



Lending Club Case Study

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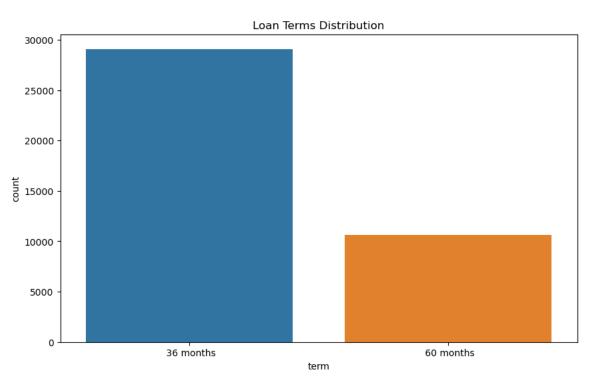


Abstract

- In today's rapidly evolving financial landscape, efficient loan assessment is paramount.
- This presentation delves into the Lending Club's dataset, aiming to shed light on the intricate patterns that govern loan approval.
- Through a series of visualizations and statistical examinations, we pinpoint key factors such as average loan amount, borrower's annual income, debt-to-income ratio, and more.
- Our analysis unveils significant insights, such as the relationship between a borrower's income and loan amount, the implications of having numerous open accounts, and the potential red flags posed by public records.



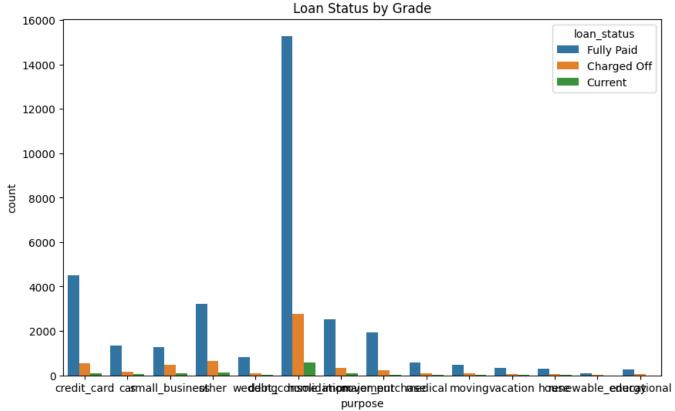




The chart shows a clear preference among borrowers for loans with a term of 36 months. These 36-month loans are significantly more popular than the 60-month loans, with counts almost three times higher



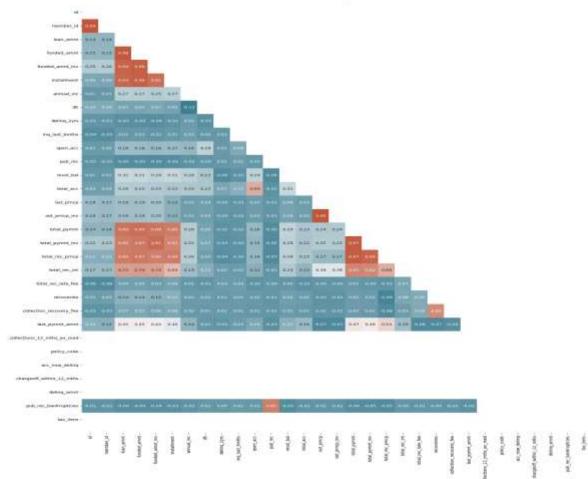




- 1. The most common purpose for loans, by a significant margin, is 'debt consolidation', with the majority being current.
- 2. 'Credit card', 'home improvement', and 'major purchase' also have a noticeable number of loans, with the majority in the 'Current' status.
- 3. The 'small_business' category, despite having fewer loans, shows a higher proportion of charged-off loans compared to other purposes.
- 4. Other loan purposes like 'wedding', 'medical', 'moving', 'vacation', 'renewable energy', and 'educational' have relatively lower counts, indicating they might not be as popular.
- 5. Across most loan purposes, the majority of loans are current, with only a few categories showing significant charged-off statuses.



Correlation among the Columns





- 1. The chart showcases the correlation between various financial and credit attributes, with values ranging from -1 to 1, indicating negative and positive relationships respectively.
- 2. Attributes like 'loan_amnt', 'funded_amnt', and 'installment' exhibit high positive correlation, suggesting that the loan amount decided, the amount funded, and the installment amount are interrelated.
- 3. Conversely, there are some attributes with negligible correlation to others, implying that these features don't necessarily influence each other, such as the 'policy_code' which seems to have no significant correlation with other attributes.
- 4. Variables like 'total_rec_int' and 'total_pymnt' have moderate to high positive correlations, suggesting that as total payment increases, the interest received also goes up.
- 5. Features like 'pub_rec' and 'pub_rec_bankruptcies' have a positive correlation, hinting that borrowers with public records might have a higher likelihood of having public record bankruptcies.





Significance of Loan Status with Respect to Different Parameters:

Annual Income:

- 1. Borrowers with higher annual incomes seem to have a higher rate of current loans and a higher chance of fully paying back their loans.
- 2. Conversely, those with lower annual incomes seem to be at a higher risk of having their loans charged off. Loan Purpose:
- 1. The purpose of the loan seems to play a role in its status.
- 2. Loans for credit card, small business, and debt consolidation purposes, for instance, have varying frequencies of being fully paid, charged off, or currently in payment.
- 3. Verification Status: The loan status also varies by the verification status. Notably, non-verified loans have a higher count, but it's essential to be cautious as non-verified might also carry higher risks.





Loan Approval Considerations:

- 1. Income Level: Higher annual income groups tend to have a better repayment record. Thus, approving loans to these borrowers might be less risky.
- 2. Purpose of the Loan: Some purposes like debt consolidation and credit cards might be seen as riskier, given their higher default rates.
- 3. Verification Status: Verified loans or source-verified loans tend to be more trustworthy as their details have been cross-checked, making them potentially safer bets for loan approval.





In conclusion, while these charts provide valuable insights into the relationships between various variables and loan statuses, a more in-depth statistical analysis would provide a clearer picture of the exact risks and predictors of loan default. Always blend qualitative insights with quantitative findings to make holistic lending decisions.