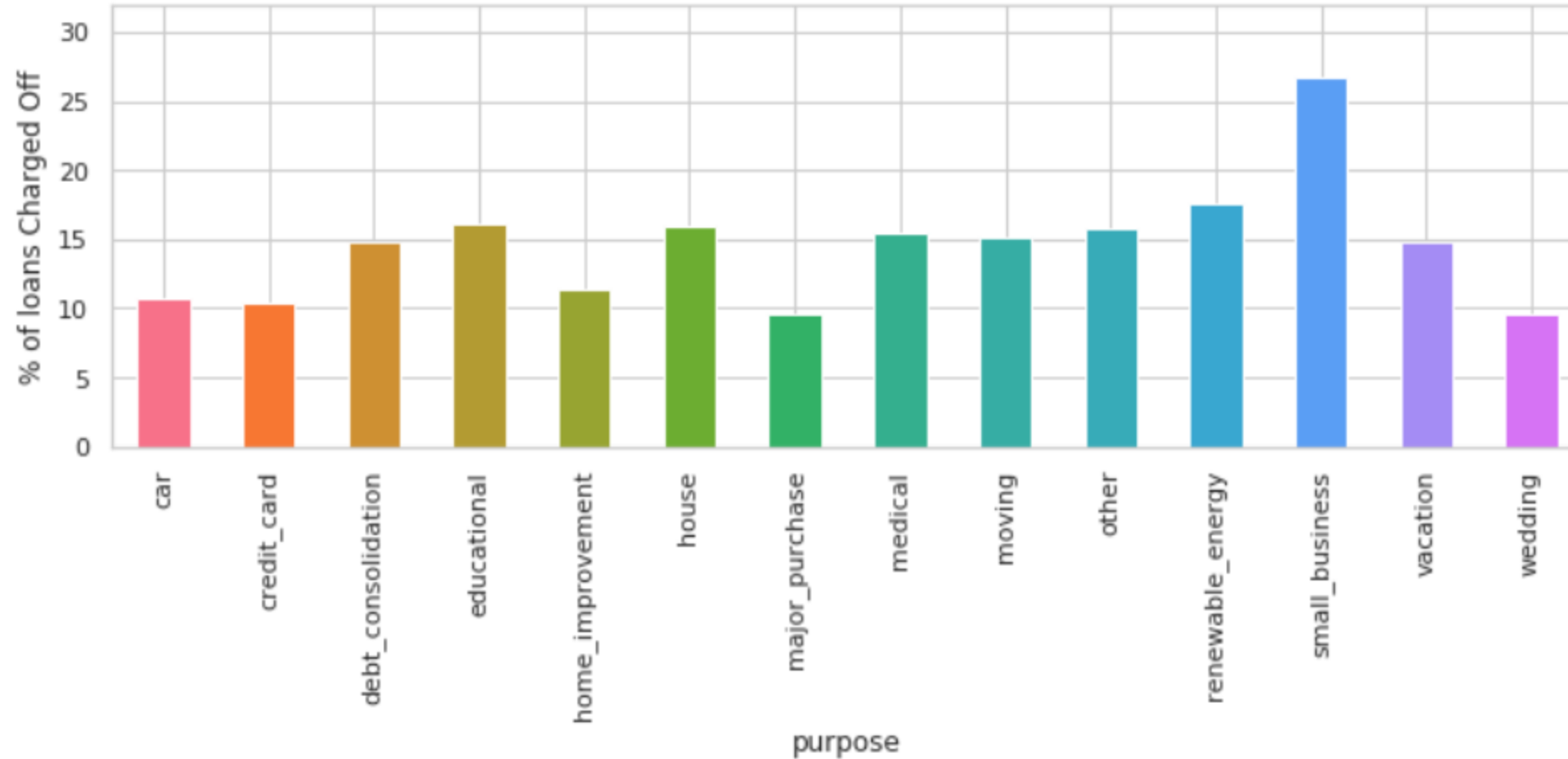loan_status,inq_last_6mths

Borrower who are in rented ownership and mortgage are having more % of to be defaulter
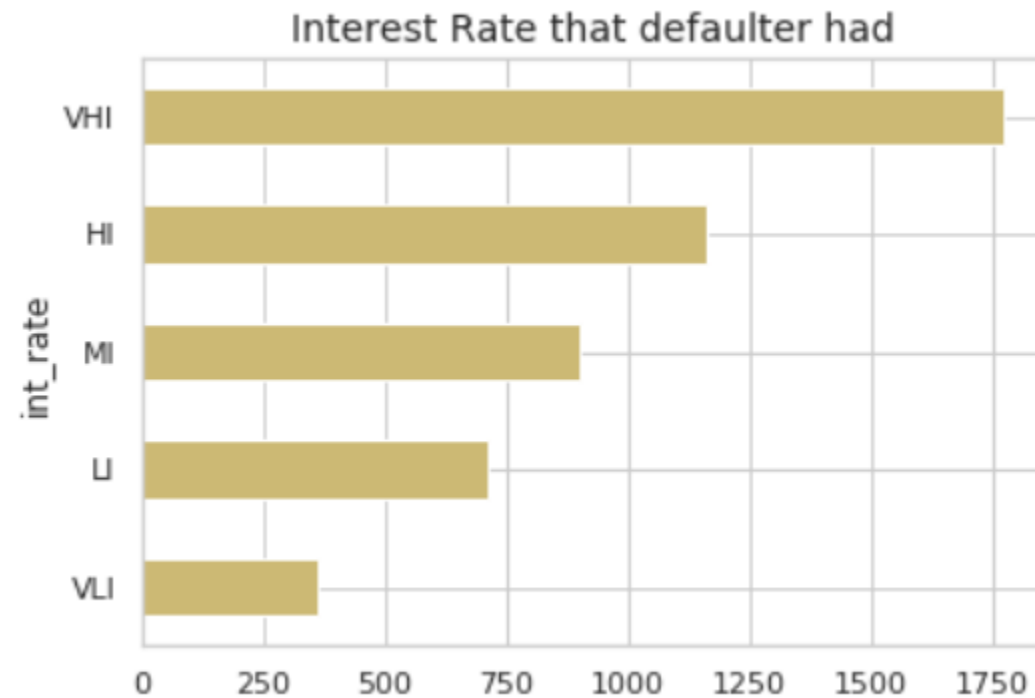
Could not make any inference on the number of enquiries
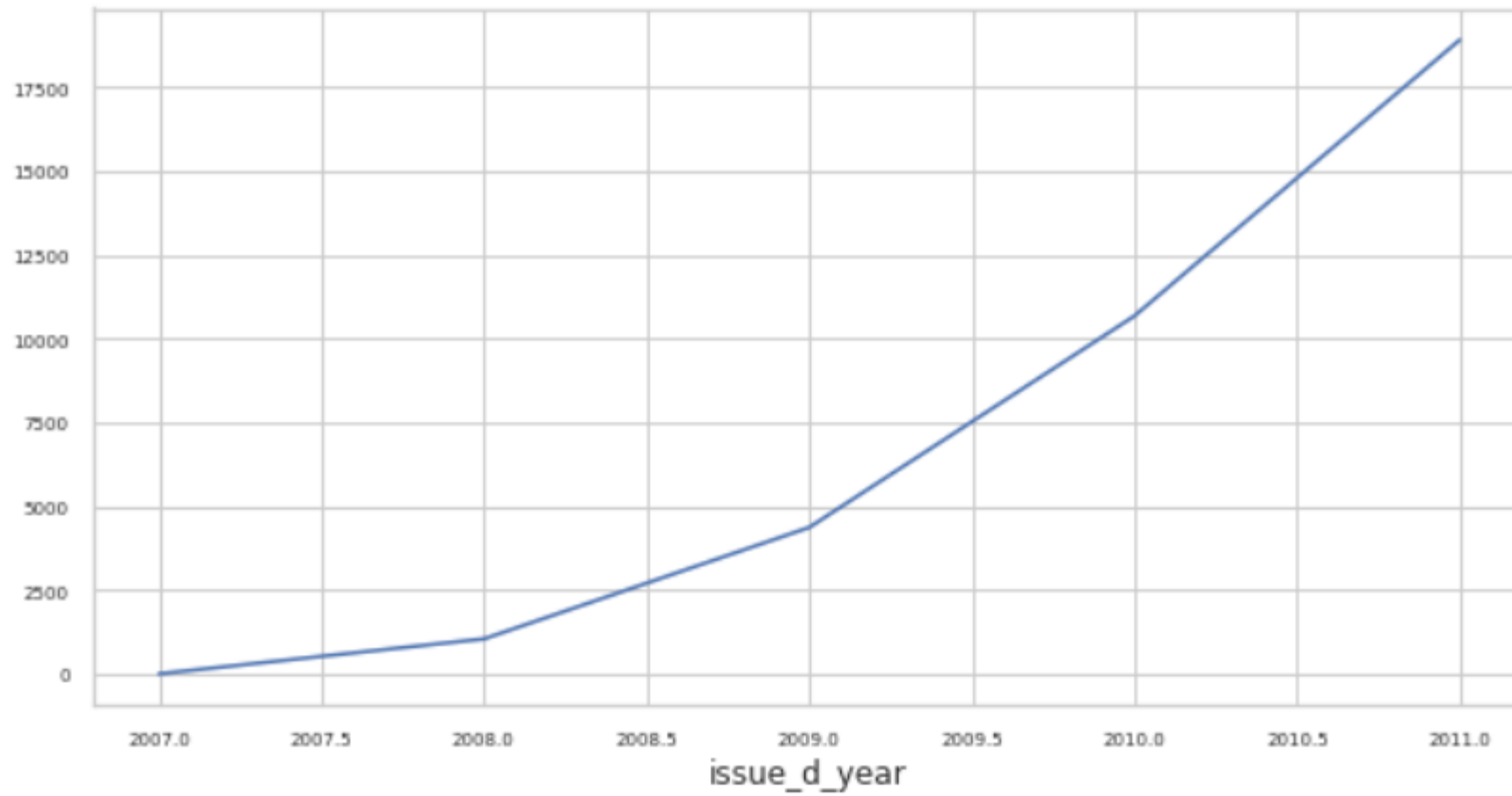
Default by loan purpose

Loans taken for the purpose of small business sees the highest default. We should avoid it.

Loan analysis
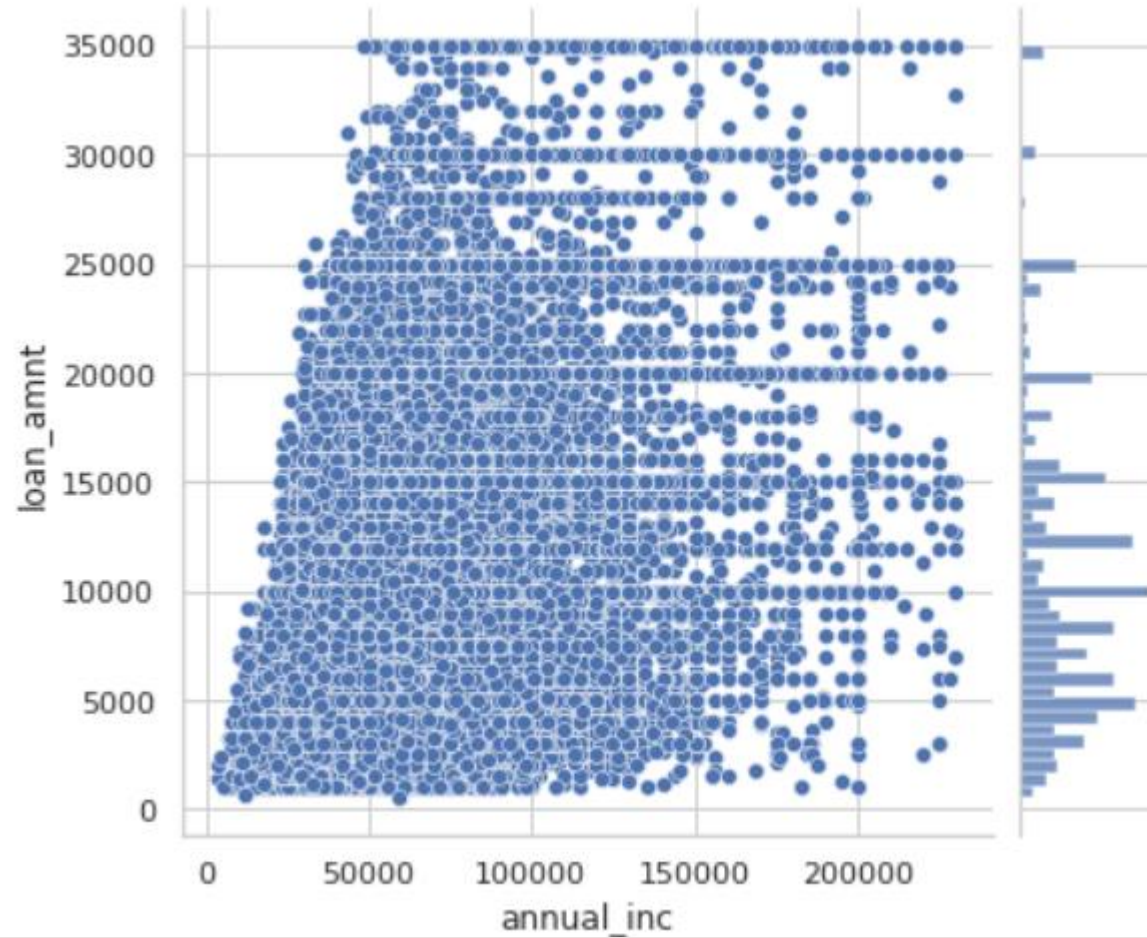

Interest Rate that defaulter had

Very high interest rate had the highest count of defaults. With increasing interest rates, the chances of default increase.

Loan analysis

Loan amount over a period of time.

Loan analysis

This depicts the loan amount vs annual income, average income lower than 50000 taking loans of 25000 or higher. These would be risky loans.

Recommendations

5 Driving factors for defaulters of the loan: **interest rate, annual income, emp experience, purpose, dti**

1. Reduce the percentage of loans where reason is debt consolidation/ Increase the rate of interest of such cases; Attractive interest rates can be offered to the category of 'renewable energy'
2. Avoid giving loans to the number of people with very low-income group, On the flipside, the loans can be given out to the people with Very high income at more attractive rates as they have low chances of default
3. Avoid giving loans to people with high experience
4. Avoid giving loans for the small businesses
5. Interest rates could be increased for the cases where dti greater than 20

Thank you!