Analysis of Prosper Loan data

STORY

Before Feedback - https://public.tableau.com/shared/NRDDFM38D?:display_count=yes

After Feedback - https://public.tableau.com/views/ProsperLoanAnalysis-Final/LoanStory?:embed=y&:display_count=yes

SUMMARY

For this project I have used data from **'ProsperLoan'**. There are around 113,937 records with 81 columns. Investigating the whole dataset is out of scope for this project because of the size of the dataset. I chose the **'Borrower State'** variable to be the focus of my analysis because, I have already worked on **'ProsperLoan'** dataset for EDA project where I have explored other relationships found in the data but I did not explore **'Borrower State'**. I took this project as a chance to explore the dataset even further.

These are the questions that I have tried to answer.

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1. How many Loans are there? How are they distributed by the Term of the Loan?

Outcome: We see that the number of Loans vary by each state and term. 14,717 loan requests are from California which is highest for a State. States on the east have darker patches than Western States showing, they get more loans.

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2. Does the number of Loans vary by Employment Status of the borrower? How about the number of Loans by Income Range of the borrower?

Outcome: Yes. The number of Loans vary by Employment Status and Income Range of the borrower. By Employment Status, most borrowers are Employed. By Income Range, most borrowers are in the income range of $25,000-$49,999.

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3. If people get Loan, what is the average amount requested?

Outcome: Loan amount requested varies by each state. Loan original amounts range from 3350 to 9000. Borrowers from New Hampshire get loans for $9000 on average which is highest for a State. Loan Belt States can be seen for loan amount higher than 6900.

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4. Do people from particular Employment Status or Income Range request for more amount from others?

Outcome: Yes. Loan amount requested vary by Employment Status and Income Range of the borrower. Borrowers who are employed and in the income range of $100,000+ request for higher loan amount.

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5. Why do people get Loan? What reason is stated by borrowers for Loan? How many Loans do we have for each of these categories?

Outcome: It is interesting to see the various reasons stated for loan. Debt consolidation seems to be the #1 reason for loan which in itself is a paradox. We can also see loans requested for Boats and Cosmetic Procedures which is a bit of a surprise.

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6. How are Credit Scores of the borrower? Do we have any relationship between Credit Scores?

Outcome: There is clear relationship between Credit Scores. Credit Scores of Borrowers have a high positive correlation.

DESIGN

- 'Borrower State' denotes a geographical location. So I used 'Map' for visualizing the variable
- I decided that the first slide should be an introduction about data that is being analyzed
- Since I am trying to answer a few questions from the dataset, I wanted to clearly list the questions being discussed upfront
- There could be people who are not familiar with certain technical terms. **'QUICK BITES'** will help them understand a few things. Color variation was given just to highlight them.
- Although the questions are listed, reader should know which questions are answered where. For this purpose, questions were added to each visualization.
- Data interactivity varies from one visualization to another. Information about data interactivity was also specified for each visualization
- Bar Charts are used to visualize Categorical fields like **'Loan Category', 'Income Range', 'Employment Status'.**
- **'Term'** field was specified in months. I converted to 'Years' for ease of use and understanding.
- **'Borrower State'** had state abbreviations. I converted to full names for easy usage and understanding.

FEEDBACK

1. **DAD**
    - Correct Legend Title for Question 3
    - Remove comment text in Question 5
    - Intro - Add Loan Amount Description
    - Outro - Correct Q3 outcome. Add range

2. **COLLEAGUE**
    - Nice Visualization. Able to understand what it is about
    - Good Use of plots and interactivity

3. **COLLEAGUE (VIZ PRO)**
    - Use full state names instead of abbreviations
    - Use captions instead of dots
    - Add findings in caption
    - Use other chart types also, other than map & bar graph

RESOURCES

https://www.tableau.com/learn/tutorials/on-demand/interactive-filters