

Lending Club Case Study

By Sunny M Sharma

sunny.etrx@gmail.com

Why we need Lending Club Case Study

To identify patterns which indicate if a person is likely to default, which may be used for taking actions such as denying the loan, reducing the amount of loan, lending (to risky applicants) at a higher interest rate, etc.

Investigations and Approach

In this case study we will use EDA to Understand and Analyse how Consumer attributes and Loan attributes influence the tendency to “default”

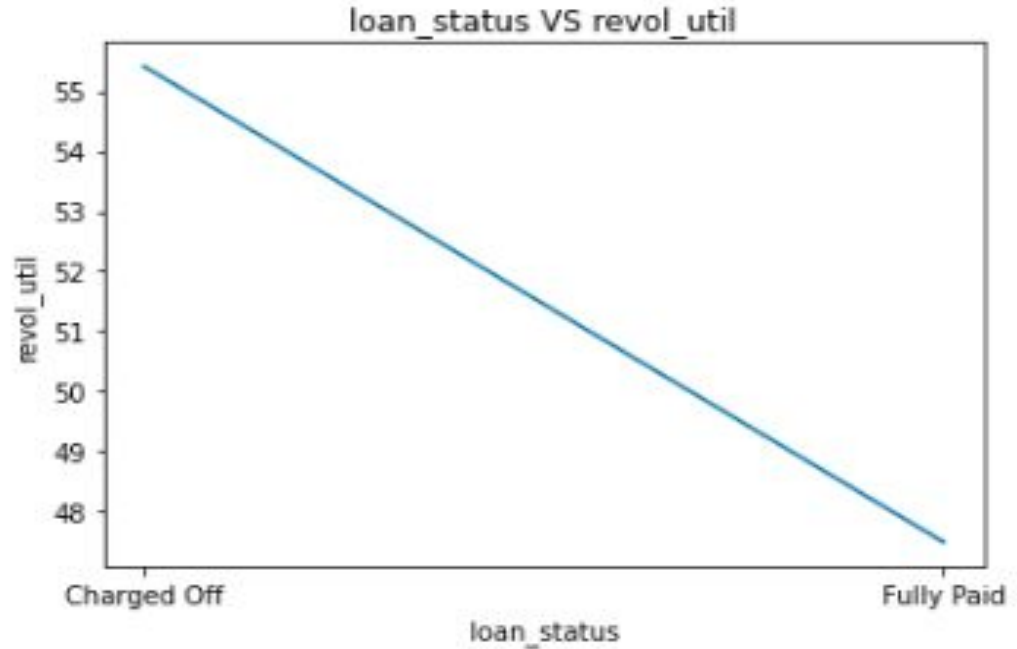
Analysis of the most significant Attributes

1. Revolving line utilization rate
2. Annual Income
3. Debt-to-Income Ratio
4. Home Ownership
5. Verification Status
6. Number of public record bankruptcies

Next will show the analysis of above attributes for both type of Individuals who have Fully Paid and Defaulted (Charged Off)

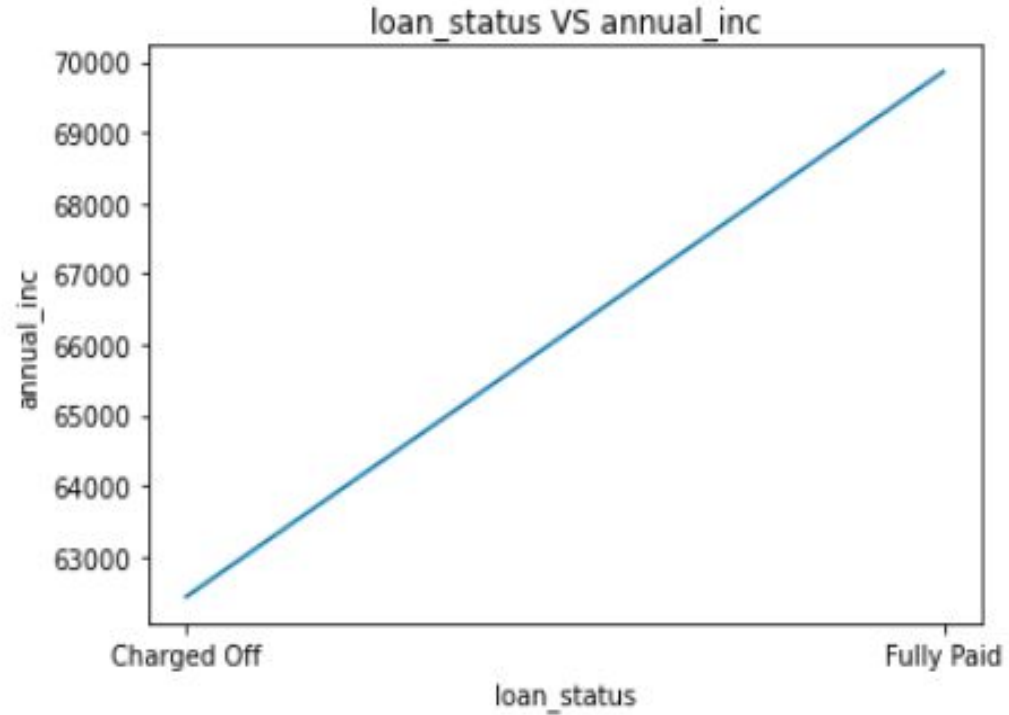
Revolving Line Utilization Rate

- On analysing data it is found that Loan status of Defaulters are found more where individual's revolving line utilization Rate is high.
- Figure plot on right



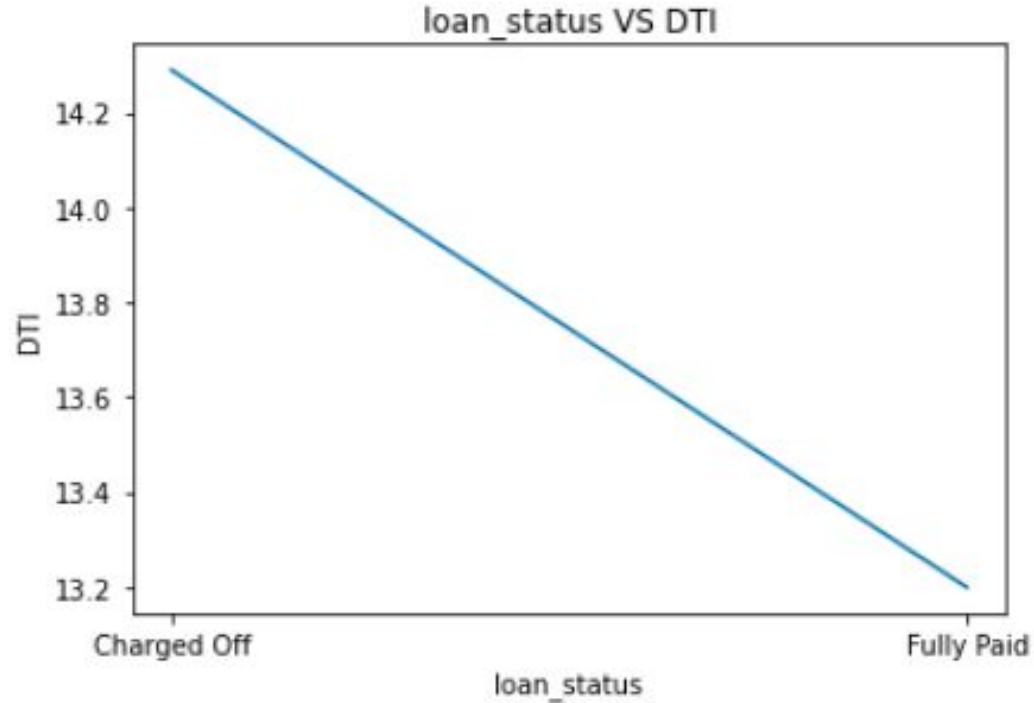
Annual Income

- On analysing data it is found that Defaulters are found more where Applicants Annual Income is Less
- Figure plot on right



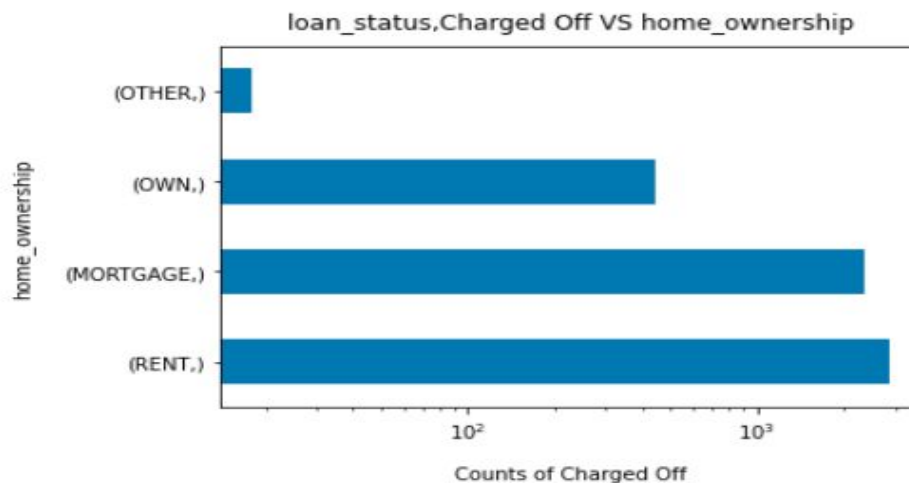
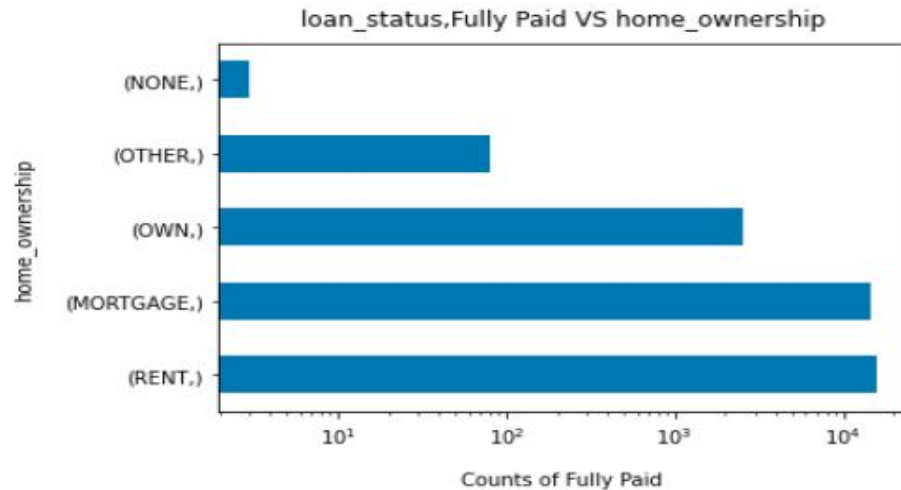
Debt-to-income Ratio

- On analysing data it is found that Probability of Individual being a Defaulter increases as Debt-to-income Ratio increases
- Figure plot on right



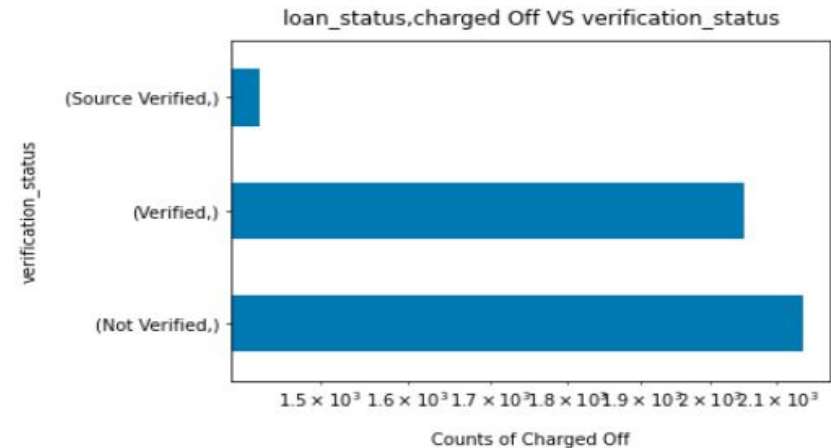
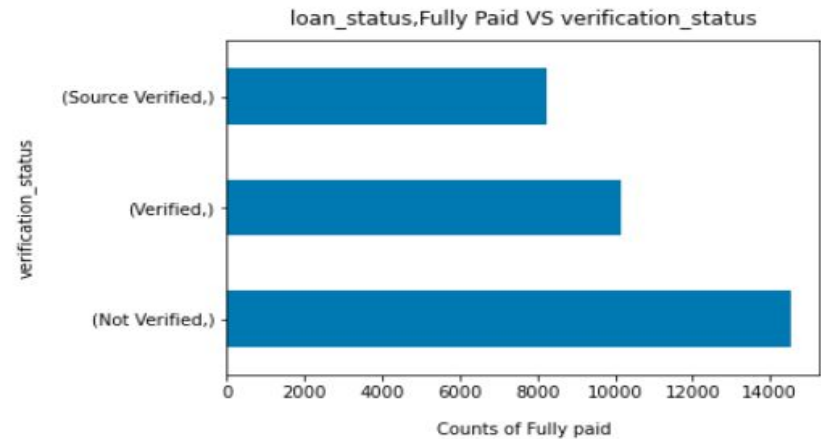
Home Ownership

- On analysing data it is found that Probability of Individual being a Defaulter increases if the Individual do not Own a house.
- Figure plot shows Owning a House is significantly less for Defaulters compared to Fully Paid Individuals.



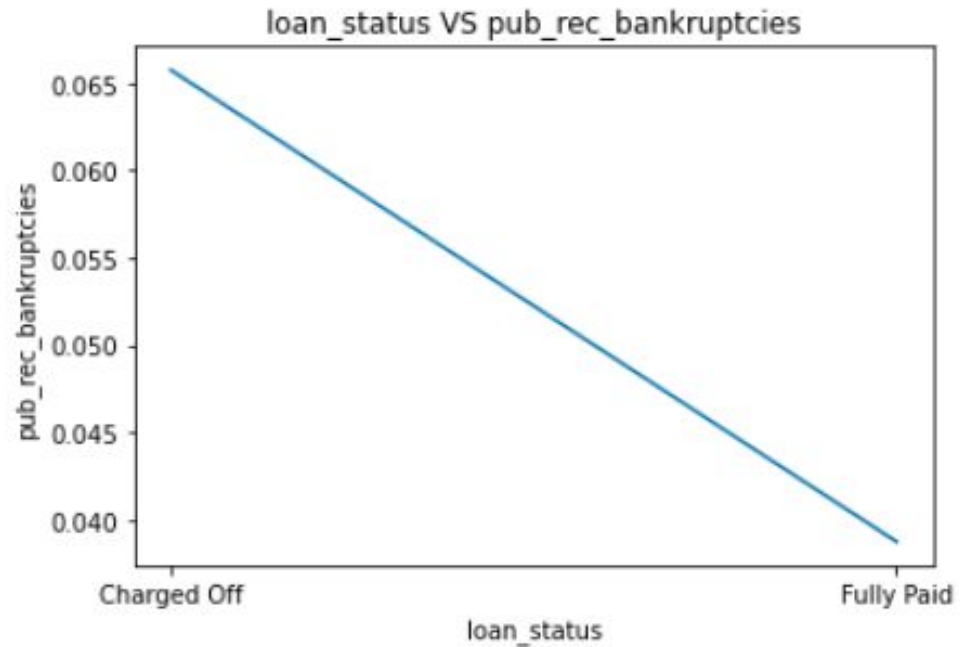
Verification Status

- On analysing data it is found that Probability of Individual being a Defaulter decreases if the Individual's income is "Source verified".
- Figure plot shows significantly difference between "Source Verified" for Fully paid as compared to Defaulter Individuals.



Number of Public Records Bankruptcies

- On analysing data it is found that Probability of Individual being a Defaulter increases with increase in “Number of Public record Bankruptcies
- Figure plot on right



Summary

- ❖ High risk factors of Applicant turning into Defaulter are
 - High revolving line utilization Rate.
 - Low Annual Income.
 - High Debt-to-income Ratio.
 - Not Owning a Home.
 - Income is not “Source verified”.
 - Presence of number of public record bankruptcies.