

LENDING CLUB CASE STUDY

By:

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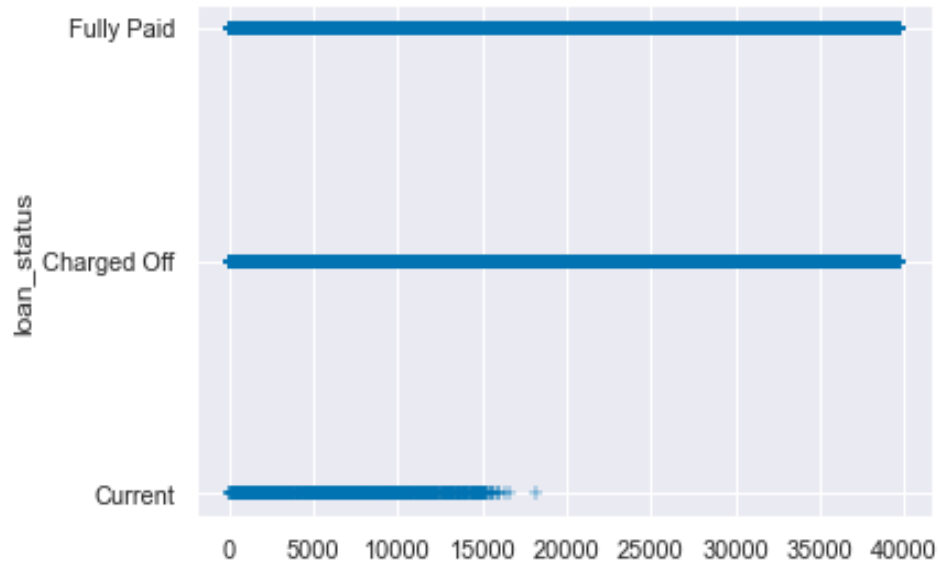
Table of content:

- Univariate Analysis
- Bivariate Analysis
- Multivariate analysis
- Conclusion

Univariate Analysis

- What are the different factors that could imply the prediction

Loan Status

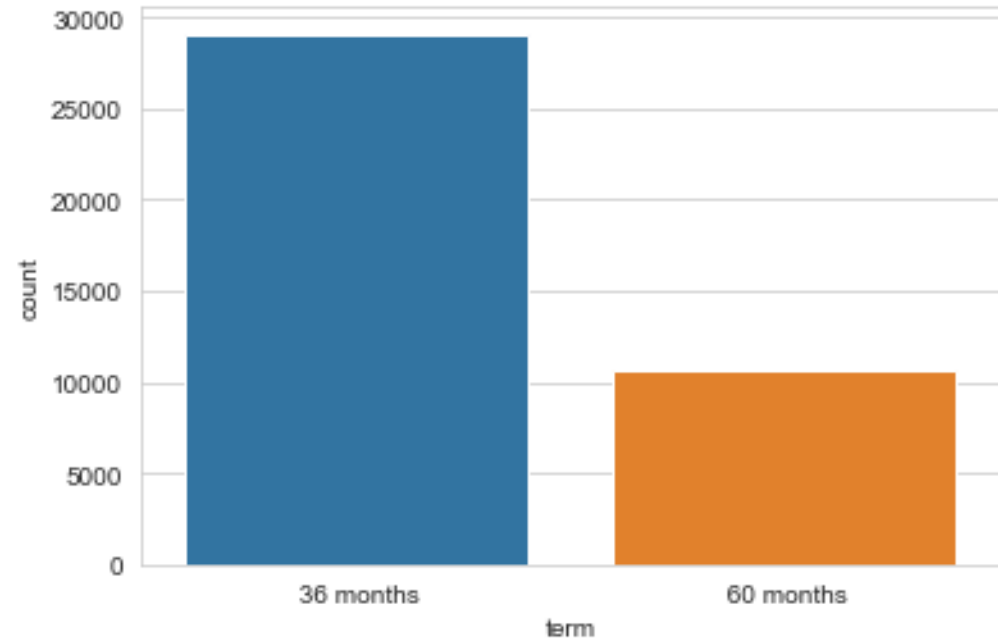


Fully paid : Loan Amount Paid in full

Charged off : Loan not paid, Defaulter

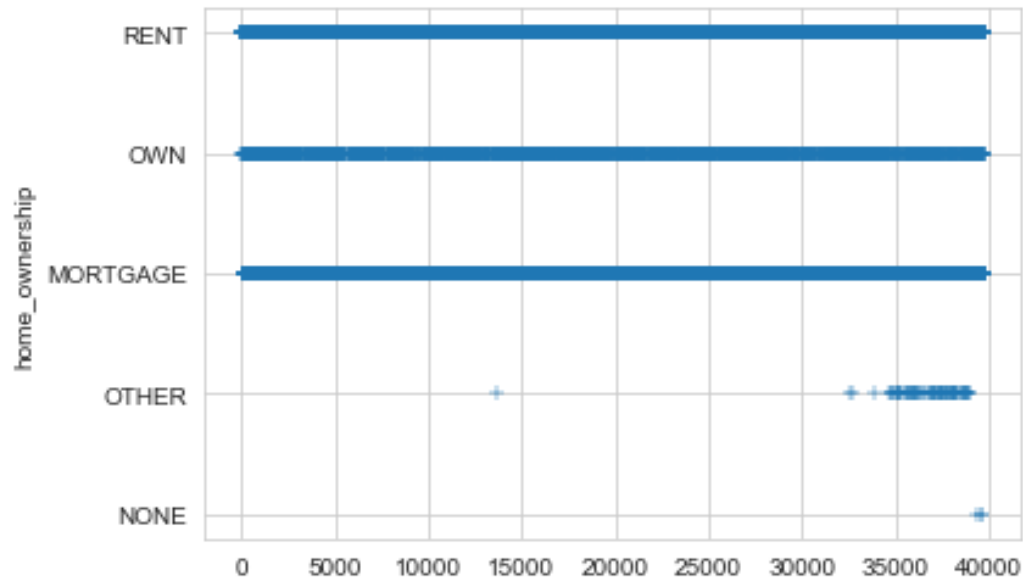
Current : Loans currently going on

Term



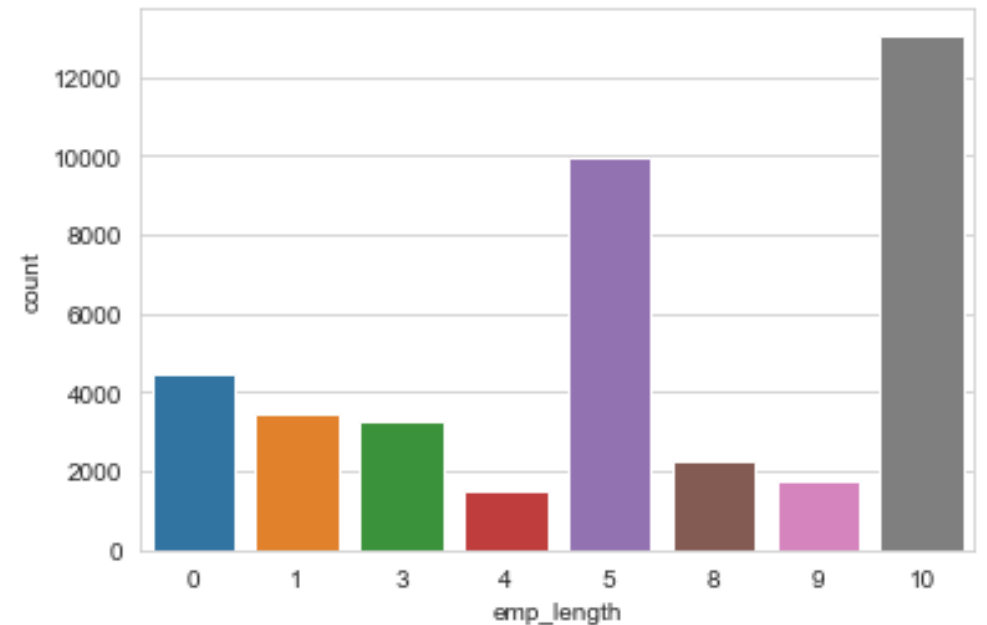
- Shorter term has higher number of applicants

Home Ownership



There are almost equal number of people having different types of ownership on a home

Employment Length

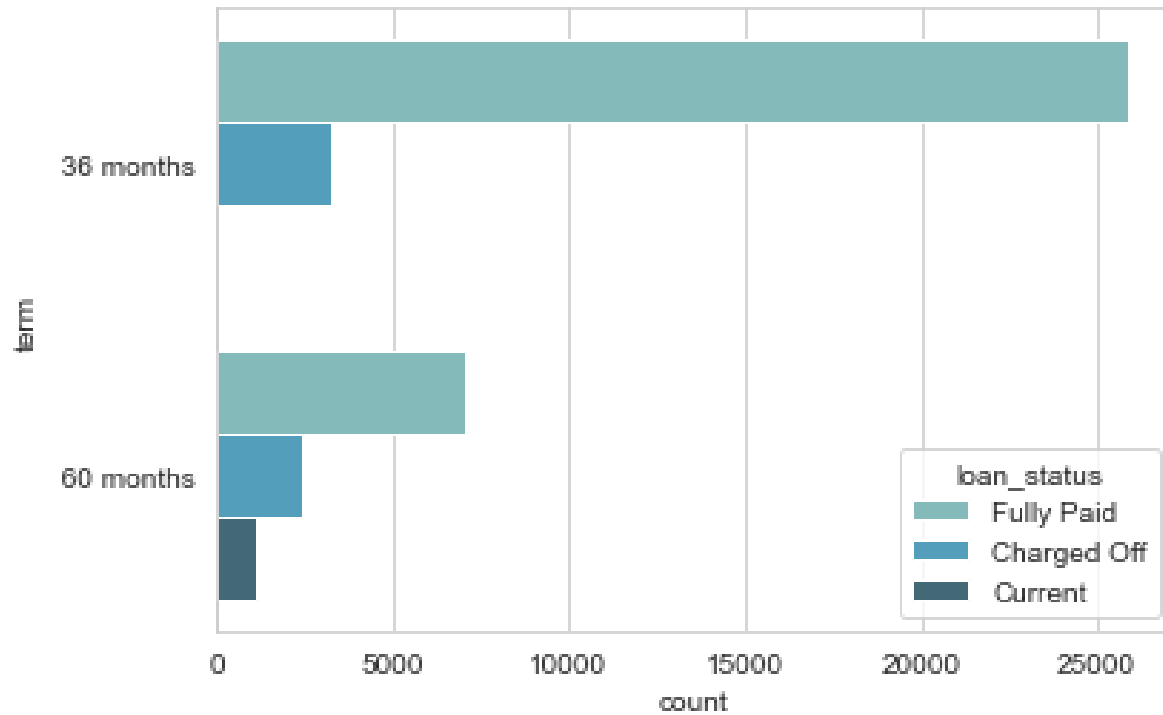


Maximum number of people apply for loan are having 10+ yrs of experience.

BIVARIATE ANALYSIS

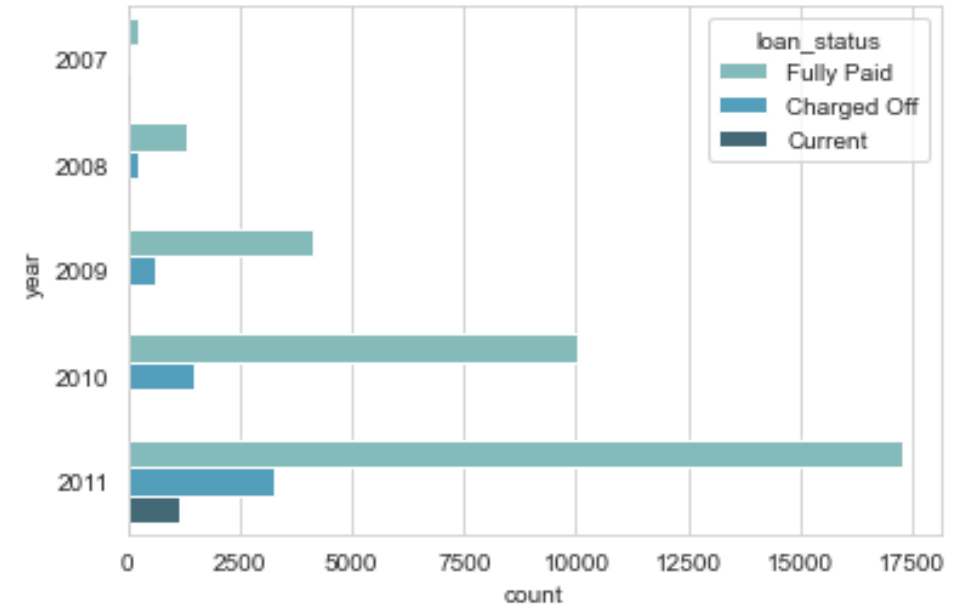
How much different factors are related to each other

Term



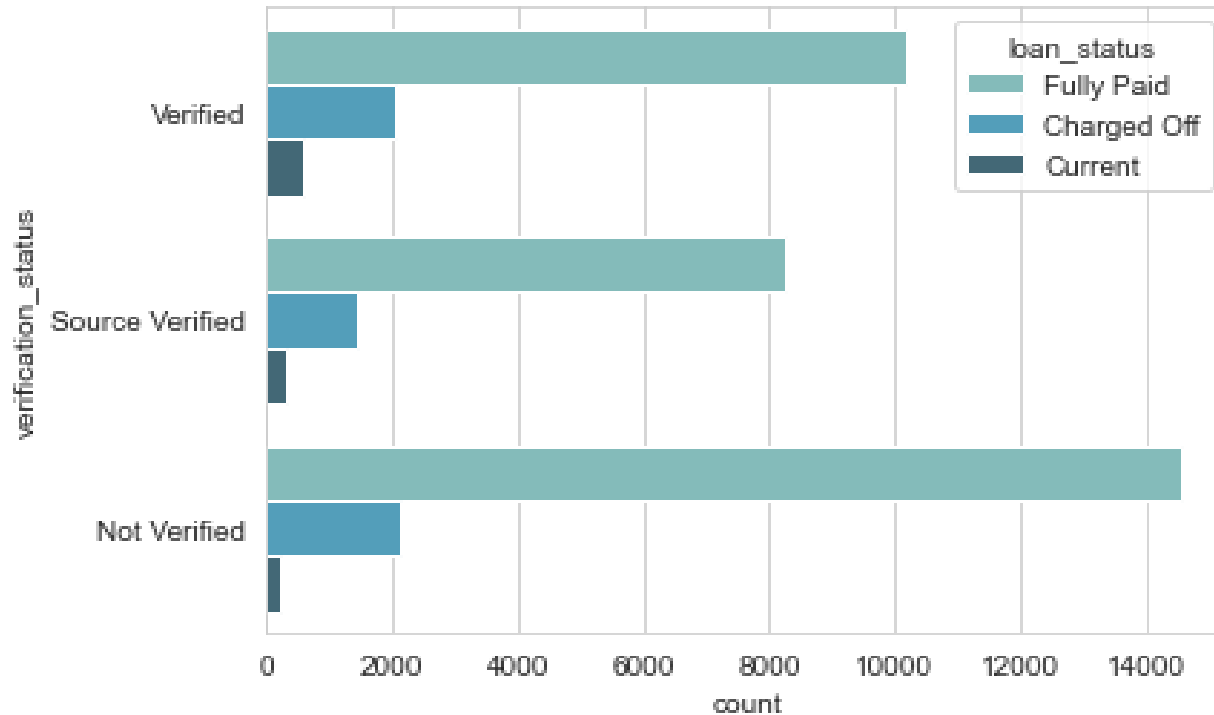
- People who have applied for shorter term are more.
- People who are charged off are also more who applied for a shorter term

Loan Status per year



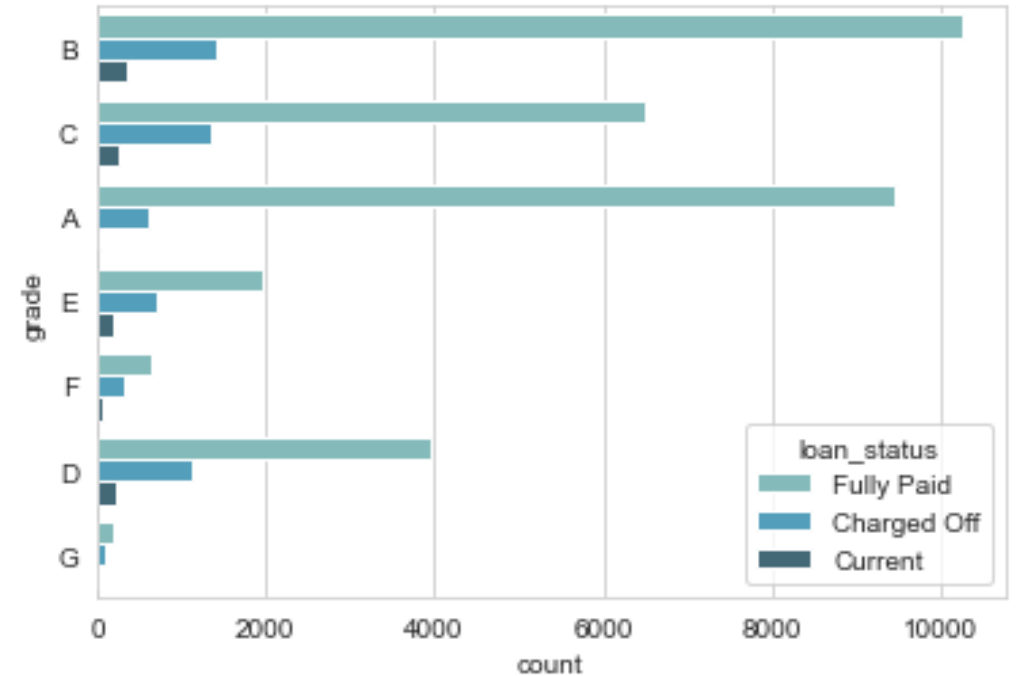
- 2011 has the highest number of people taking loan

Verification Status



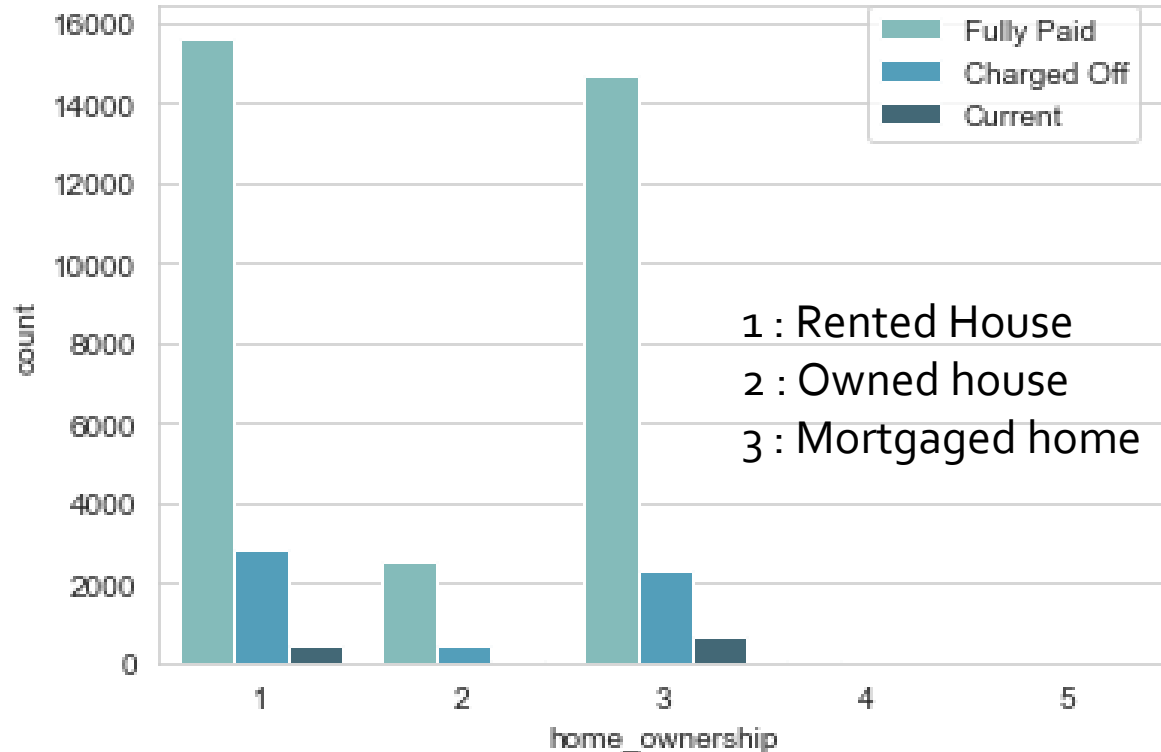
- Maximum number of people who are charged off do not have the sources verified.

Grade



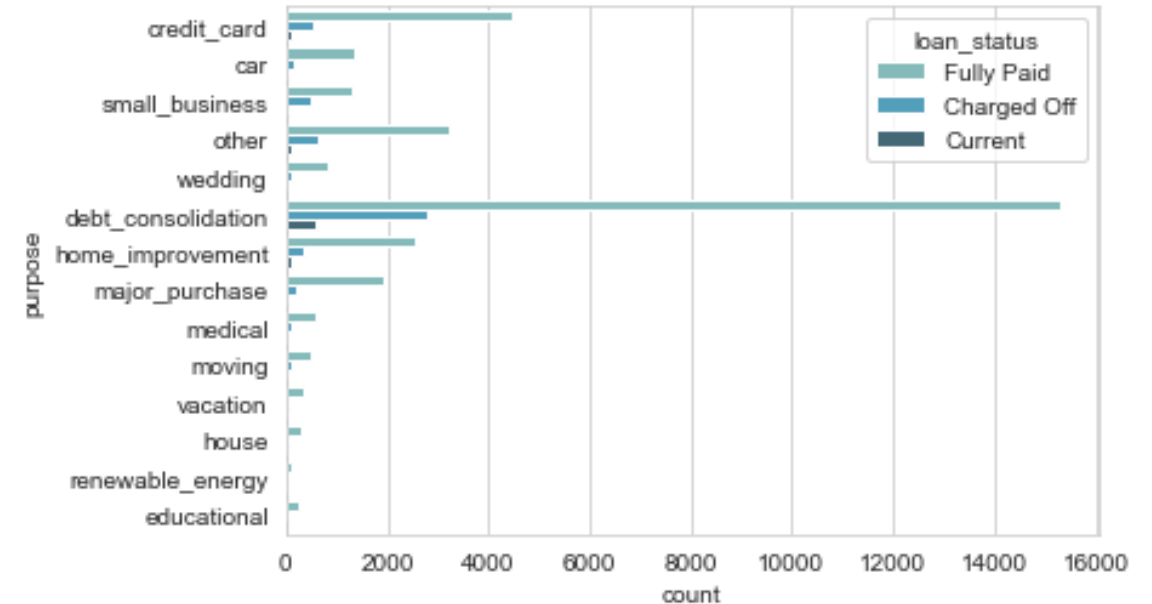
- Highest number of people who are charged off has loan Grade B

Home Ownership



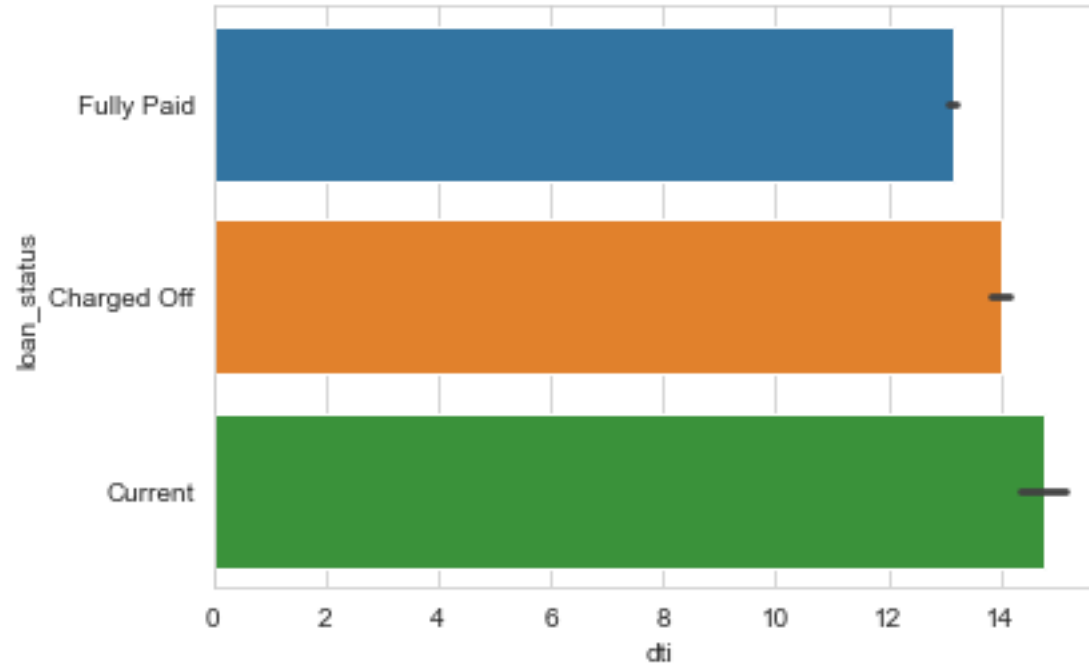
- People who have rented or mortgaged houses apply more for loan and maximum people pays off loan.
- People with own home does not apply much for loan

Purpose of Loan



- **Maximum people applied for loan to clear debts.**
- **But maximum people charged off are also who took loan to pay debts.**

Debt to Income Ratio (DTI)

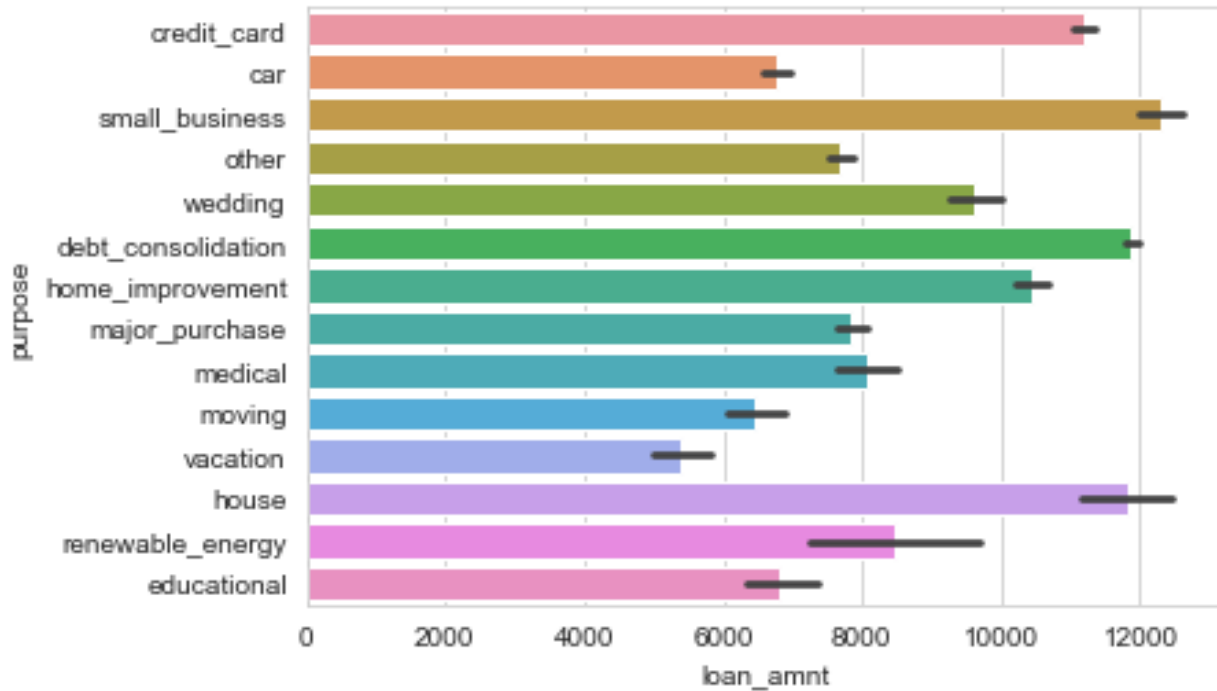


- Debt to Interest ratio is more for people who are charged off than who fully paid the loan.
- Thus we can deduce that there are higher number of people who have debts to pay and do not pay loan on time.

How different factors effect other factors

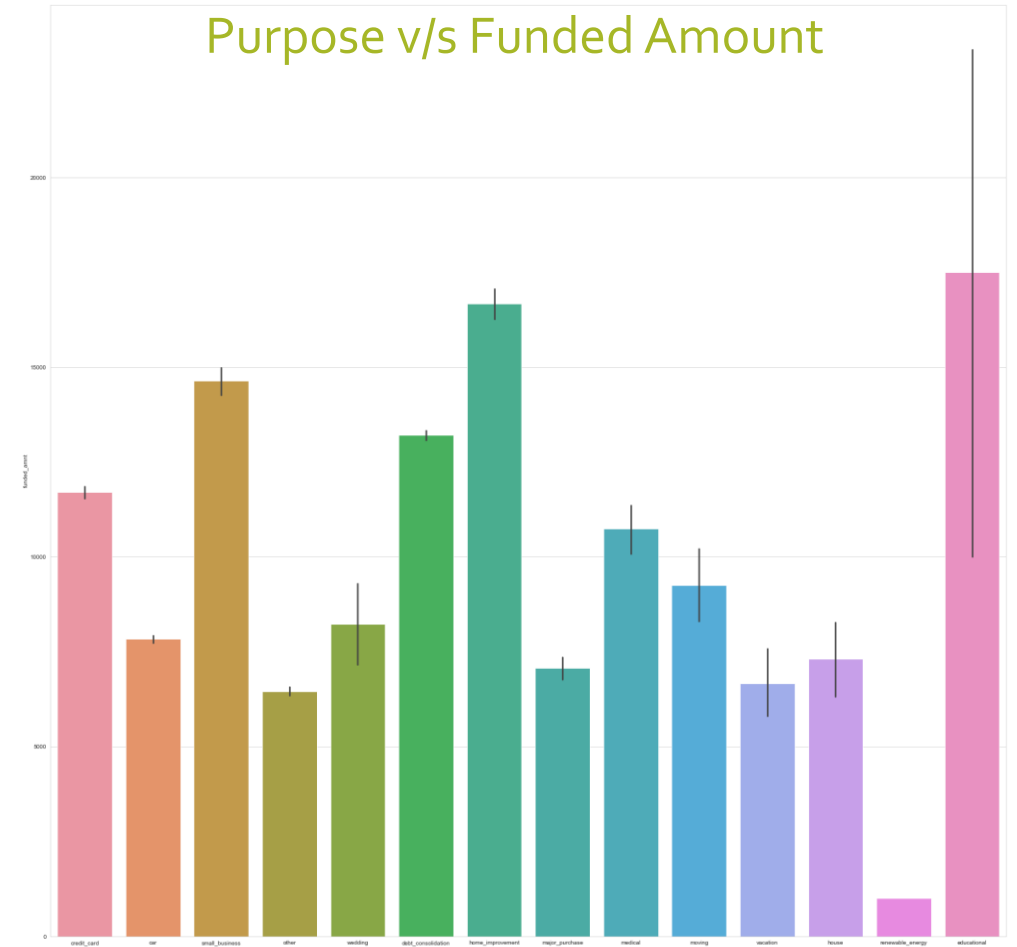
- How Annual income effects what kind of loan is taken ?
- How loan amount is effected by what is the purpose of loan is ?
- Does interest rate effects whether the loan is charged off ?
- Does the purpose of loan effects the loan interest rate
- Does purpose effects how much amount is funded
- Does term effects what should be the interest rate

Loan Amount v/s Purpose



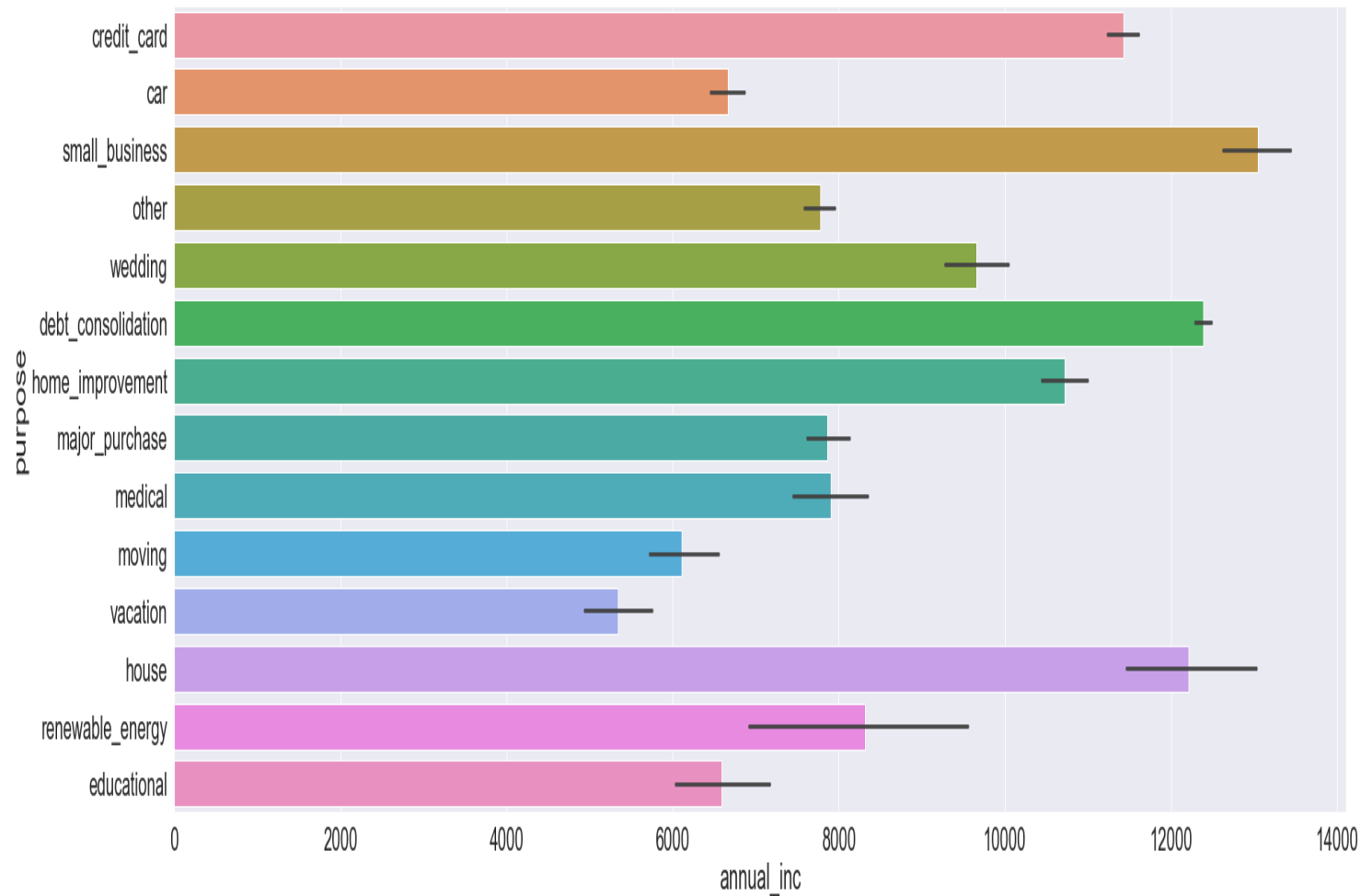
- Maximum amount of loan asked for is for small businesses

Purpose v/s Funded Amount



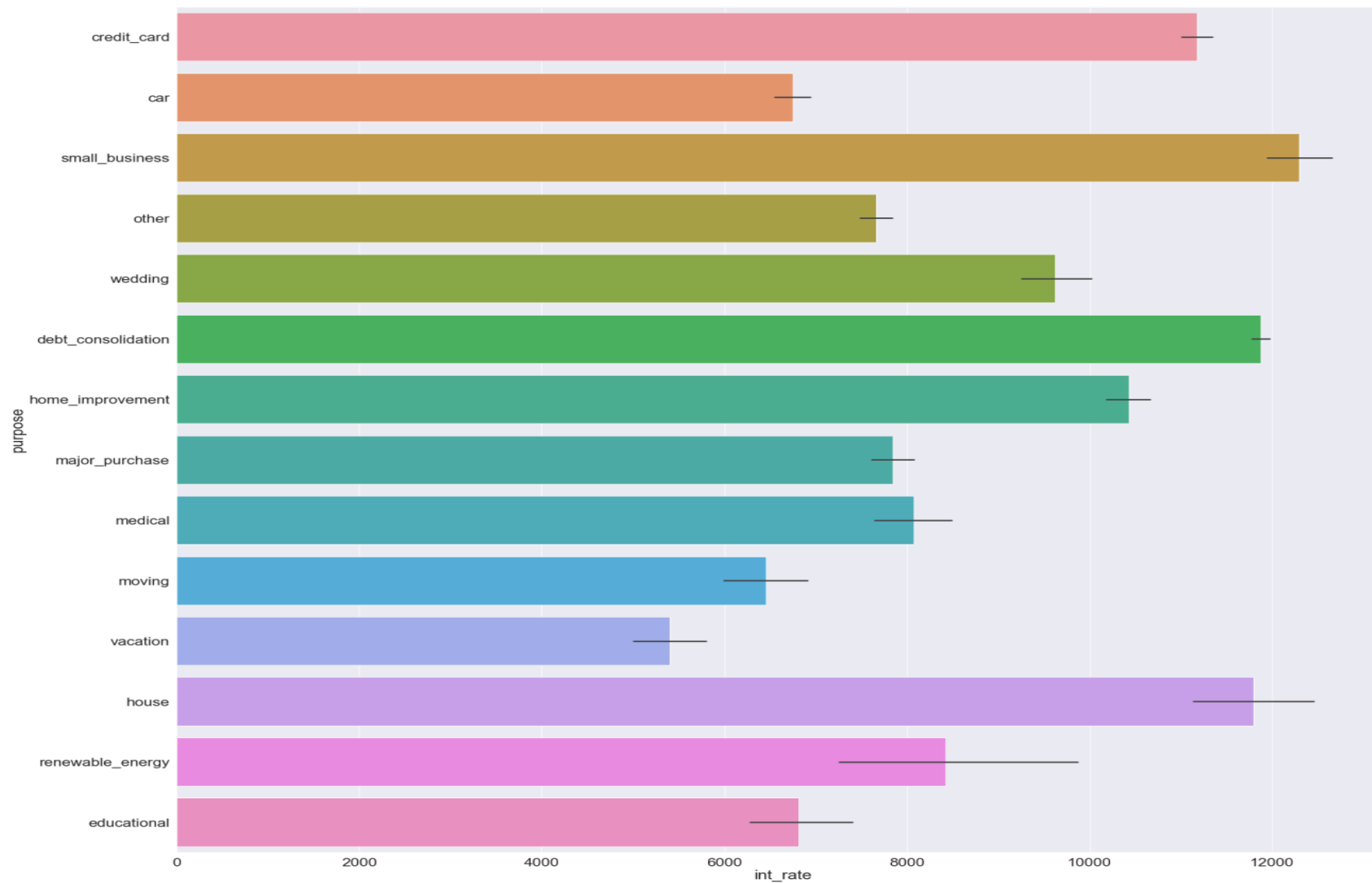
- Highest amount funded is for educational purposes and home Improvements

Annual income vs Purpose



- Maximum number of people who have higher income apply loan for small businesses.
- Least number of people who applied for loan is for vacations

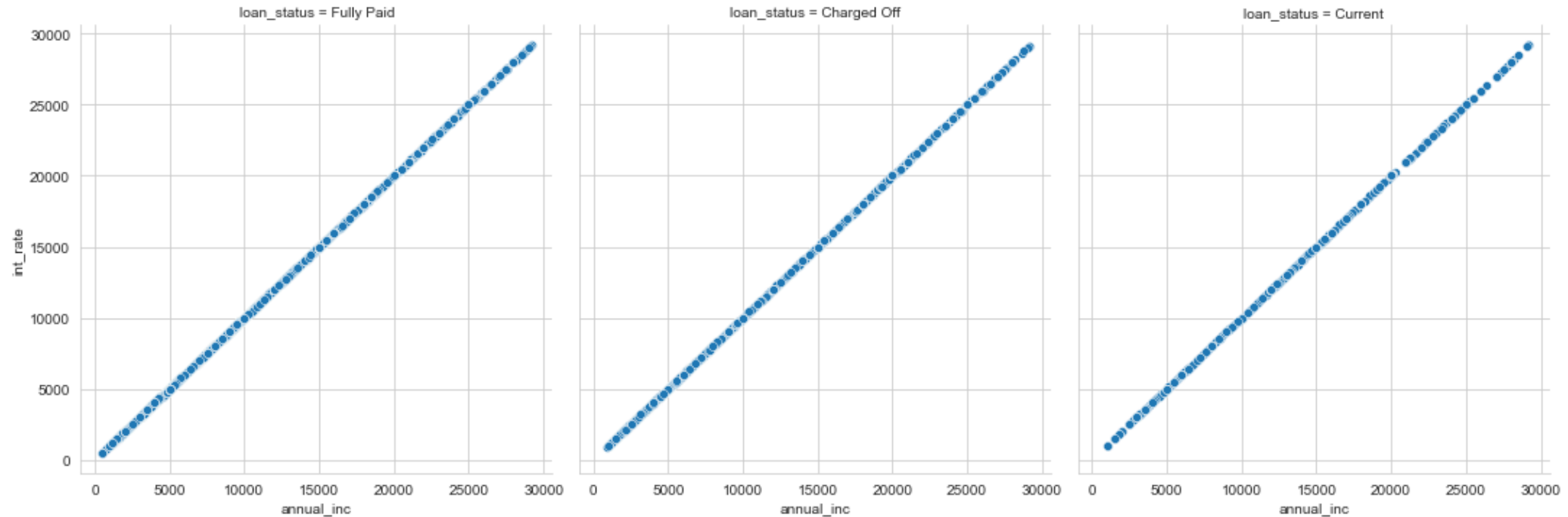
Interest rate vs Purpose



- Maximum interest is applied on small businesses along with loan for house

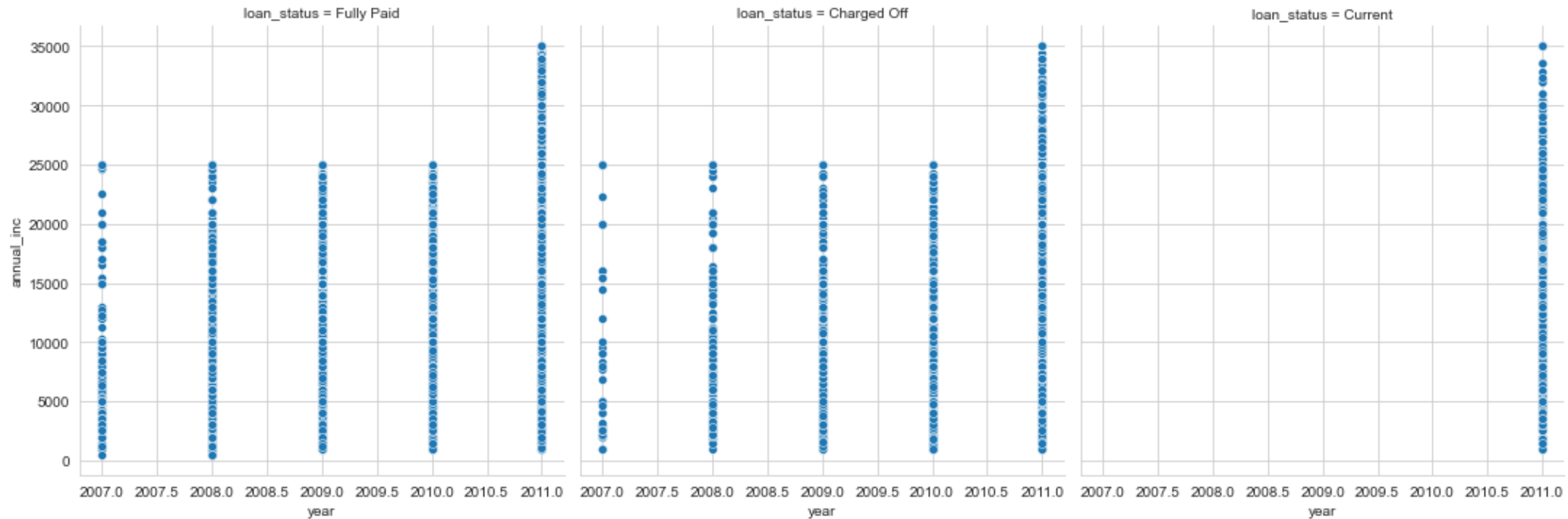
MULTIVARIATE ANALYSIS

Annual Inc v/s Interest Rate



- Higher Annual Income is directly proportional to loan interest rate.

Annual Income v/s Loan Status



- 2011 has the highest number of loans taken.
- And there is almost equal number of loans which were paid and which were charged off

CONCLUSIONS

- Higher the annual income higher the loan amount
- And higher the annual income and higher the interest rate on loan.
- And having the higher interest on loan, it is likely the loan will be charged off as people might fail to pay loan with high interest.
- Most charged off loans were taken to pay debts.
- Longer term loans were charged off more.
- Higher amount loans are verified more thus less amount of loans are not verified much and are likely to be charged off