(Loan Data from Prosper)

Dataset

> This document explores a dataset containing Loans Data from Prosper regarding 113937 loans, including variables like .. 'LoanOriginalAmount', 'MonthlyLoanPayment', 'Term', 'IsBorrowerHomeowner', 'IncomeVerifiable', 'StatedMonthlyIncome' etc.The dataset can be found at ...

https://s3.amazonaws.com/udacity-hosted-downloads/ud651/prosperLoanData.csv.

> Variable definitions can be found at

https://docs.google.com/spreadsheets/d/1gDyi_L4UvIrLTEC6Wri5nbaMmkGmLQBk-Yx3z0XDEtI/edit#gid=0

Summary of Findings

> In the exploration, I found that ...
>
> The most chosen Term is 36 months ... Then ... the short term of 12 months is mostly for small original loans, And the long term of 60 months is mostly for big original loans. As the term is longer, the monthly loan payment will decrease.
>
> In general there is a positive relationsship between Monthly Incomes & Original Loan Amount, Pharmacist at the 1st place then Judge and Doctor are the top 3 of having the highest average Loan Originl Amount.
>
> Debt consolidation, Baby&Adoption, Wedding loans have higher average Loan Originl Amount.
>
> Cosmetic Procedures has the highest average Borrow Rate, AND As the Total Prosper Loans increase, there's a slight decrease in Borrower Rate.
>
> The Top 3 Employment Status "Employed, Self-employed, Full-time" have the highest average Loan Original Amount. And The Not-employed has the highest average Borrow Rate, AND also have the highest Values & Variety of Values for both Total Prosper Loans AND Recommendations.
>
> Employment Status of "Employed" has the highest ratio of Home Owner & Income Verifiable over all other EmploymentStatus.
>
> The Home Owner Borrowers have higher Loan Original Amount on average AND lower Borrow Rate on averager THAN Non Home Owner.
>
> The True Income Verifiable have higher Loan Original Amount on average AND lower Borrow Rate on averager THAN False Income Verifiable.

The sorted in descending way Average Incomes for the Occupations we have in our dataset --> Doctor, Attorney, Judge, Executive, Dentist, Pharmacist

Over the positive relationship between Stated Monthly Income AND Loan Original Amount, as the both increase --> we can observe thet the majority of higher loans are Home Owners AND Income Verifiable, Also we can observe decreasing in Borrower Rate AND increasing in the Term

Higher LoanOriginalAmount on Average can be observed along some Employment Status like Employed, Self_employed, Full-Time and along some Listing Category like Debt Consolidation, Home Improvement, Business, Large Purchases, Medical/Dental, Wedding Loans

Key Insights for Presentation

For the presentation, I focus on the variables numeric and categorical affecting "Loan Original Amount" and "Borrower Rate" throuhg many plots like like (Scatter, Box, Violin, Reegplots & Heatmaps)