

Loan Data By Prosper

By Tiffany Hong

Source

prosperLoanData.csv - <https://www.google.com/url?q=https://s3.amazonaws.com/udacity-hosted-downloads/ud651/prosperLoanData.csv&sa=D&ust=1554486256021000>

Introduction

This project is for analyzing the loan data from Prosper. Prosper is a peer-to-peer lending platform in US. About 0.9 million people have used this site and \$14 billion have been borrowed. I use Loan data from Prosper from 2005 to 2014.

Findings

1. Univariate Exploration

- Which state do borrowers live most?
Borrowers live in CA almost 2.5 times more than second ranked state, TX. Recently, the number of IT jobs has increased in CA so I try to find what their occupations are.
- What is the most occupation in CA borrowers?
Professional jobs are almost twice than executive jobs excluding other selection. On the other hand, computer related jobs ranked as third but the number is not significant. Therefore, borrowing money isn't related to the job.
- How about other state? Even other states have professional job borrows money more than other jobs?
The answer is yes. Still professional job borrows more money rather than other jobs. Therefore, state is not related to the job.
- How about borrowers' Loan Status?
Almost a half of borrowers are in current loan status. Past due amount is not significant. Therefore, I think Prosper has a strong financial system.

2. Bivariate Exploration

- If the borrowers have high bank card credit, do they loan more money?
Most of borrowers tend if they have higher bank card credit, they borrow money less than 10% of their bank card credit. However, the borrowers with lower bank card credit tend to borrow more money. This is not a good situation for the borrowers and Prosper because they have a chance not to pay back.
- How about income range vs loan original amount?

The higher income, the more borrow money. As I see the above, the higher salary jobs such as professional, executive, computer engineer, request more money than other jobs. I think they invest their money to expand their business or for other purpose, they need more money and that is not for life, so the size of borrowing amount is huge.

- The borrowing money trend by year
Prosper data has started since 2005. First two year, the business had seemed to go well but in 2008, the Lehman brothers incident had caused deflation. The borrowers have tried to borrow money again since 2009. The loan amount keeps increasing by year after 2009. Thus, Prosper is a such prospective company.

3. Multivariate Exploration

- Loan amount vs Income range by year
As I mentioned above, the higher salary jobs tend to borrow more money. This graph shows the exact same conclusion which I make. The amount of borrowing money of borrowers below \$50k salary does not have increased significantly. However, the borrowers above \$50k have increased dramatically since 2012. They have been shown to borrow more money than others since 2009 but the slopes are not obviously. Thus, the higher salary people have planned aggressive invest to their business after 2012.

Reference

<https://www.prosper.com/about>

<https://stackoverflow.com/>

<https://github.com>

<https://pandas.pydata.org>

<https://seaborn.pydata.org/>