

# LENDING CLUB CASE STUDY

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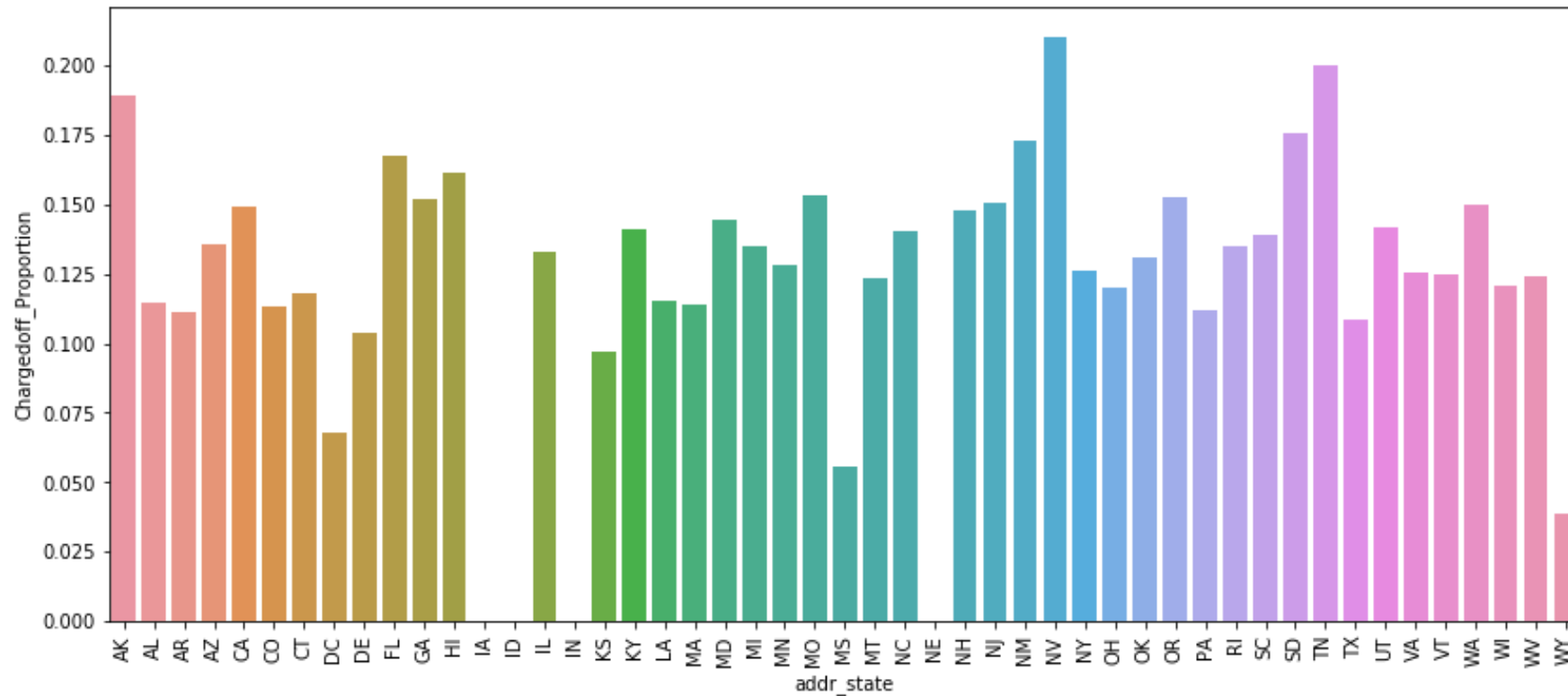
# Problem Statement

- Lending club is an online loan marketplace.
- Their aim is to find risky loan applicants and prevent themselves from credit loss.

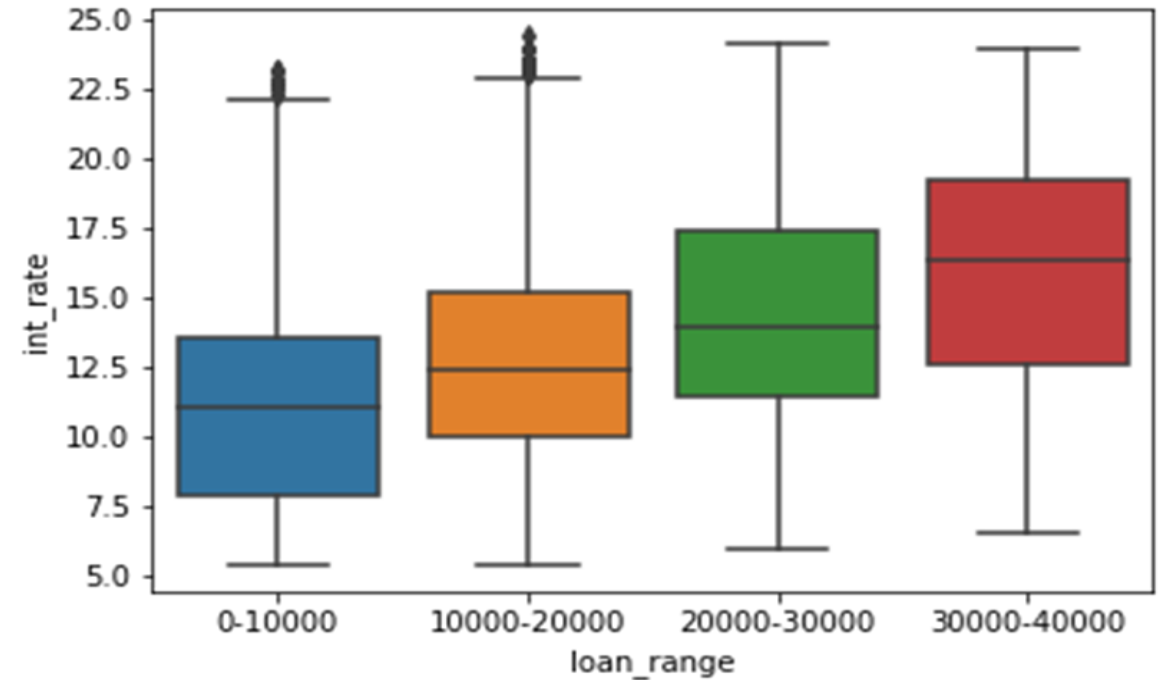
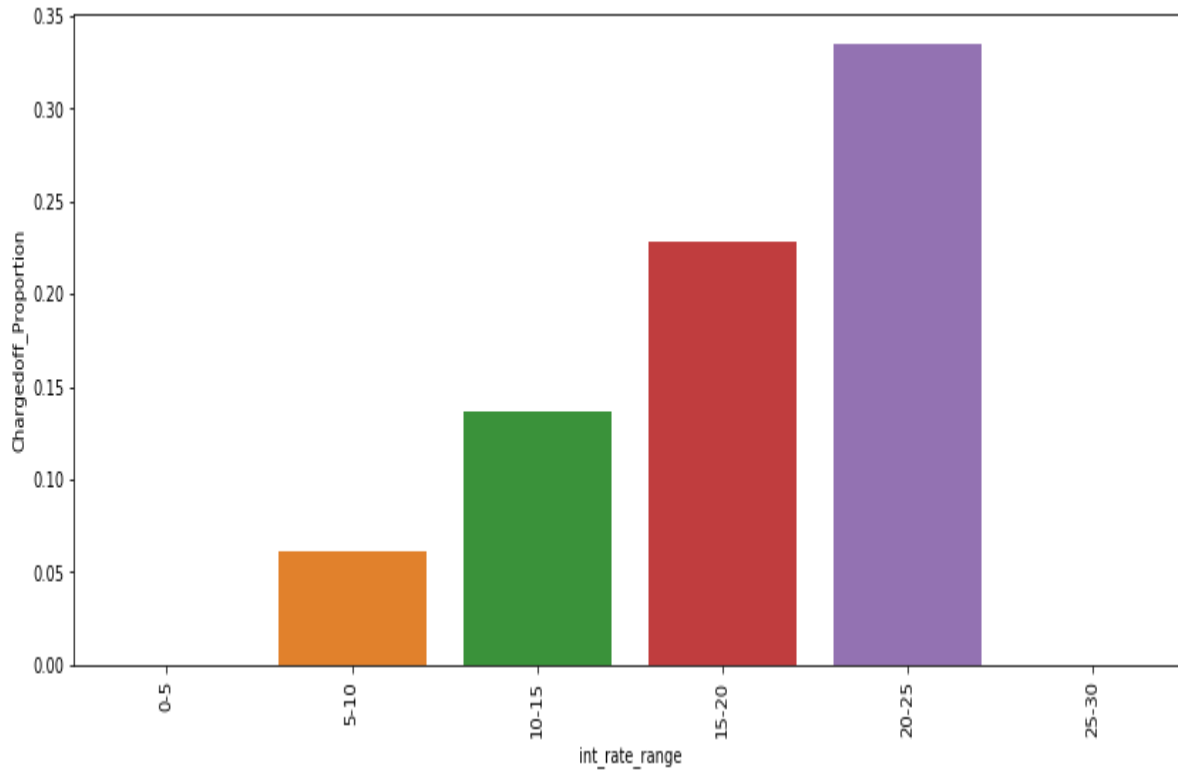
Our goal is to find factors that lead to defaults .

# State

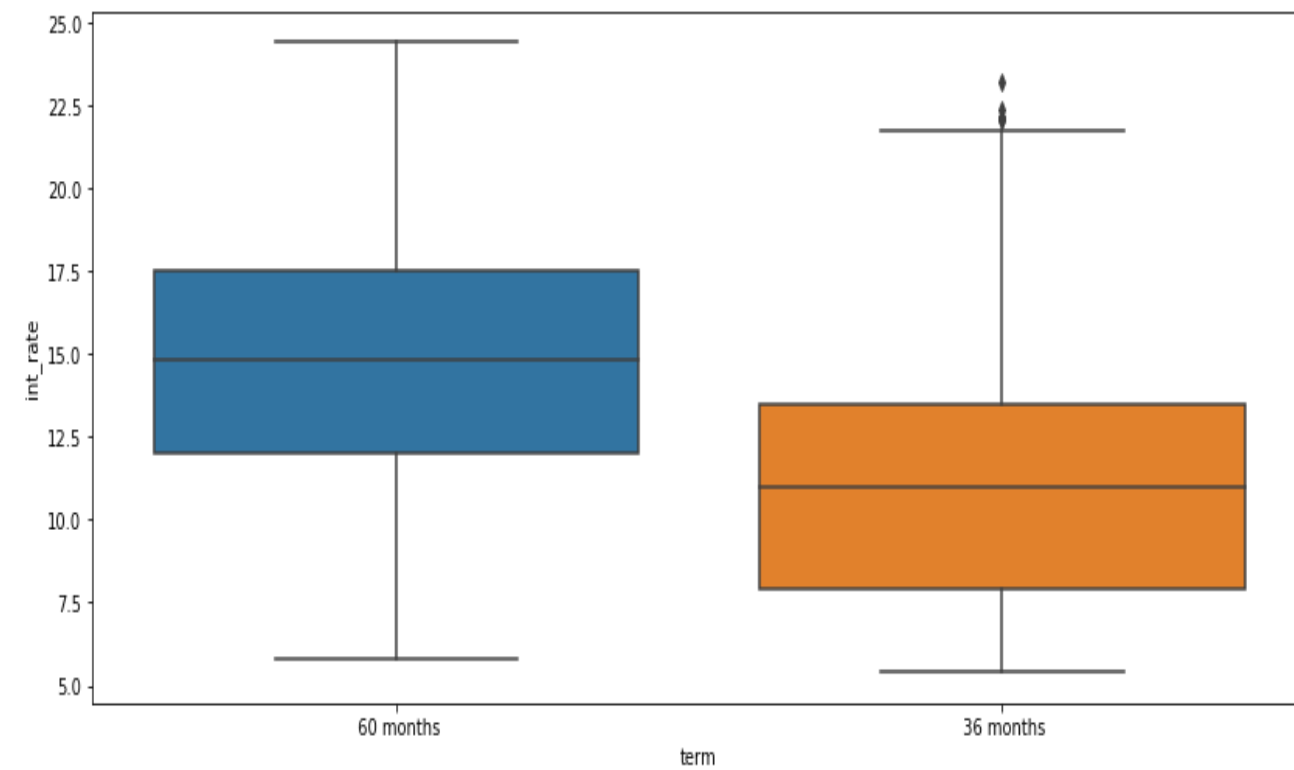
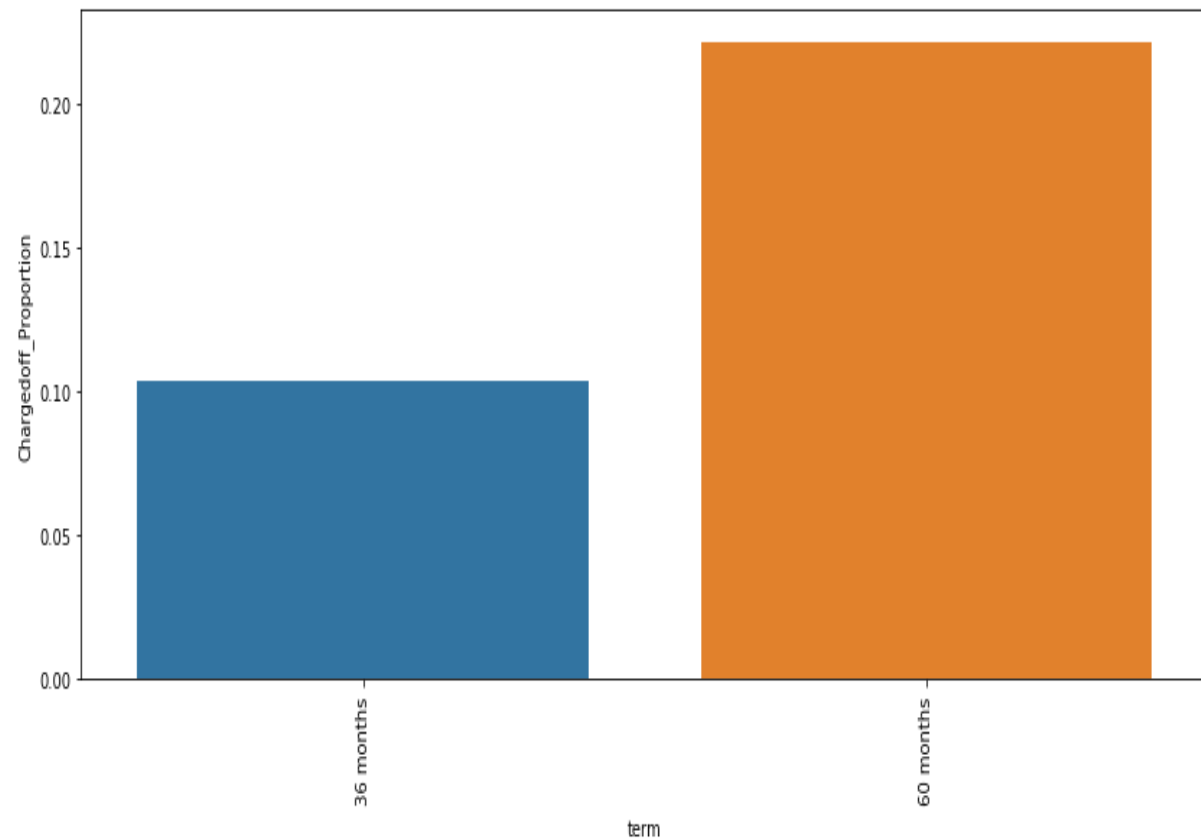
- California had the highest no. of applicants.
- NV had the highest charged off %.



# Interest rate

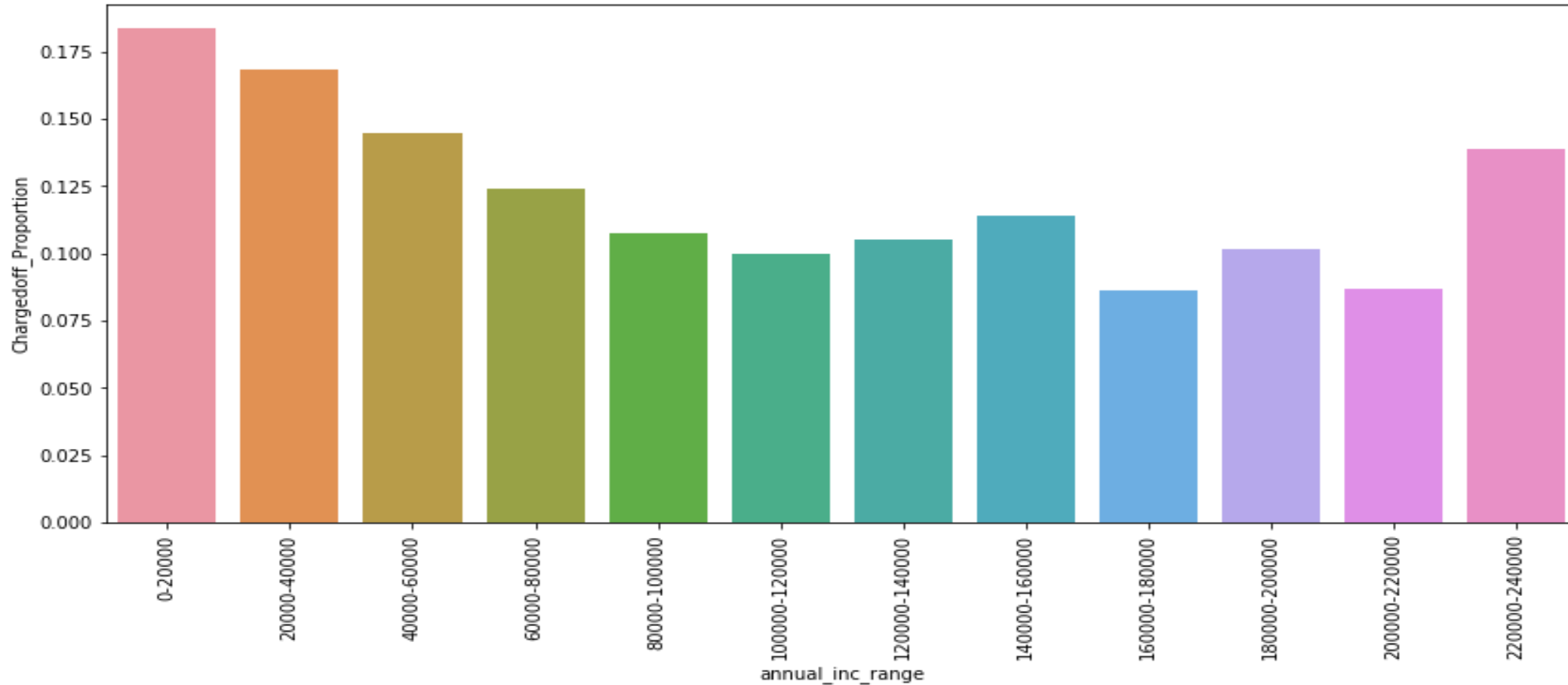


- defaulters have higher interest than fully paid customers.
- People with IR b/w 20-25 had the highest chances of default.
- IR is also different among purposes, with debt consolidation , home and business having the highest interest rates.
- IR are increased as loan amount increases.



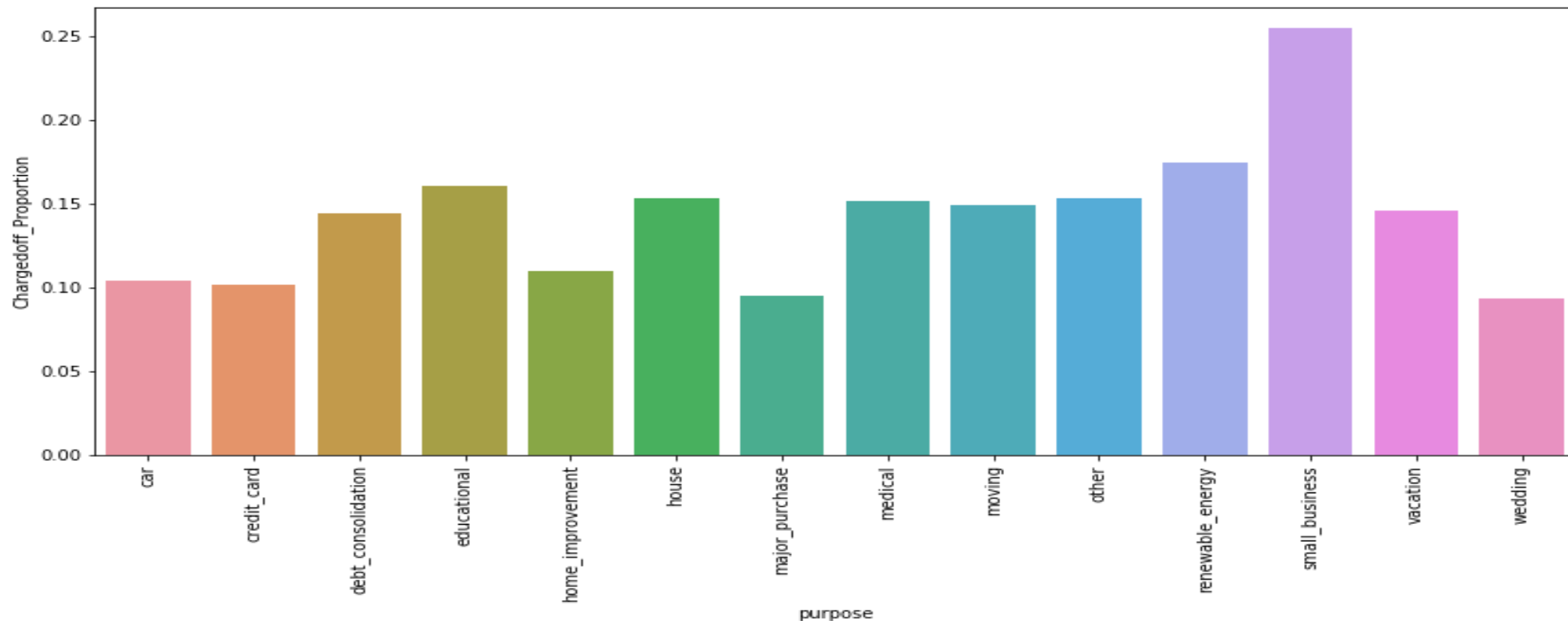
- Longer term loans also had higher median interest rate.
- Charged off proportion was also higher for longer term loans.

# Income

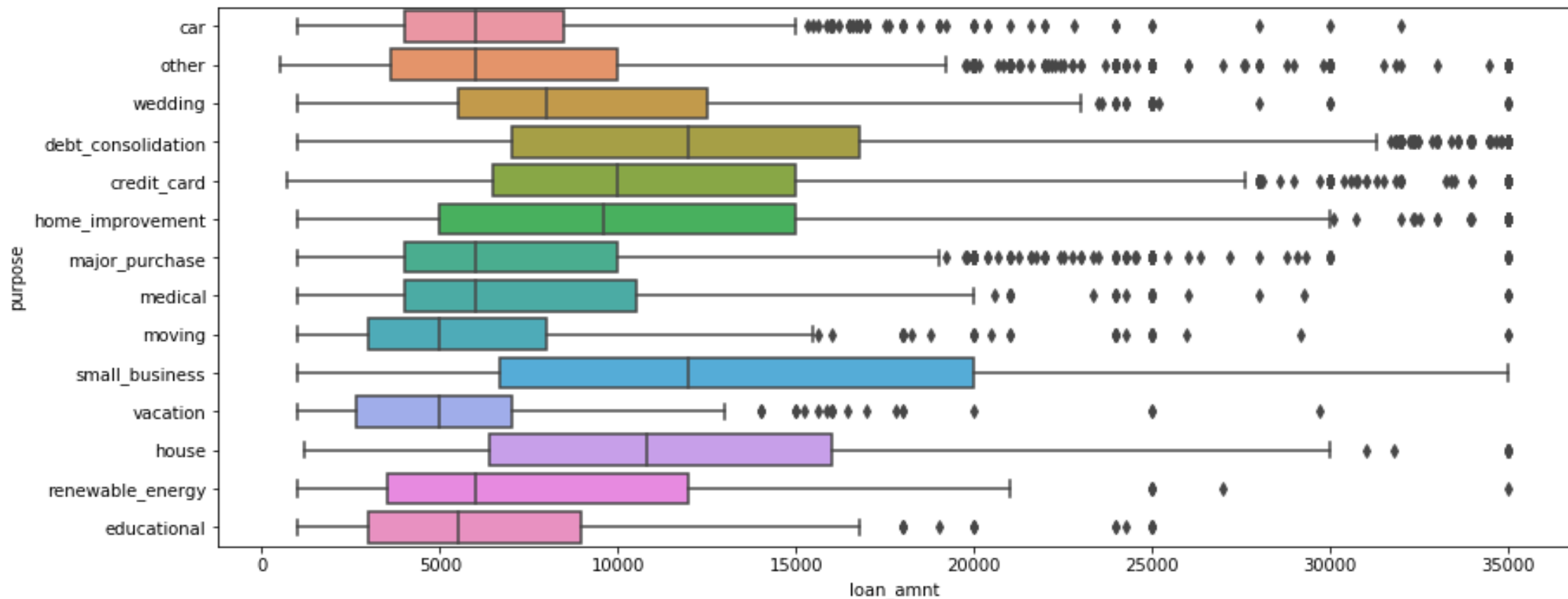


- People with annual income of 100000+ had lower charged-off percentage.
- But there are some irregularities for 220000+ income group where charged-off is higher.

# Purpose



- Small business has the highest default rate, followed by credit card, home, debt consolidation.
- These also had the highest interest rates.(as we saw earlier)

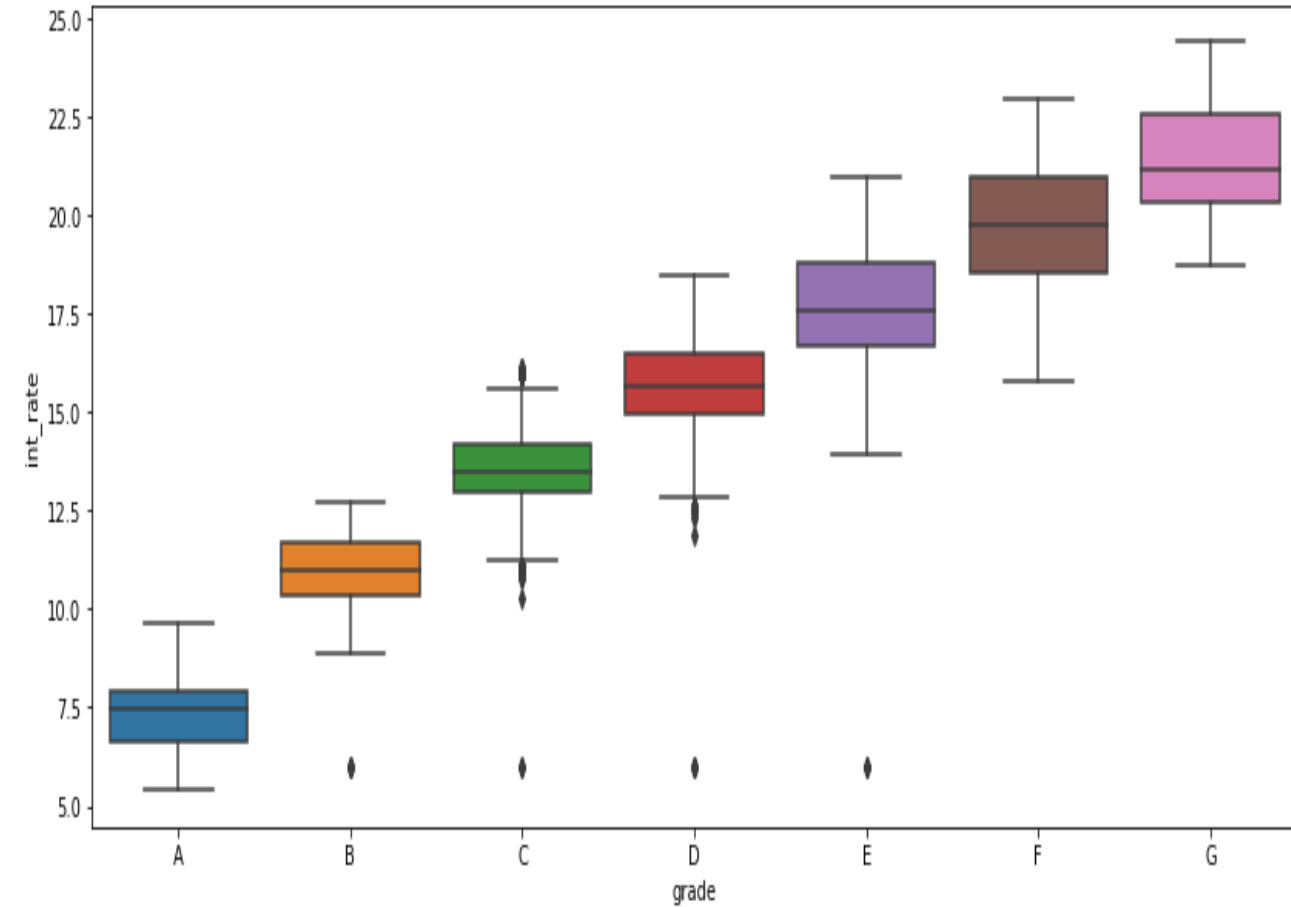
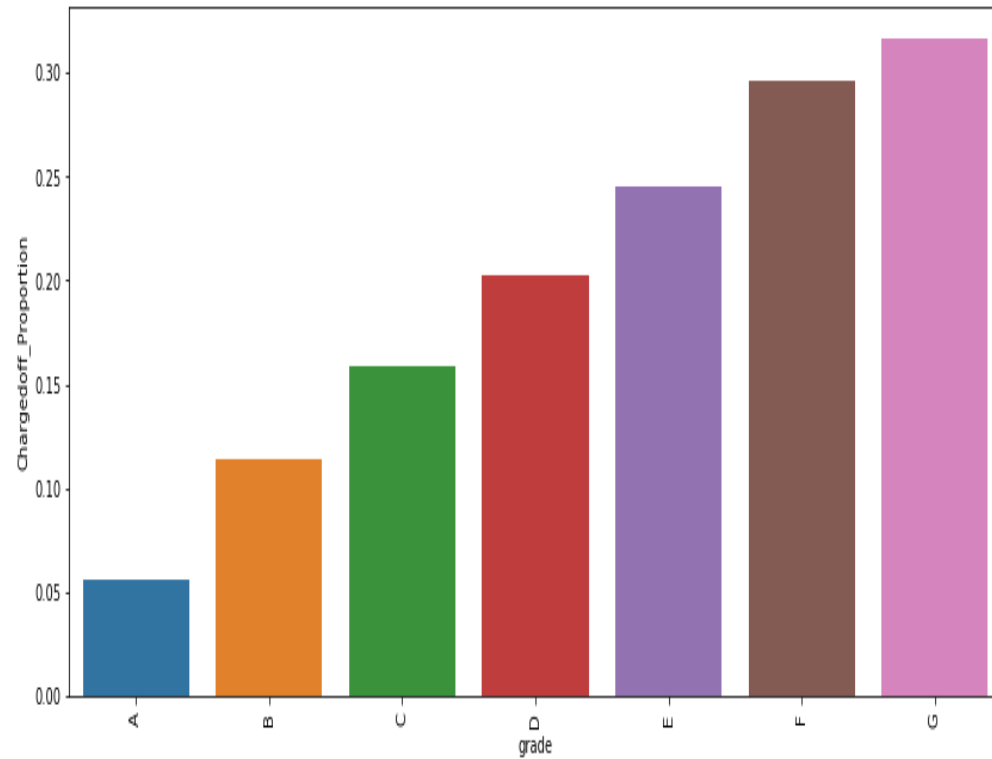


- Loan amount was also higher for small business, debt, credit card, home.
- For small business, debt, credit card, home :

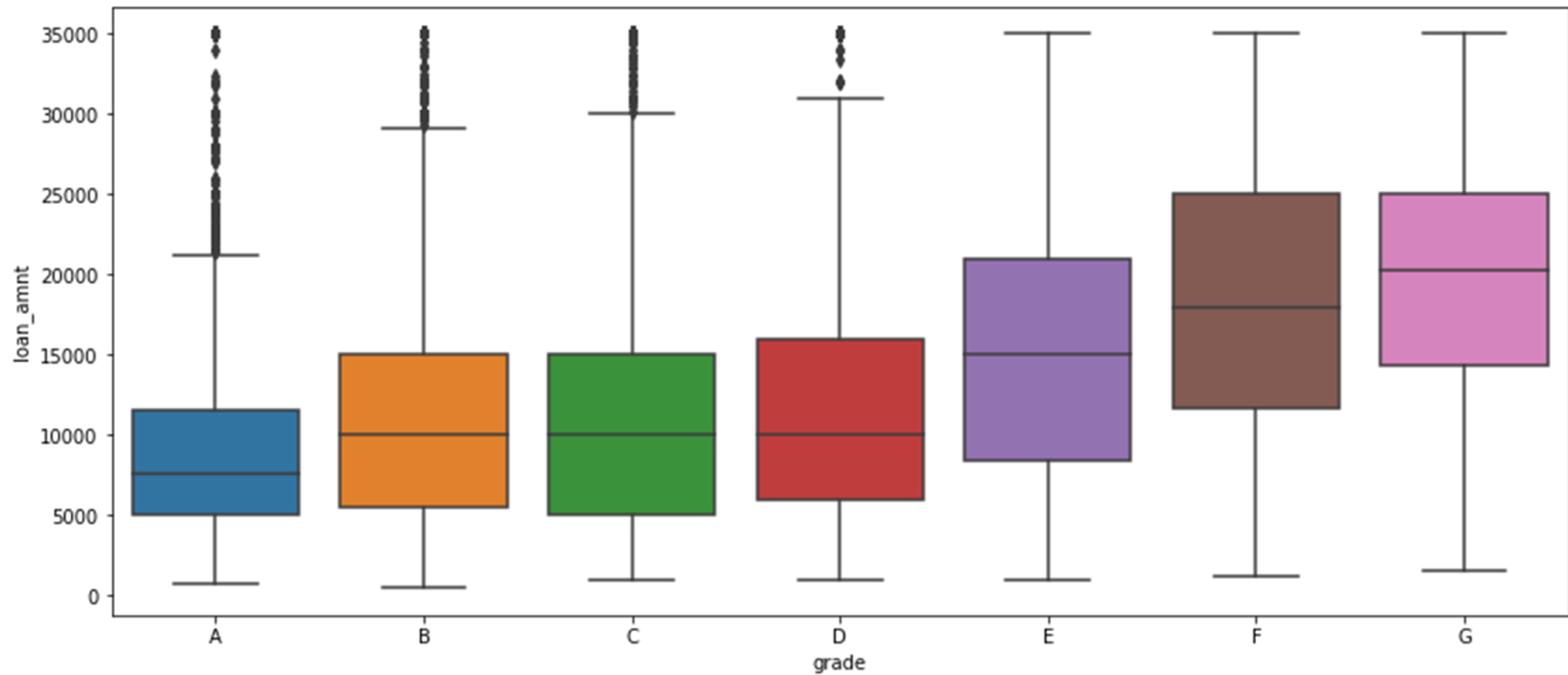
Increase loan amount → increase IR → increase default.



# Grade



- Default proportion increases as we go from A-G.
- IR increases as we go from A-G.



- Loan amount increase as we go from A-G.
- Increase grade → increase IR → increase default.
- Increase grade → increase loan amount → increase default.

# RECOMMENDATIONS

- A loan getting charged-off is highly connected to purpose, grade , interest rate, loan amount.
- Interest rate greater than 15% leads to highest defaults and must not be used.
- Loans given to small business, debt , home , credit card must be A or B grade so they have less interest rate, which in turn leads to lower defaults.
- Reducing 60 months loan as longer term has higher interest rate and higher defaults.
- Loans of more than 30000 should be given.
- Applicants with income above 100000 must be given loans.