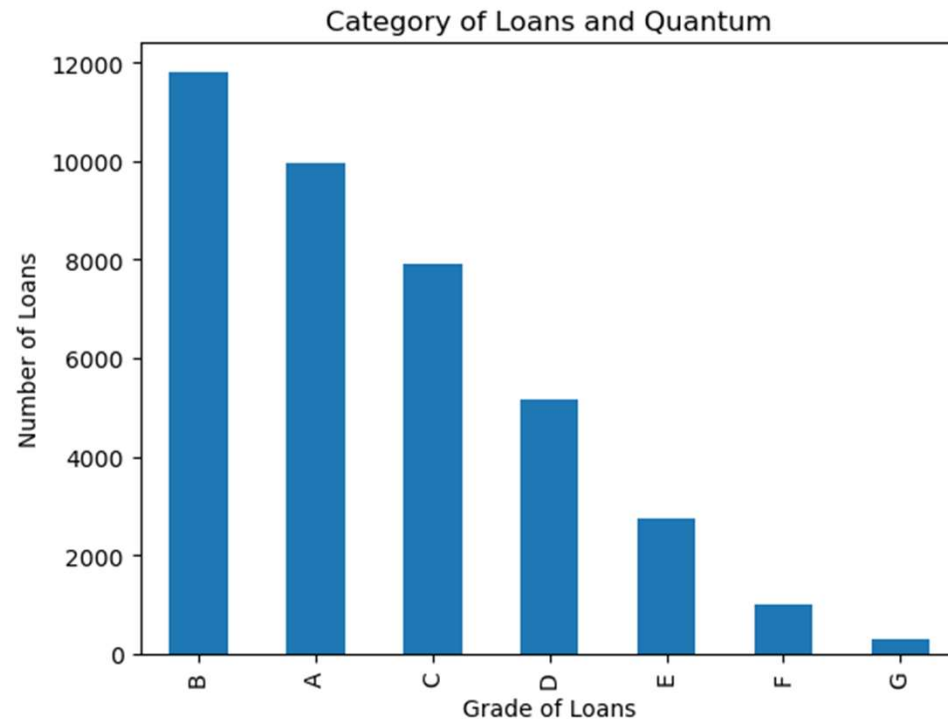


# The Analysis and Recommendations on the Lending Club's loans Data set

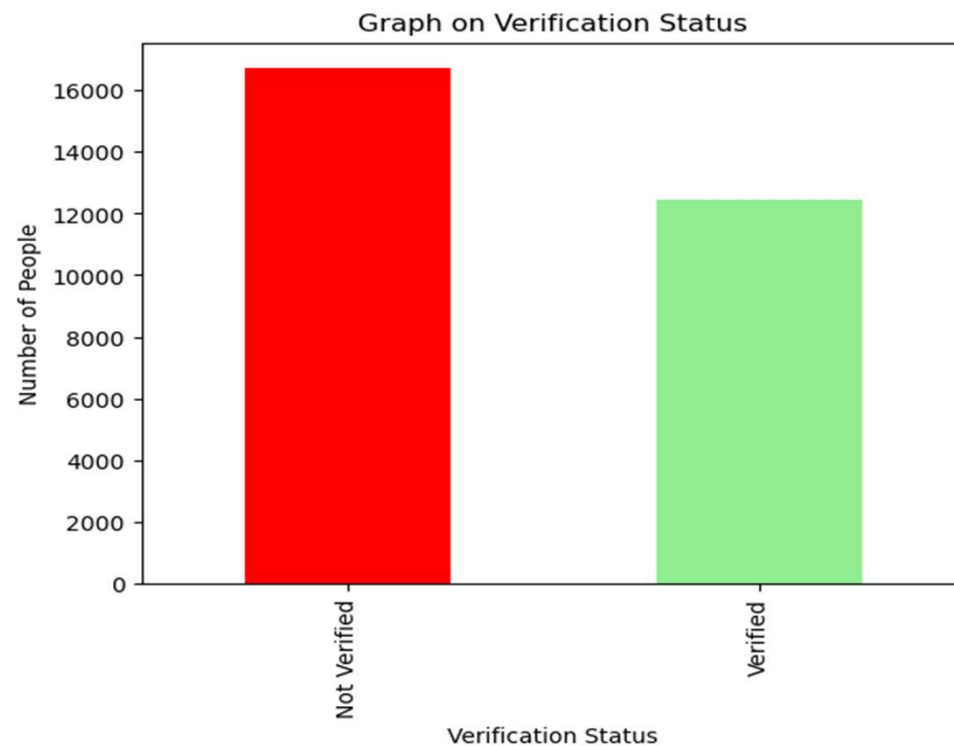
It will be an analysis summary and actionable recommendations that can be applied in real world business environment . The aim of it is to reduce bad debts and have the insight on whom to give loans and how much to give .

1. From the below graph , we can derive the fact that highest number of loan given is of the category B followed by A and C . Although , A Category loans are good , B/C category of loans are given to low credit quality borrowers and are charged higher rates of interests which could be the indicator of bad debts .

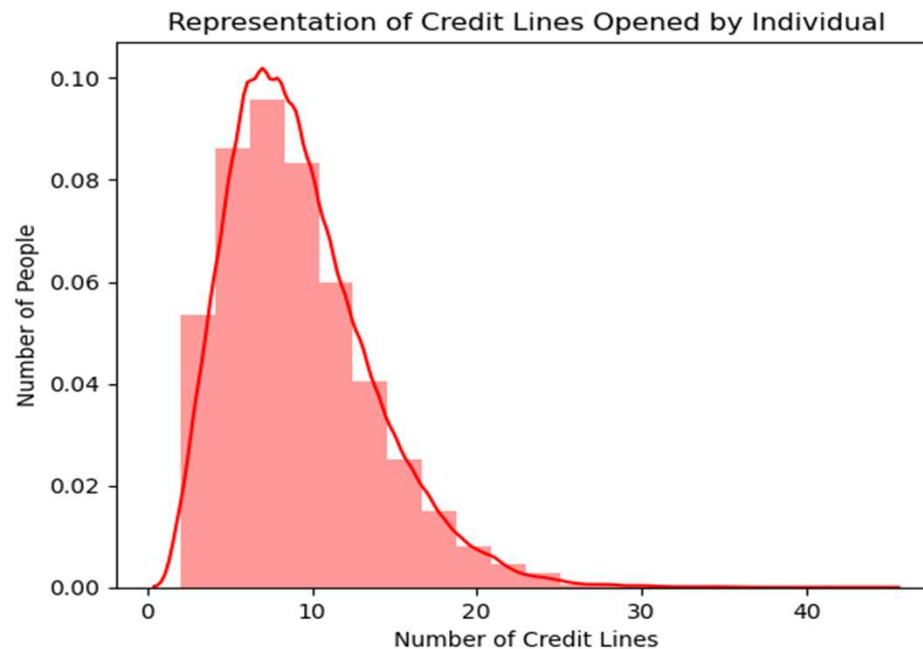
It would be recommended to give loans to the people who have good credit history and have their background verified by either themselves or by outsourcing this task .



- 2. From the below graph , its quite clear that the reason of debt annhilation could be because of non-verification of income .
- It would be recommended to verify the income source from thier employer or from tax authorities or from their accountants in case the borrower is self-employed.

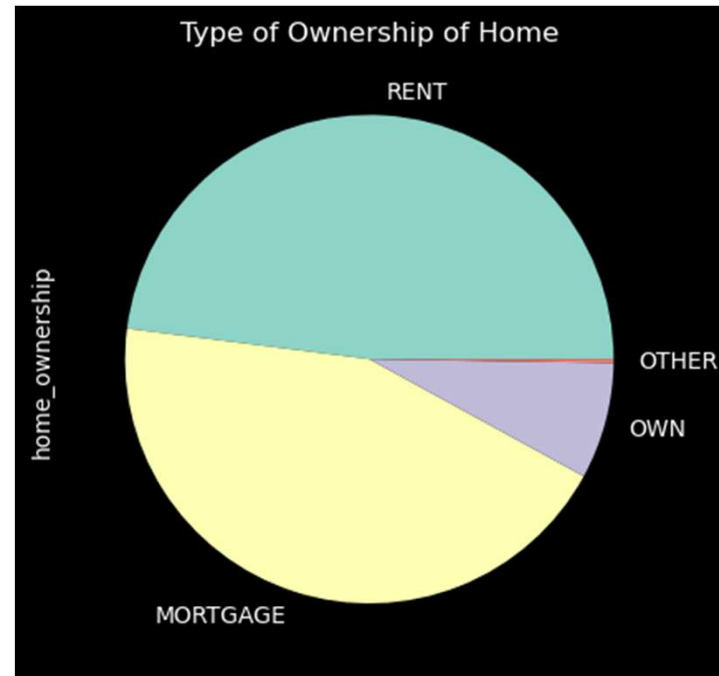


- 3. Another contributing factor of bad debts could be having large number of credit lines . Having large number of credit lines (more than 3 as per Wikipedia) makes it difficult to keep record of monthly payments leading to bad debts . Large number of people have taken 8-12 credit lines.
- Lending Club can introduce a policy to not give credit to people who have more than 5 credit lines . In case , some borrower has the urgency of having more than 5 credit lines , they could be considered as an exception and are asked to reduce the limit to 5 if their urgency is lifted .



4. From the below graph , people who have to pay rent are large in number making it difficult for them to meet the monthly credit repayments requirements . People who have thier house mortgaged could be considered as delinquents assuming they are middle-class or poor.

It would be beneficial to add a layer of certainty about the repayments by asking the borrowers to sign an indemnity bond about securing the company from the loss of credit because of obligation to pay rents.



*5. Assuming the per capita income in USA (70,000 Dollars) is even across nearly all states , then as we can see , a lot of people are in the 0-40k or 40k-80k range can be considered as lower-middle class thus making them more vulnerable to bad credit score.*

*Lending Club should target middle-class or upper middle-class . In case they want to give credit to lower middle class people , the credit should be given with easy repayment methods like no cost EMI's , low interest rates , debt consolidation for chosen people etc.*

*Annual income bins | Quantum*

*(0 – 40,000) | 19425*

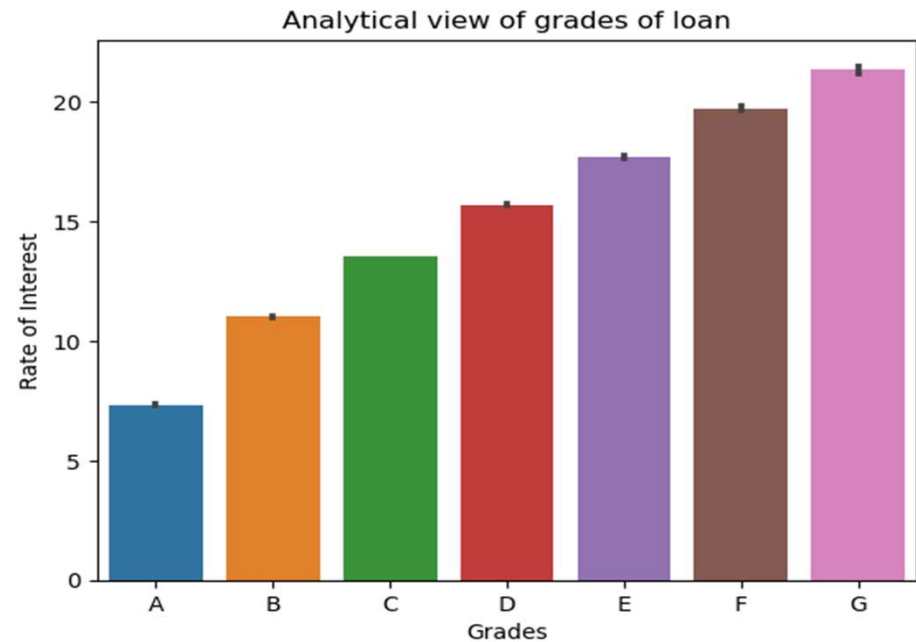
*(40,000 – 80,000) | 9814*

*(80,000 – 1,20,000) | 7084*

*(1,20,000 – 1,60,000) | 566*

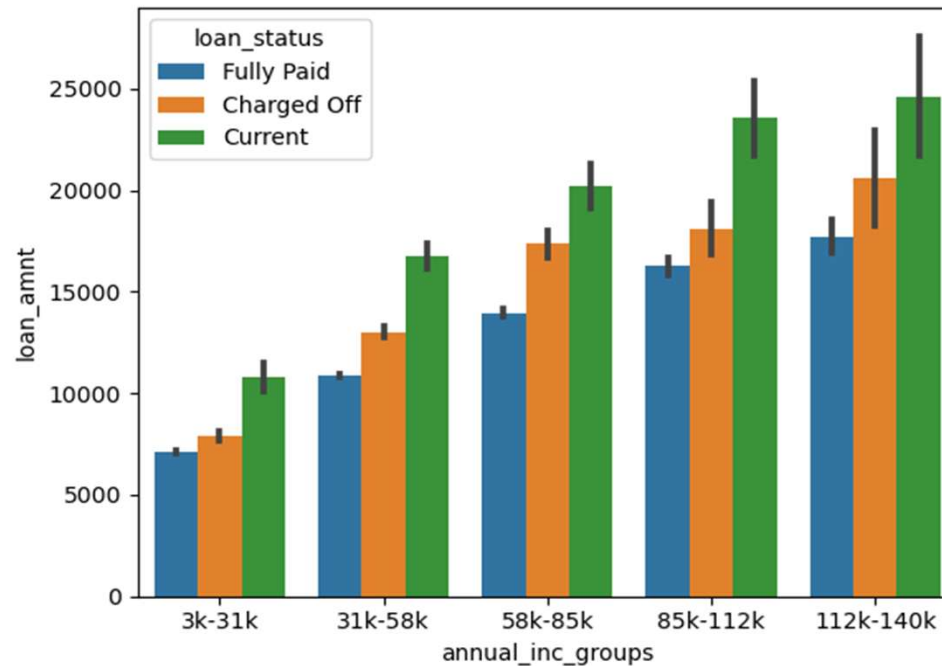
6. As we can see, as the grades of loan decreases , the interest rates increases indicating that higher the risk , higher will be the rewards . But this concept can back-fire because of the fact that , worse grades of loans can threaten the profit motive if borrowers doesn't repay.

Company should reduce the interest rate on bad grade loans instead of charging high rates . It will not only decrease their risk but also ensure higher revenue because of economies of scale by making credit attractive to large number of people .



7. It is evident from the graph, as the income increases , the amount of loan also increases . But what's more interesting is the fact that , with increase of the aforementioned two variables , the charged off ratio is also increasing making it clear that company has higher tendency to loose money if large amount of loan given to higher income groups .

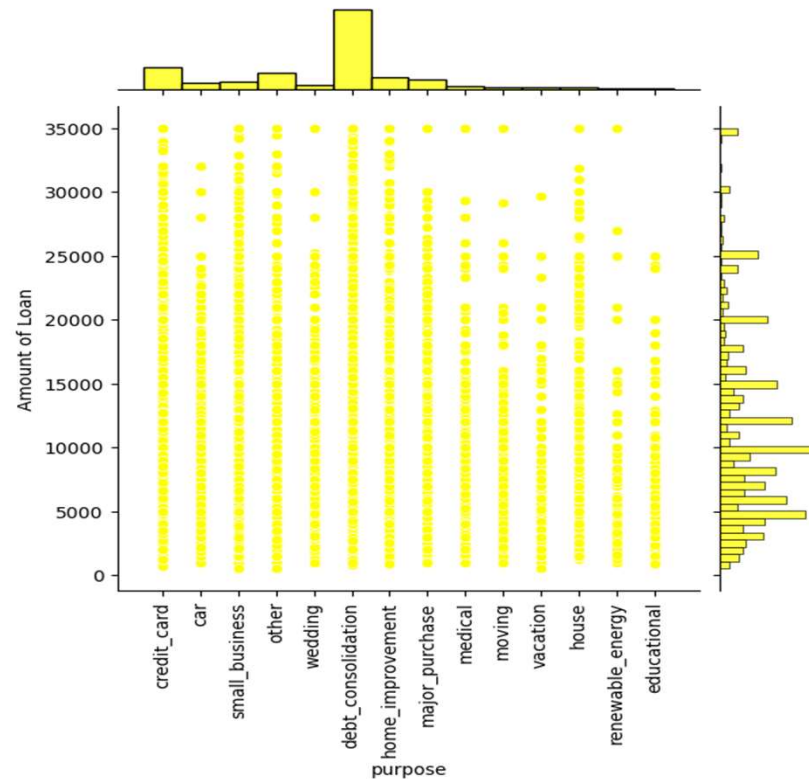
In this case , rich people should be given loans as the companies give them currently but they should ensure the security of their loan by keeping the high valuables as collateral.





8. One may not be able to draw inferences from scatterplot, but the histogram on the outerpanes axis makes it evident that large amount of loans are taken for debt consolidation which indicates the people's inability to pay previous loans. So instead of blocking the funds into giving loan as debt consolidation, Lending Club should give loan for other purposes.

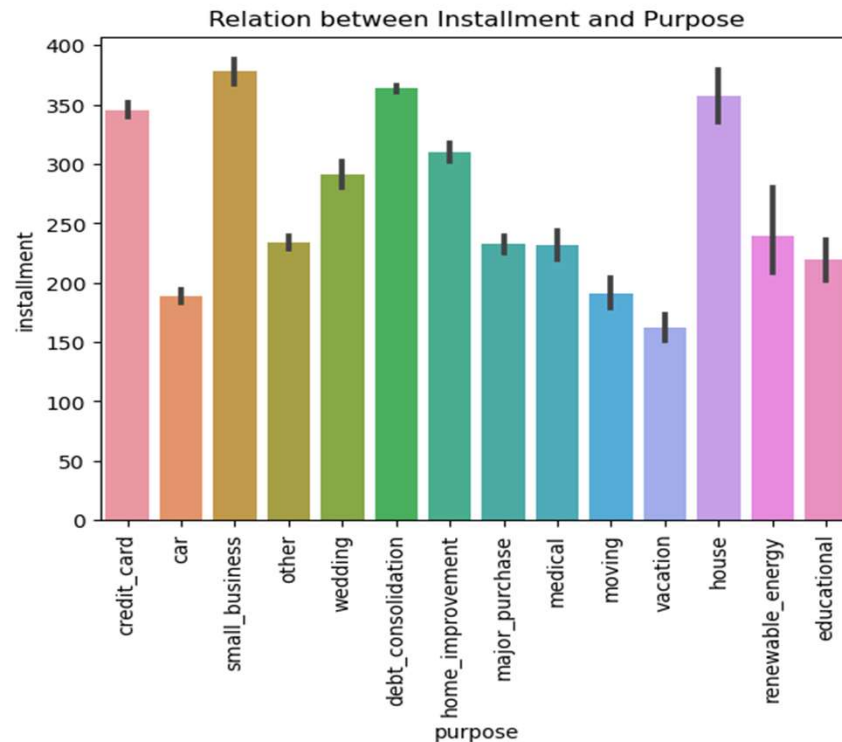
Although Debt consolidation could be a better way to restrict the bad debts, but it should be allowed for chosen people who aren't at the risk of going insolvent. Many times the people who seek repetitive debt consolidation are often declared insolvent at the end making the company lose its partial or full principal amount. Instead debt should be given for other purposes.



9. Now the question arises , give loans as for which purpose ? The answer is :-

- I. House
- II. Small Business
- III. Credit Card

The reason for picking installment variable is that , the higher the installments , higher will be the turnover . And as turnover increases , the credit multiplier does its work and increases the overall money supply resulting in higher profits.



10. From the heatmap , one can state that small businesses and house building are such purposes which results in the highest utilisation of loan taken . Giving loans for productive work boosts the money supply , resulting in credit creation multiplied by reciprocal of cash reserve ratio which leads to higher profits of not only one bank but the entire banking industry. It also proves the above mentioned analysis.

