Create a Tableau Story Project

Story on Data from Prosper in Tableau

Project description

Prosper Marketplace, Inc. is a San Francisco, California-based company in the peer-to-peer lending industry. Prosper Funding LLC, one of its subsidiaries, operates "Prosper.com" (https://www.prosper.com/), a website where individuals can either invest in personal loans or request to borrow money.

Borrowers request personal loans on Prosper and investors (individual or institutional) can fund anywhere from $2,000 to $35,000 per loan request. Investors can consider borrowers' credit scores, ratings, and histories and the category of the loan. Prosper handles the servicing of the loan and collects and distributes borrower payments and interest back to the loan investors.

I have analyzed Prosper's loan data set, which contains 113,937 loans with 81 variables on each loan (including loan amount, borrower rate, current loan status, borrower income, and many others) to present a short story on the state of the peer-to-peer loans.

Story Links

The initial version of Prosper Story
(https://public.tableau.com/shared/45HZQ429S?:display_count=no)

The final version of Prosper story
(https://public.tableau.com/views/ProsperLoansProject/ProsperLoans?:embed=y&:display_count=yes&publish=yes)

Summary

In my story, I have done the exploration of the Prosper company and borrowers. First, I have done a time series analysis on the number of loans taken by the borrowers and the amount of every loan. Then, I looked closer to the geographical distribution of

borrowers all over the states, employment status and the number of loans taken since the company started its activity in 2006.

Then I tried to investigate the reasons why borrowers are taken loans and what they will use it for ? and the ability for payment?

Lastly, I have explored the basis for Prosper to give loans for borrowers and if income range and employment status affect borrowers' opportunity to take loans.

Design

When it comes to the design of the plots, I decided to:

- Use a line plot to present the number of loans over time and a bar plot to present loan's amounts over time, and mixing the line plot with the bar plot to present relation between the number of loans and amount of loans over time.

- One of the problems I faced in the first plot line of "Loan Amount over Time" is that the title wasn't showing in the story because it's a worksheet so instead of adding it to a dashboard then adding the dashboard to the story, I added a description box to post the title of the worksheet on it.

- Use geo map to present the number of borrowers over USA states and easily see from which states most of the borrowers comes from.

- Use a stacked bar chart to present borrower's employment status, and Prosper rating to see the effect of the employment status on Prosper rating for the borrowers.

- Use a scatter plot to see the correlation between Loan original amount by borrower rate and Prosper rating.

colors :

In the first version I used the default colors of Tableau in most of the plots, but after the feedback, I decided to not use green and red colors together.

For all plots, I have tried to:

★ Add markers whenever possible to make it easier to see changes in the number of records.
★ Add forecast lines to better visualize increase and decrease in the number of loans.
★ Add trend lines to the scatter plots to be able to see the trend between the numerical variables.
★ Add legends to make it easy to understand what is presented on each plot
★ add filter whenever applicable.
★ Use descriptive plot titles.

Feedback

After building the first version of the story, I have shared my visualizations with Udacity study group and with student hub mentors.
I received the following feedback from a student hub mentor:

Amélia P. Mentor 3:47 PM
Hi @MarwaF , congratulations for your story!

I have some suggestions:

1. Titles, captions, subtitles, and descriptions of the axes are essential for the chart interpretation. Please review your charts to ensure that this information is clear and legible.

2. Please increase the legend sizes to allow see the labels.

3. We should avoid using the colors **green** and **red** together because colorblind people will have difficulty analyzing the graph. See this article on this:
https://www.tableau.com/about/blog/2016/4/examining-data-viz-rules-dont-use-red-green-together-53463

And similar observations from Udacity Slack channel:

1. "Missing titles for some of the plots".
2. "Add prosper rating to the size mark in "Loan original amount by Prosper rating & Borrower rate", so it will be easier for the viewer to see the difference between ratings".
3. "It would be easier to read bar plots if values would be placed on top of the bar".
4. "Variable names in the tooltip are incorrectly formatted - e.g 'LoanOriginalAmount' instead of 'Loan Original Amount".
5. "Add filters to 'Avg. debt to income ratio by Income range & Employment status' plot."

Resources

Prosper Marketplace, Wikipedia, the free encyclopedia
(https://en.wikipedia.org/wiki/Prosper_Marketplace)

Tableau Community Forums
(https://community.tableau.com/thread/160226)