



Lending Club

Loan defaulter analysis



Data Analysis

The project aims at analyzing the historical loan dataset and extract actionable insights

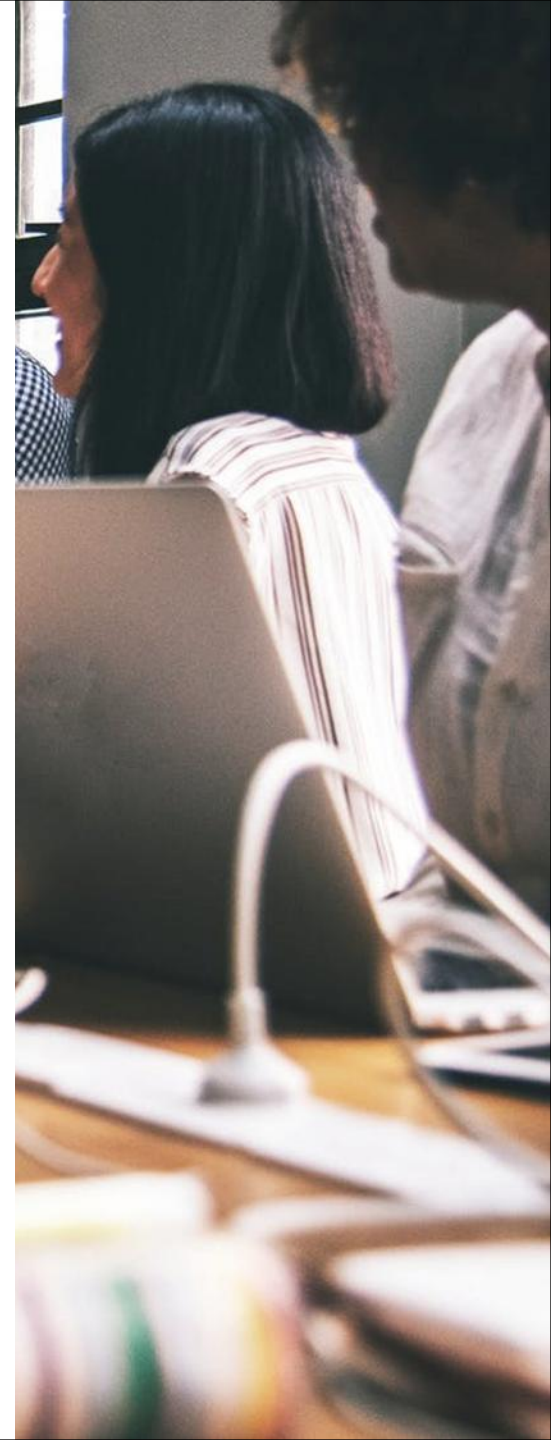
Dataset consists of all loan applications and its servicing related information from a leading lending company.

Total applications

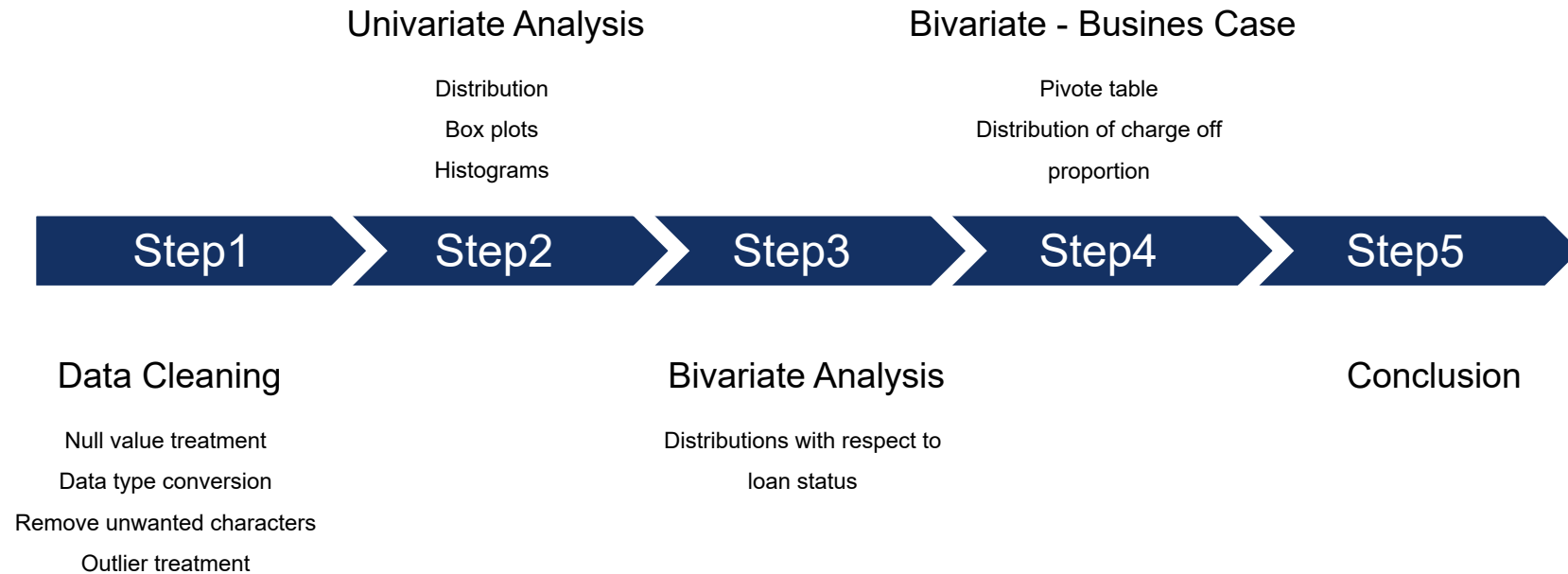
35,365 (after cleaning)

Issue years

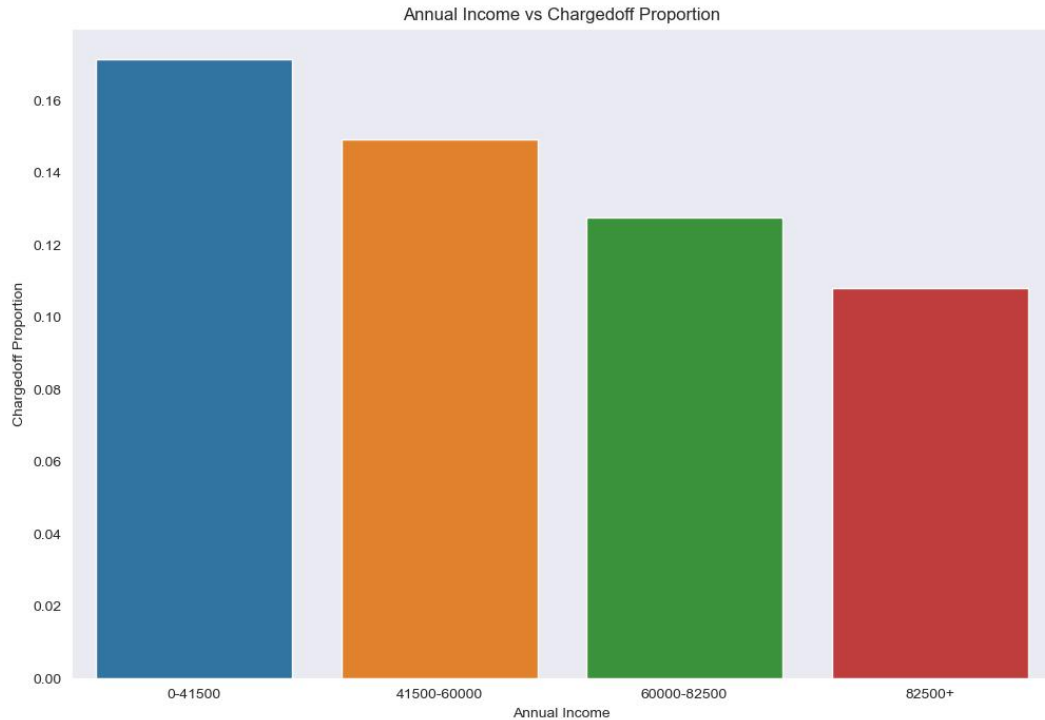
2007 to 2011



Steps

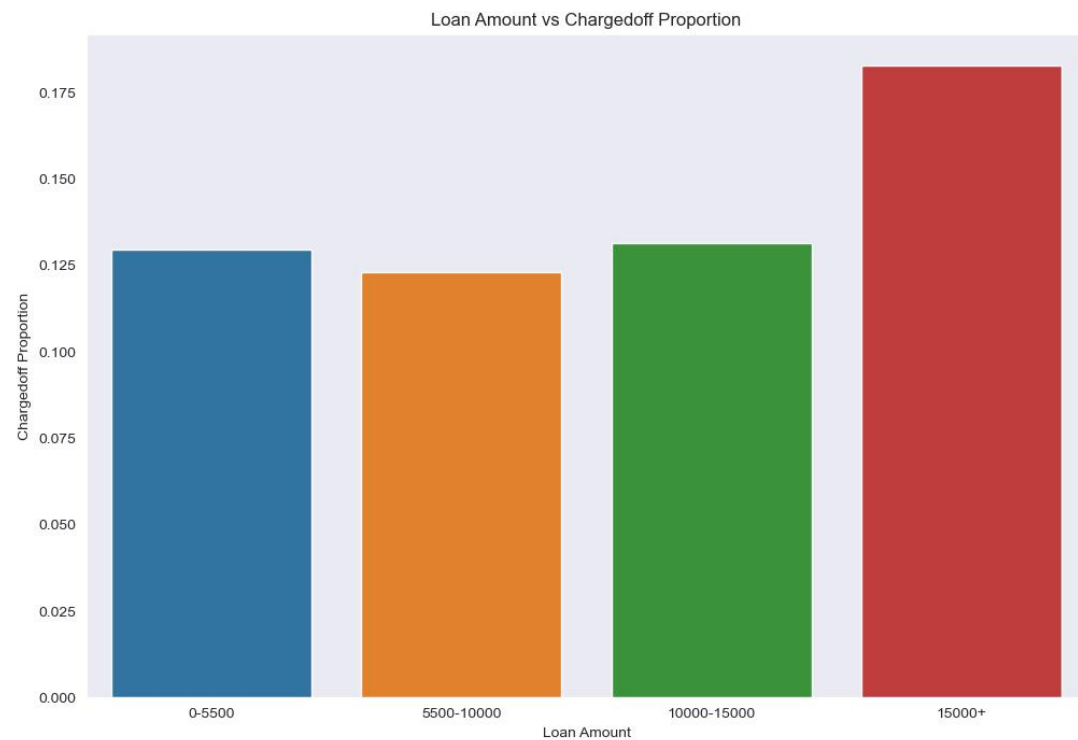


Observations



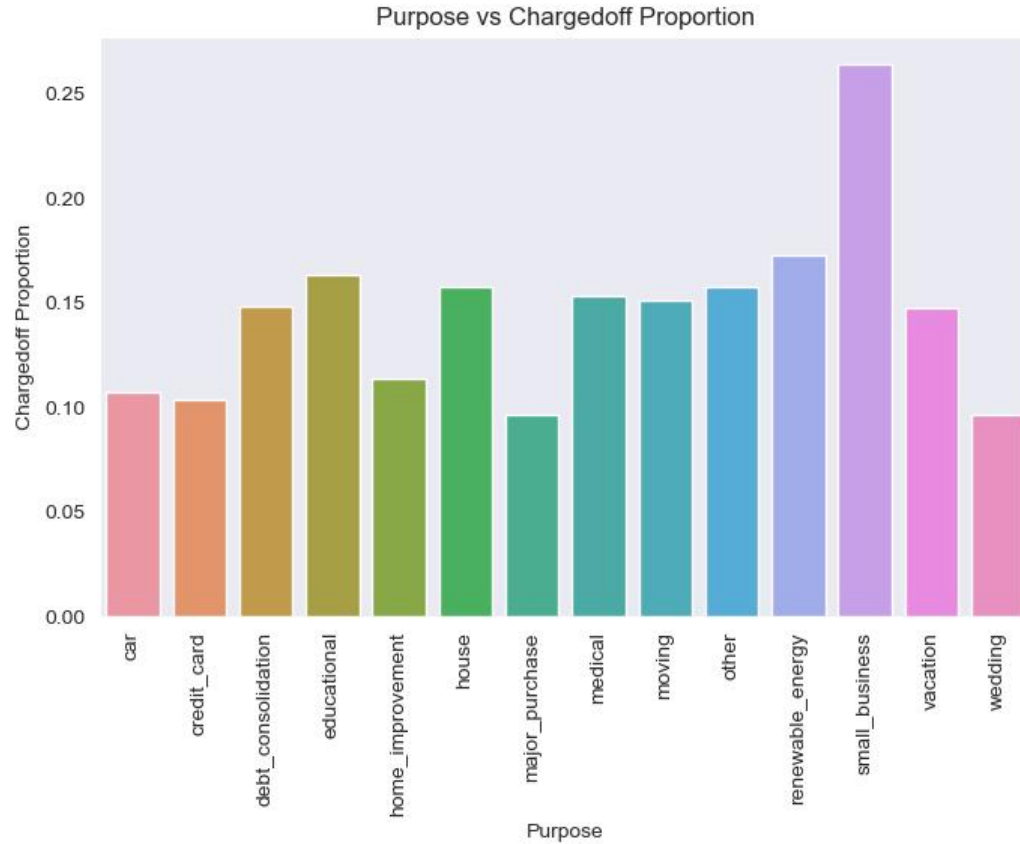
- As the annual income increases the charged off proportion decreases.
- Income range 82500+ has less chances of charged off.
- Income range 0-41500 has high chances of charged off.

Observations



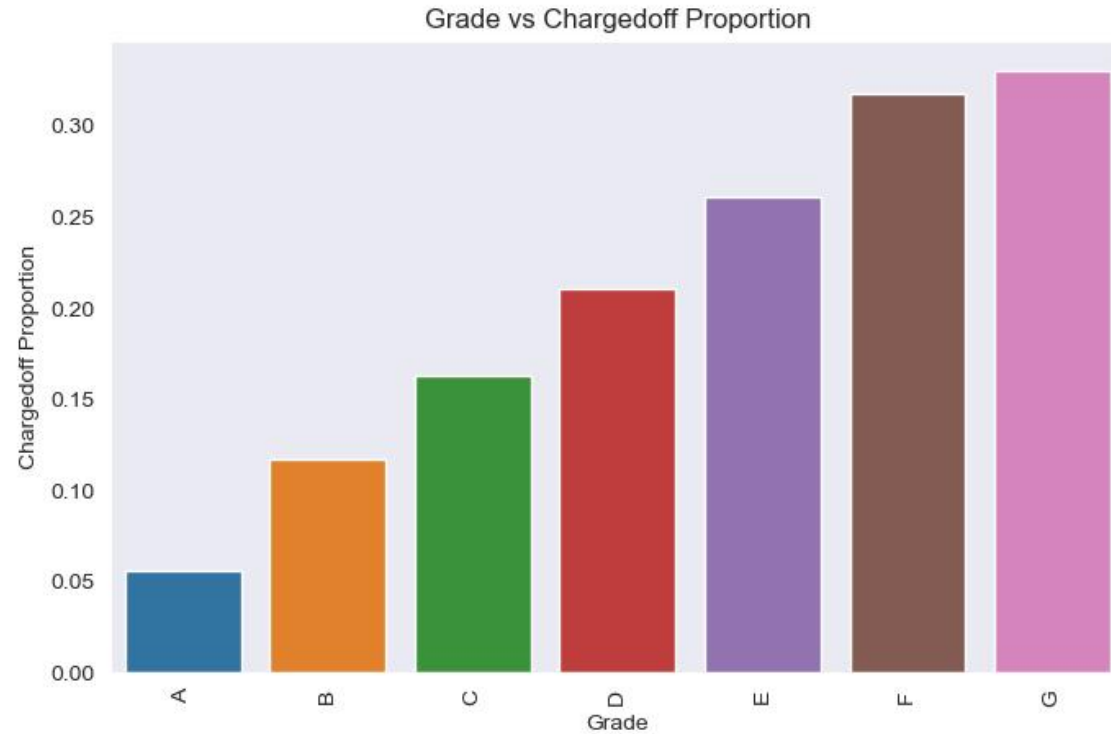
- For higher loan amount i.e. 15000+ there are high chances of charge off.

Observations



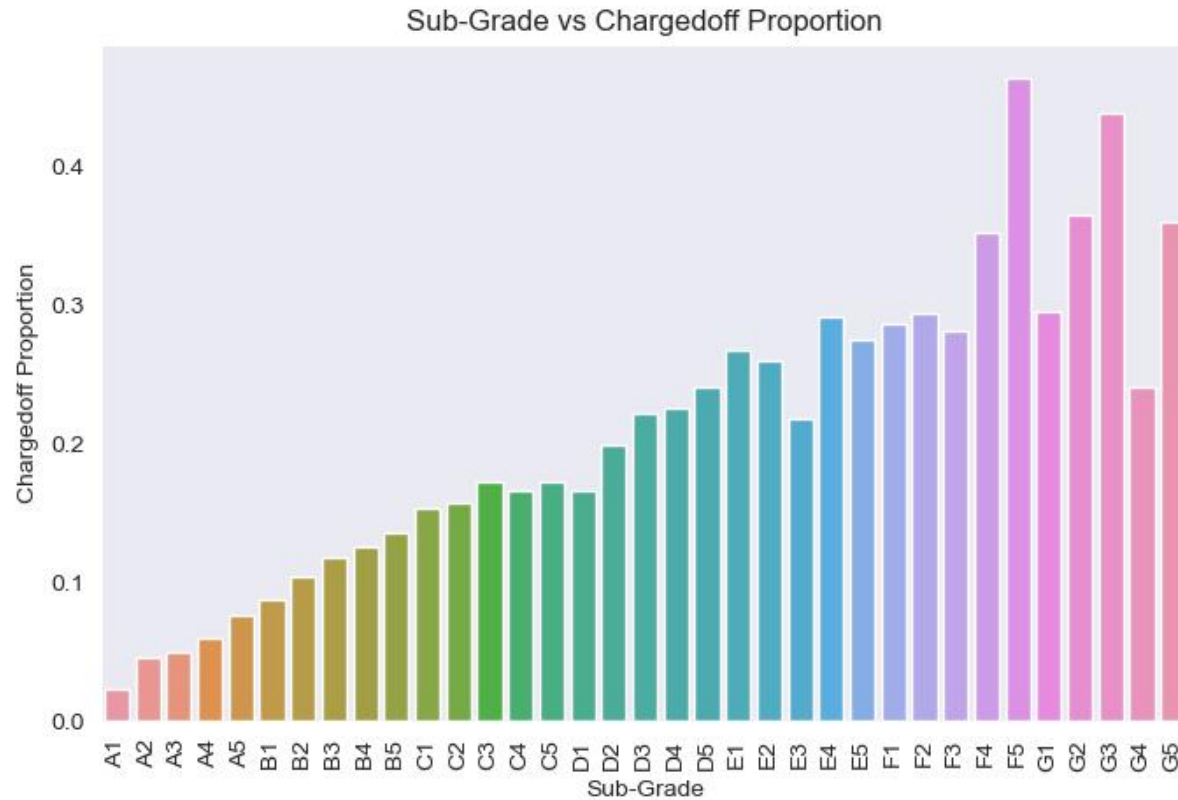
- Small Business loans have high chances of getting charged off.
- On the other hand, wedding and major purchases loans have low charge off rate.

Observations



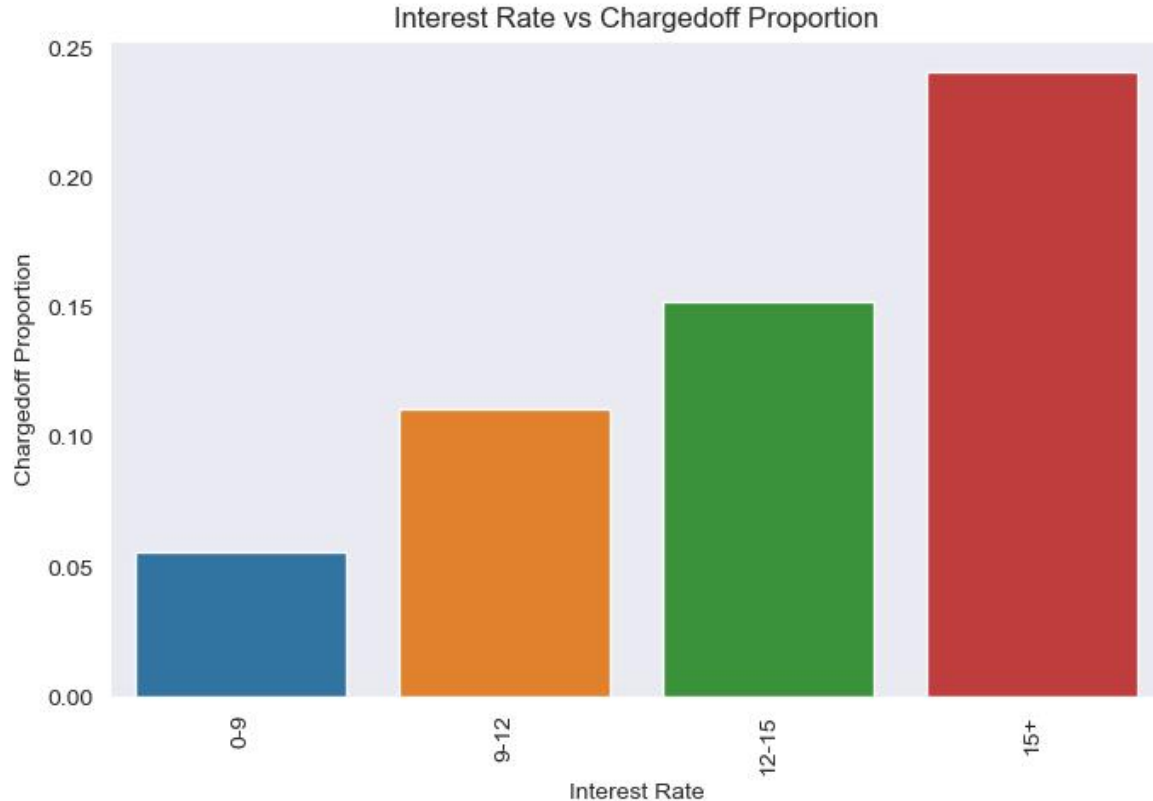
- Chances of charged off increases from "A" towards "G"
- Grade "A" has very less chances of charged off.
- Grade "F" and "G" have very high chances of charged off.

Observations



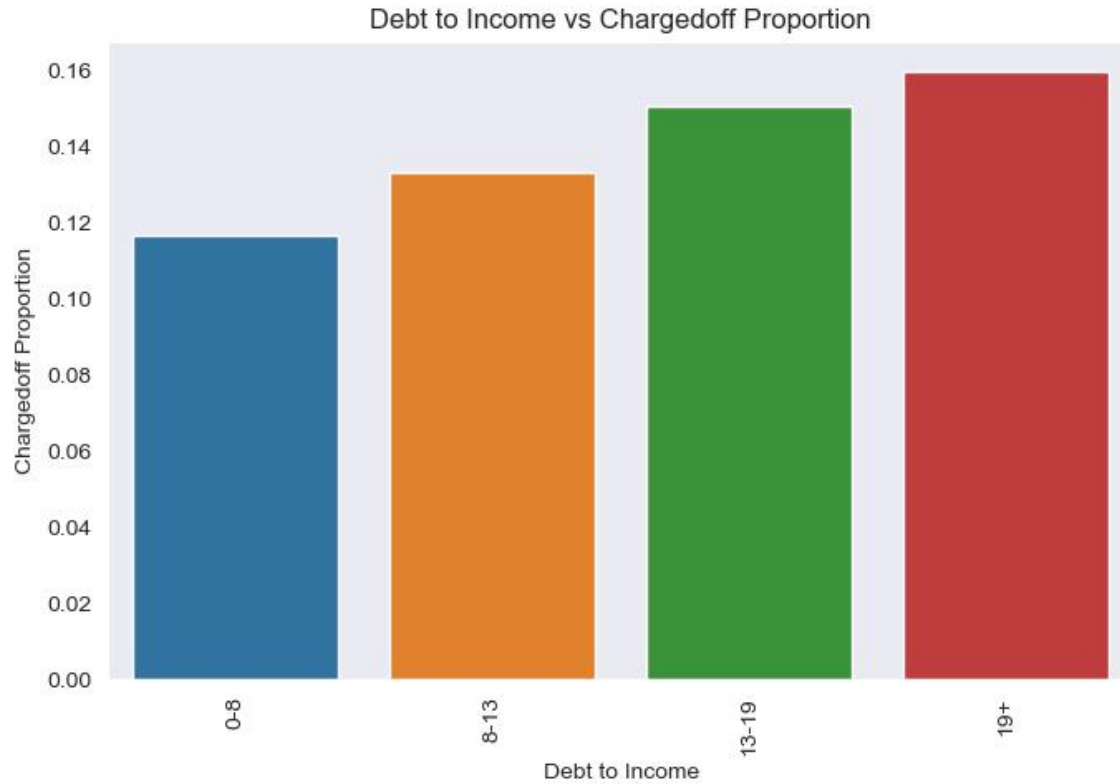
- Chances of charged off increases from sub grades "A" towards sub grades of "G"
- sub Grades of "A" has very less chances of charged off.
- sub Grades of "F" and "G" have very high chances of charged off.

Observations



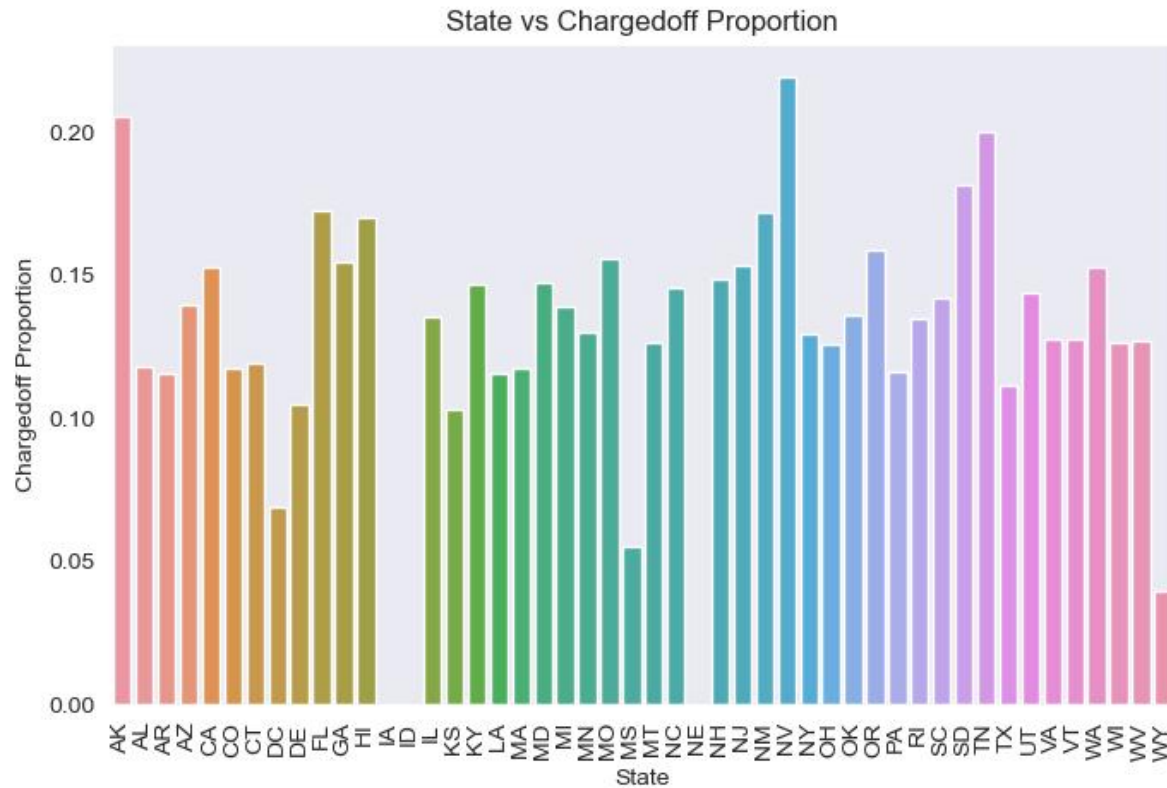
- Charge off increases with increase in interest rate. Higher interest rate loans are more likely to charging off.
- interest rate less than 9% has very less chances of charged off.
- interest rate more than 15% has more chances of charged off.

Observations



- Charge off increases with increase in debt to income ratio. Higher dti customers are more likely to charging off.
- debt to interest ratio less than 8% has very less chances of charged off.
- debt to interest ratio more than 19% has more chances of charged off.

Observations



- States NV, AK and TN has very high chances of charged off.

Conclusion

	Pass	Low Risk	High Risk
Annual Income	> \$60,000	\$41,500 - \$60,000	< \$41,500
Loan Amount	< 15,000	-	> \$15,000
Purpose	Others	-	Small Businesses
Grade	A - D	E	F,G
Interest Rate	< 12%	12% - 15%	> 15%
Debt to income	< 13%	13% to 19%	> 19%

A close-up photograph of a person's hand holding a smartphone. The person is wearing a silver metal-link wristwatch. In the background, a laptop screen is visible on the left, and a dark-colored cup is in the center. The scene is set on a desk with some papers and a pen. A semi-transparent dark blue rectangle is overlaid on the left side of the image, containing the text.

THANKS

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