



Lending Club Case Study

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Problem Statement

Brief overview

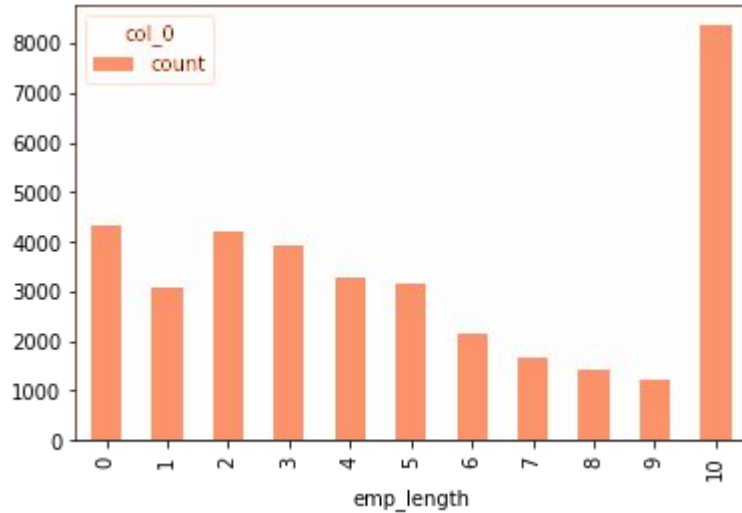
When the company receives a loan application, the company has to make a decision for loan approval based on the applicant's profile. Two **types of risks** are associated with the bank's decision:

- If the applicant is **likely to repay the loan**, then not approving the loan results in a **loss of business** to the company
- If the applicant is **not likely to repay the loan**, i.e. he/she is likely to default, then approving the loan may lead to a **financial loss** for the company

Solution

Results of Analysis:-

1. It can be seen that more than 14% of the customers have not repaid their loan completely.
2. Most loans were got for debt consolidations, which infers that people got the loan from this bank to close their other loans stating they may have less interest rate than outside.
3. Also 0.25% of those used the loan to build renewable energy and 0.8% for education which is appreciated.
4. Number of loans increases as we near the end of the year, stating that people tend to start new business or any other new expenses arise while nearing the new year.



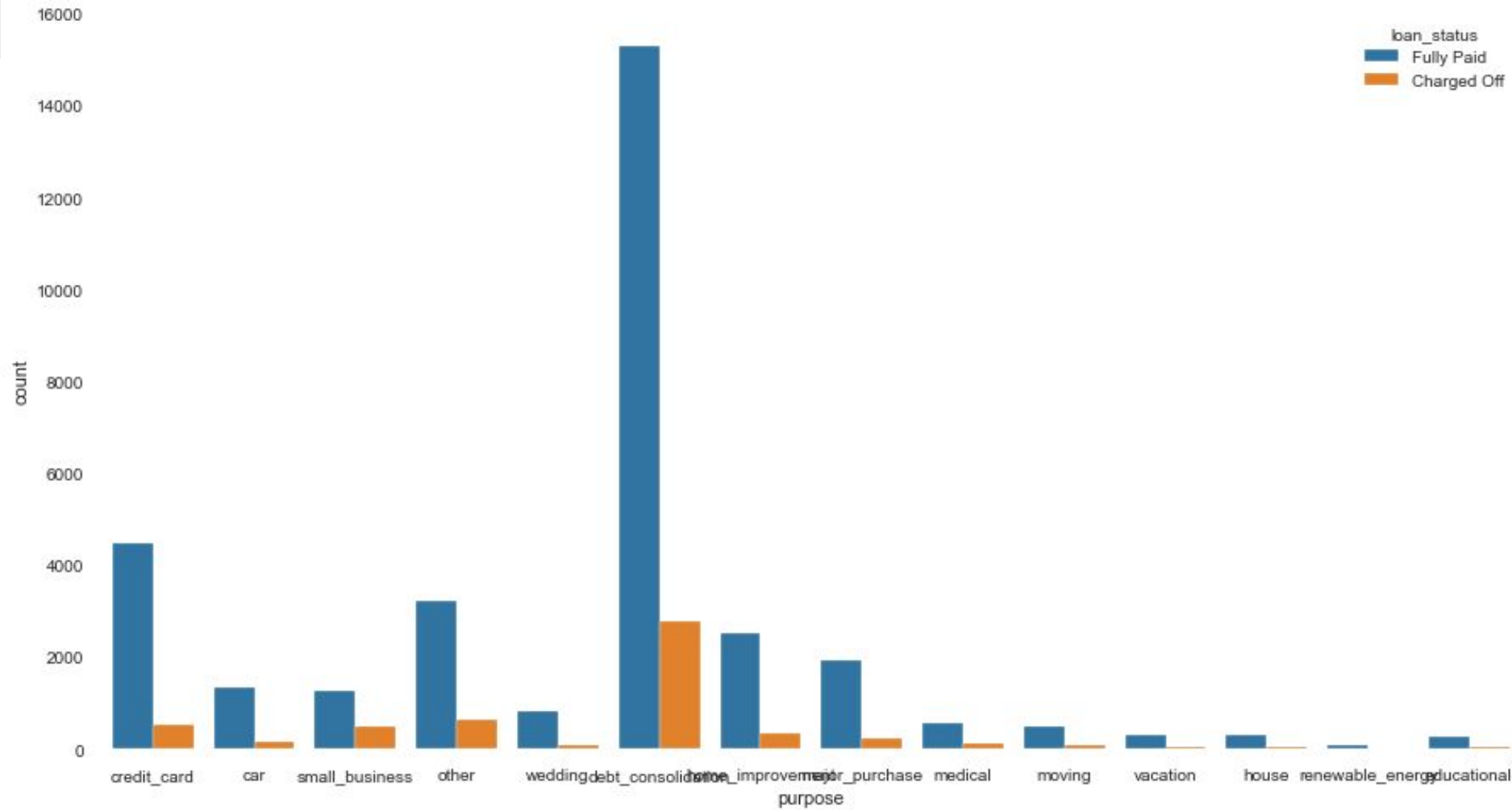
5. It can be seen that people with 10+ years of experience have got more number of loans


6. It may be because those with 10+ experience could repay the loan properly or may have good credit score.

7. It can be seen that maximum number of those who got loan dont have own house, either their house is in mortgage or they dont have one.



8. It can be seen that on average the annual income of defaulters is less than those who paid the loan properly.
9. Also in total almost 75% of those earn 83000 but the max income is 6000000 which is clearly an outlier.
10. It can be seen that the not verified category has the least annual income on average. But on analysing the other parameters it can be seen that verification status doesn't depend on the loan status.

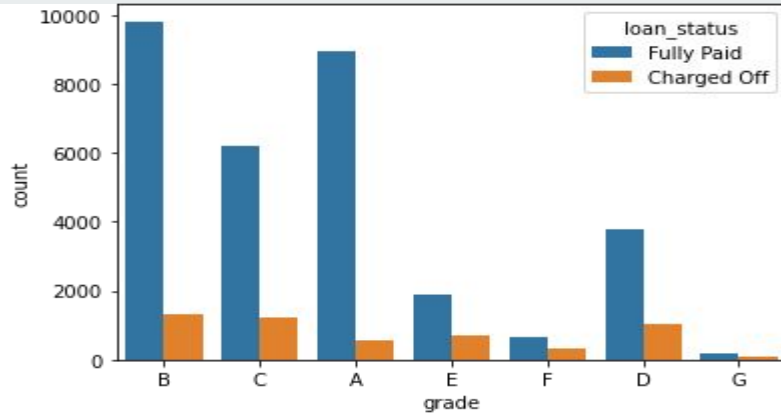




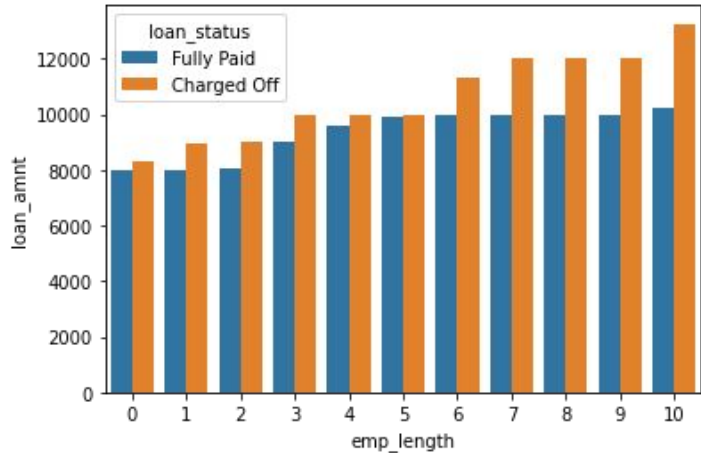
11. It can be seen that most % of charged of loans is under small_business category

12. It can be seen that maximum interest rate is applied to small buisness and the least rate to car and major purchase

13. The interest rate for the charged off is higher than the fully paid people.

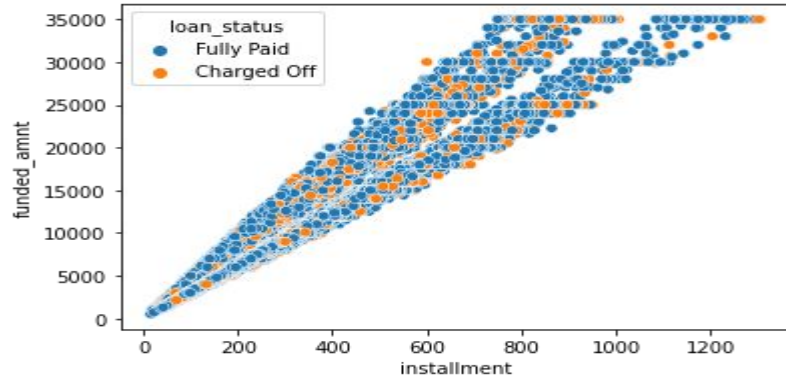


14. It can be seen that the grades A,B,C have got more number of loans



15. It can we seen that people with more work experience are given higher Loan amount

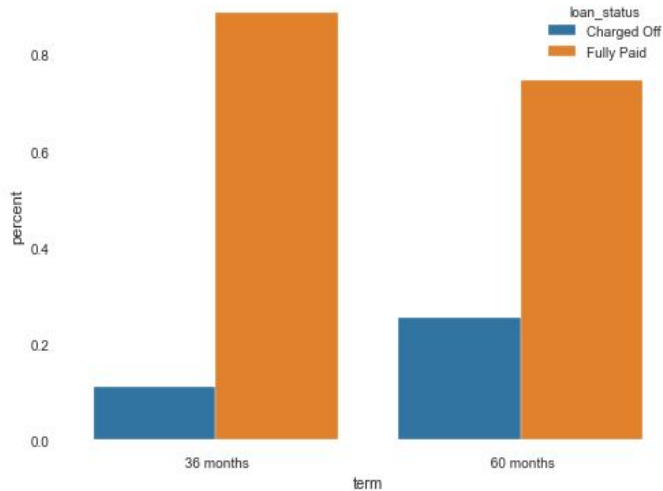
16. Also the risk reduces as the work experience reduces may be they have good income by then.



17. It is obvious that greater the funded amount more is the number of installments

18. Also seen than as the loan amount increases the charge off also increases

19. There are more customers with 36 month term loan also the defaulters have reduced





Summary

1. Most people get new loan to close their previous loans
2. The number of loan getters increases at end of the year
3. The interest rate is higher for small scale businesses and also the number of defaulters is also higher in percentage than other loans
4. The maximum number of loans are approved for those with 10+ years of experience because they may have good pay back probability.
5. The interest rate is least for car and major purchase.