


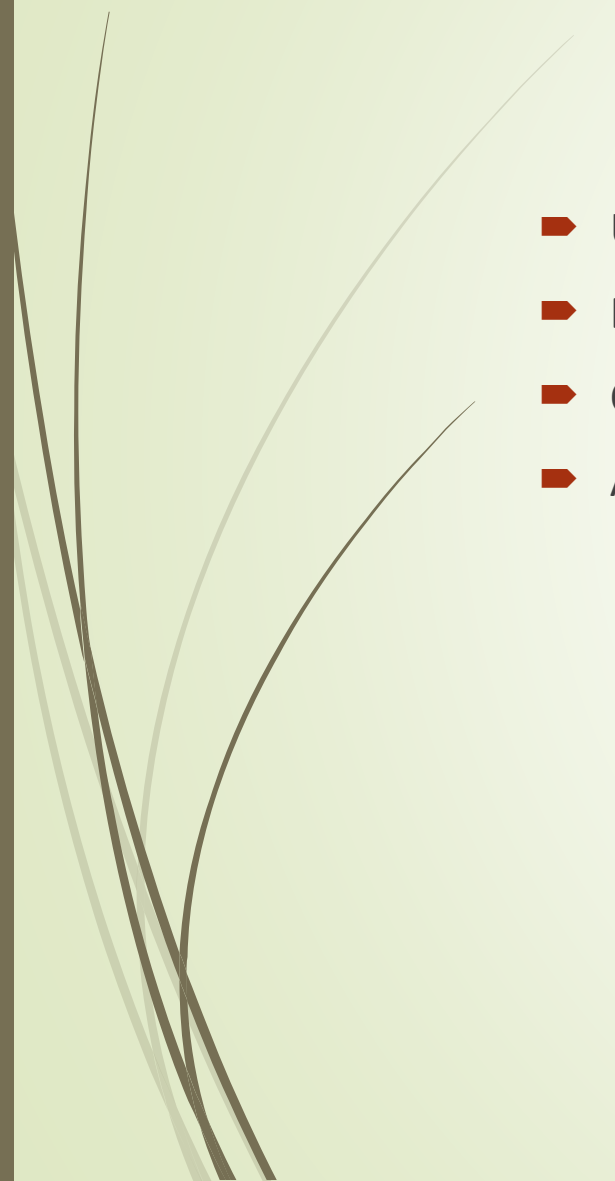


C47- EDA Lending Club Case Study

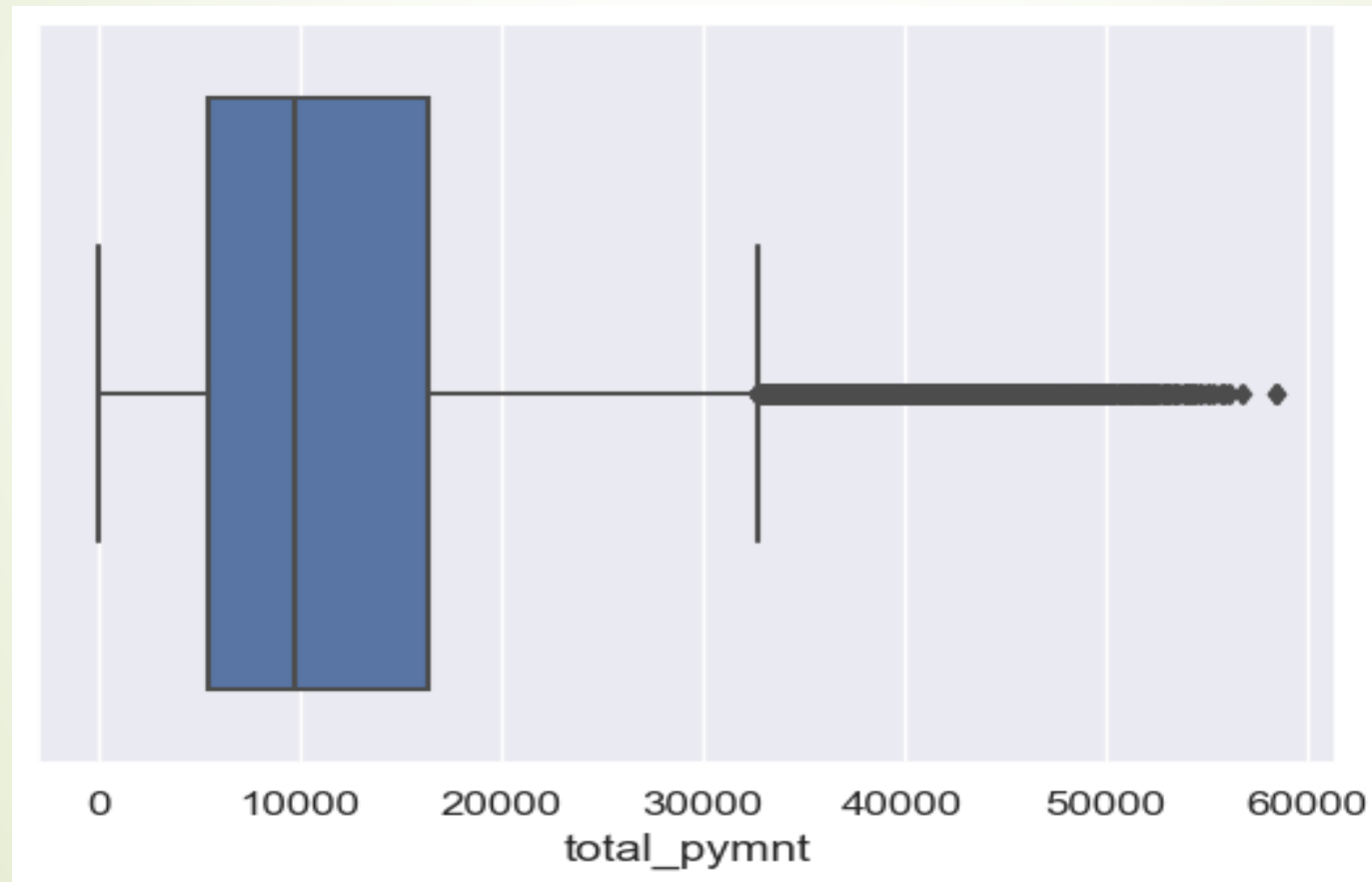
Done By
Manickkam S
Sachin Maruti Munde



Agenda:

- UniVartiate analysis
 - Bivariate analysis
 - Conclusion
 - Acknowledgment
- 

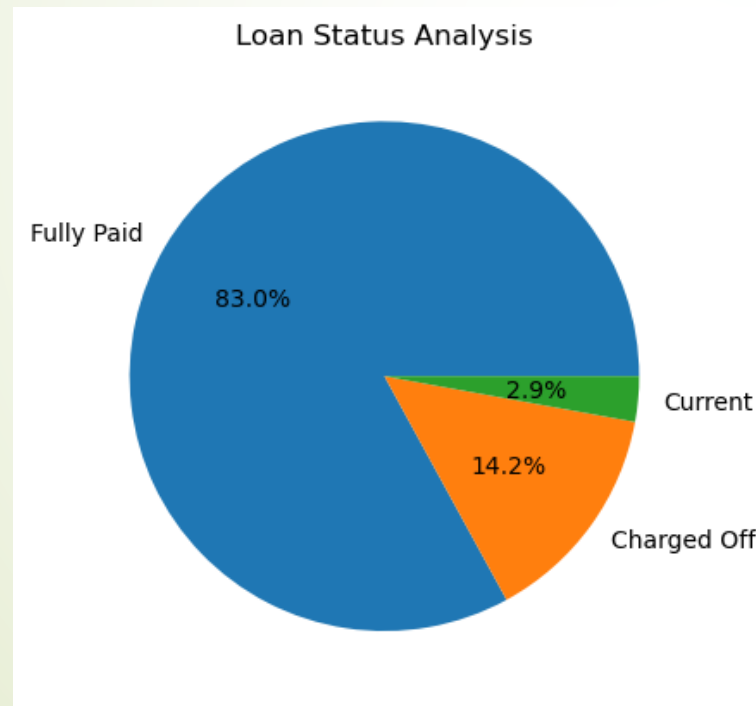
UniVariate Analysis – The average taken loan amount is Rs.10,000.



1. 83approach % Paid in full, and we can for a new loan.

1. 14.2% are charged off

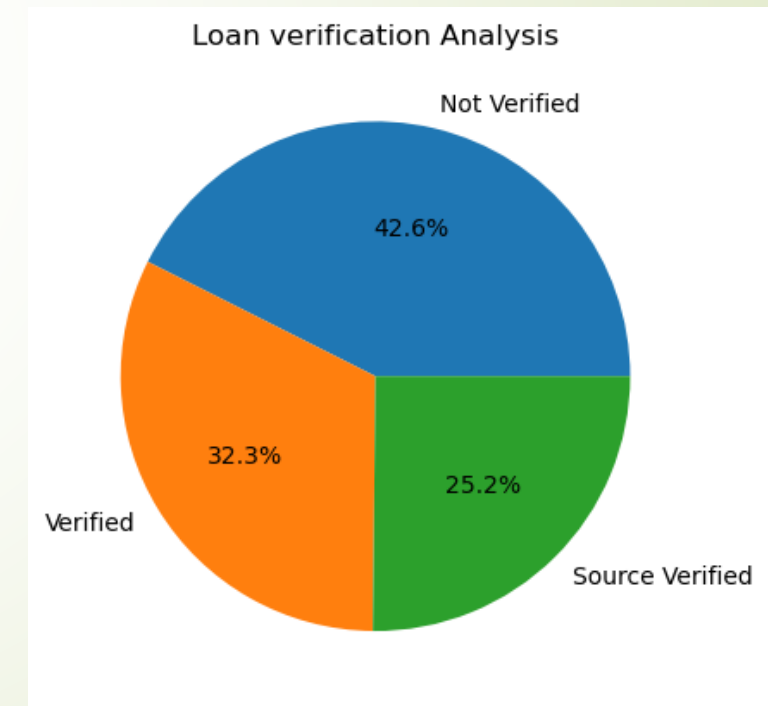
2. 2.9% are in Current, so we can request for t op-up.



1. 32.3% Loan are verified

2. 25.2 % Loans are source verified

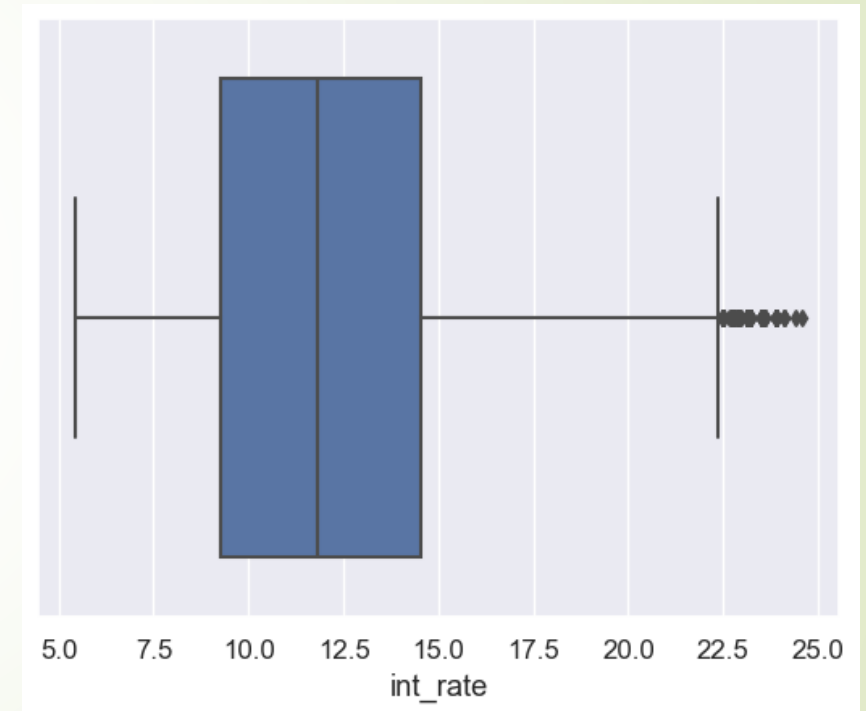
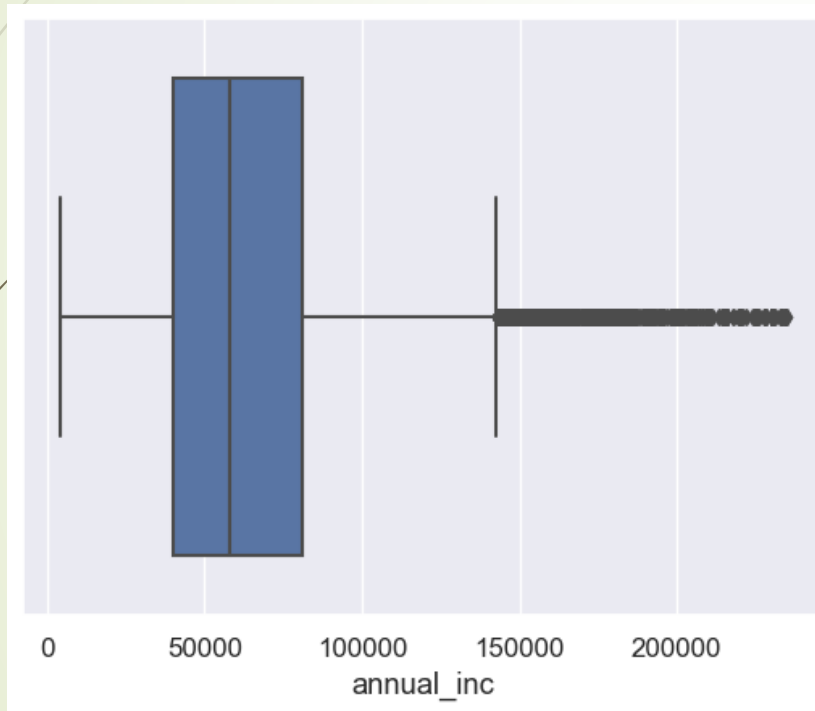
3. 42.6% Loans are Not verified



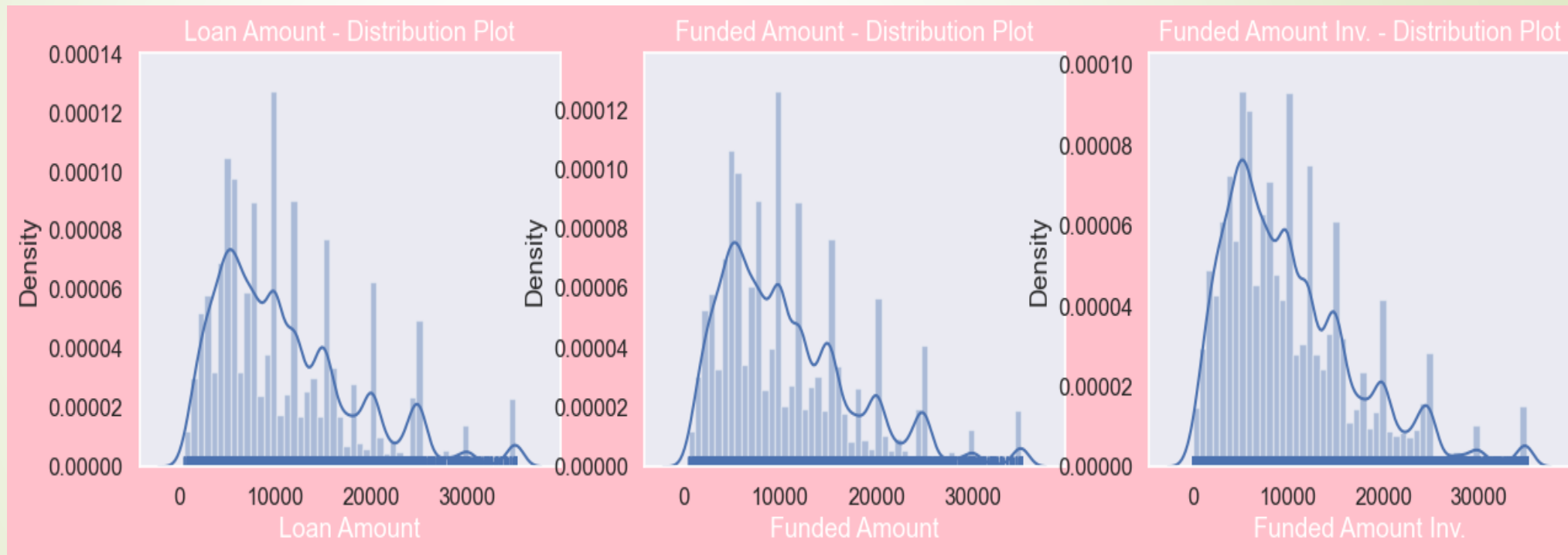
Observation On annual Income vs interest rate

Average annual Income Of the Loan taker is 60,000

Average interest rate is 12 %

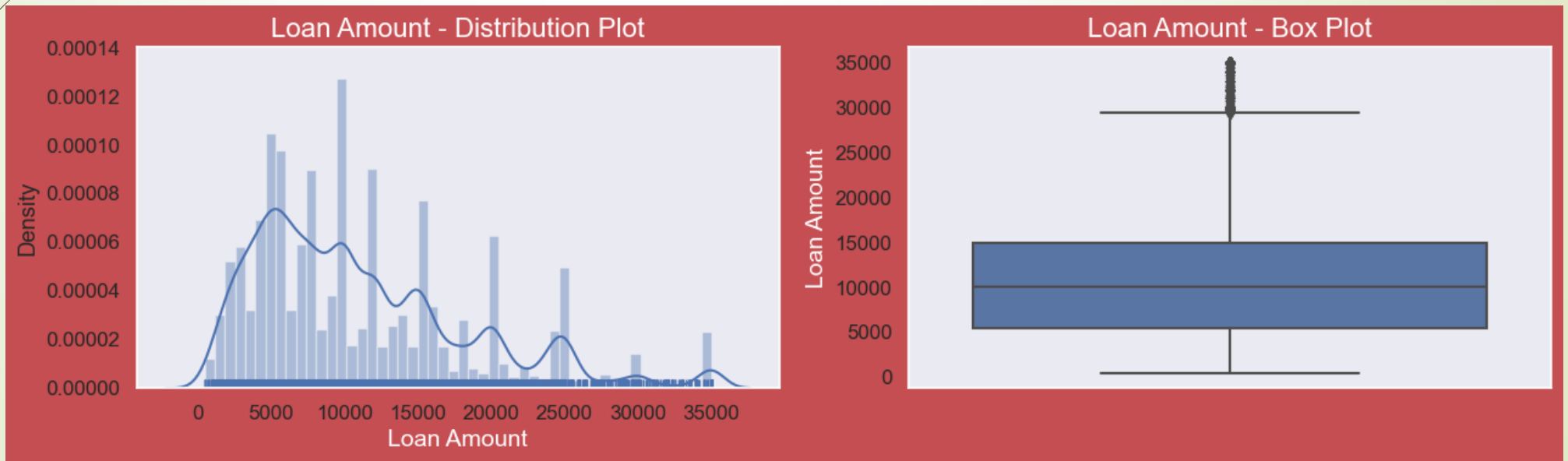


Observation on funded/Loan amount graph :

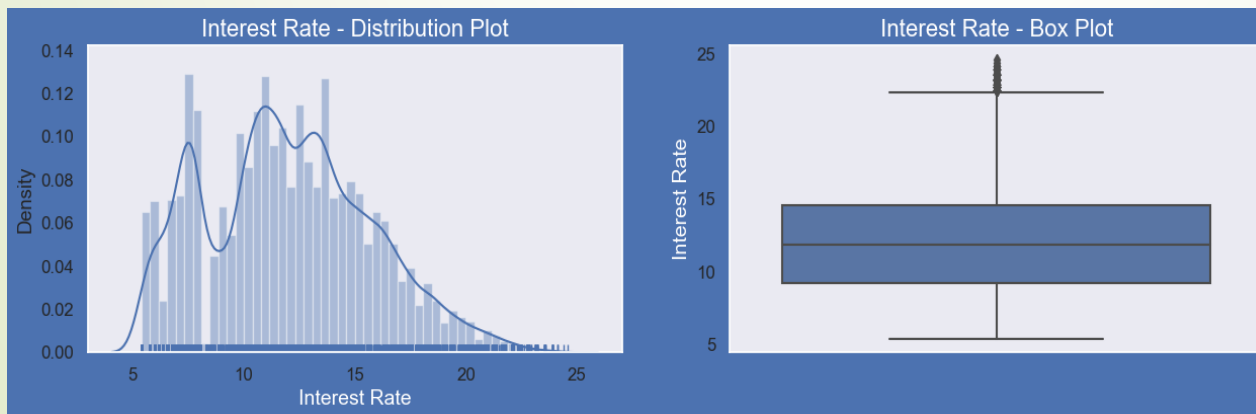
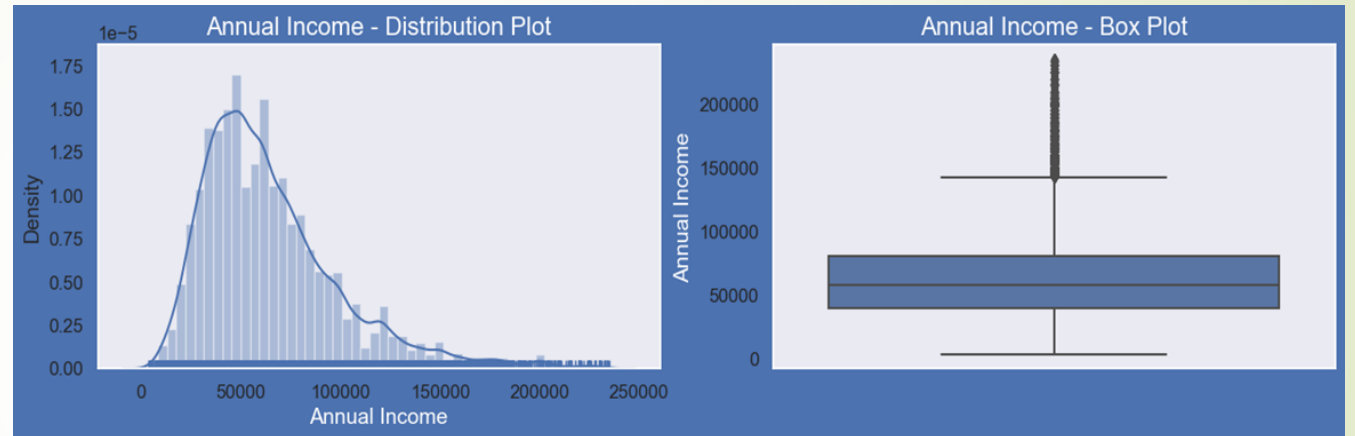


Loan Amount analysis :

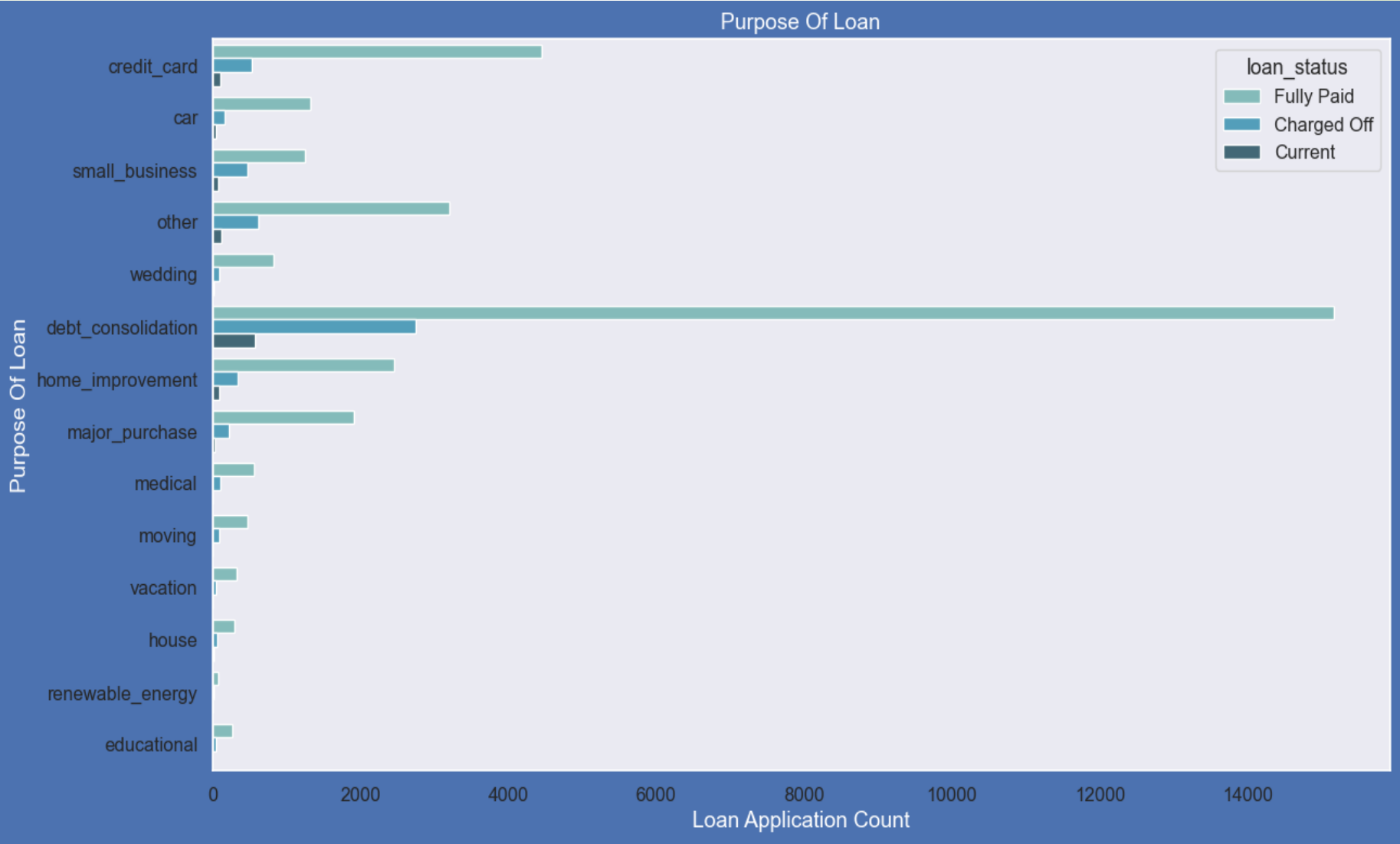
- 1) Observation is that Loan amount, investor amount, funding amount are strongly correlated.
- 2) Annual income with DTI(Debt-to-income ratio) is negatively correlated.
- 3) Debt income ratio is the percentage of a consumer's monthly gross income that goes toward paying debts.
- 4) That means when annual income is low DTI is high & vice versa.
- 5) Positive correlation between annual income and employment years. That means income increases with work experience



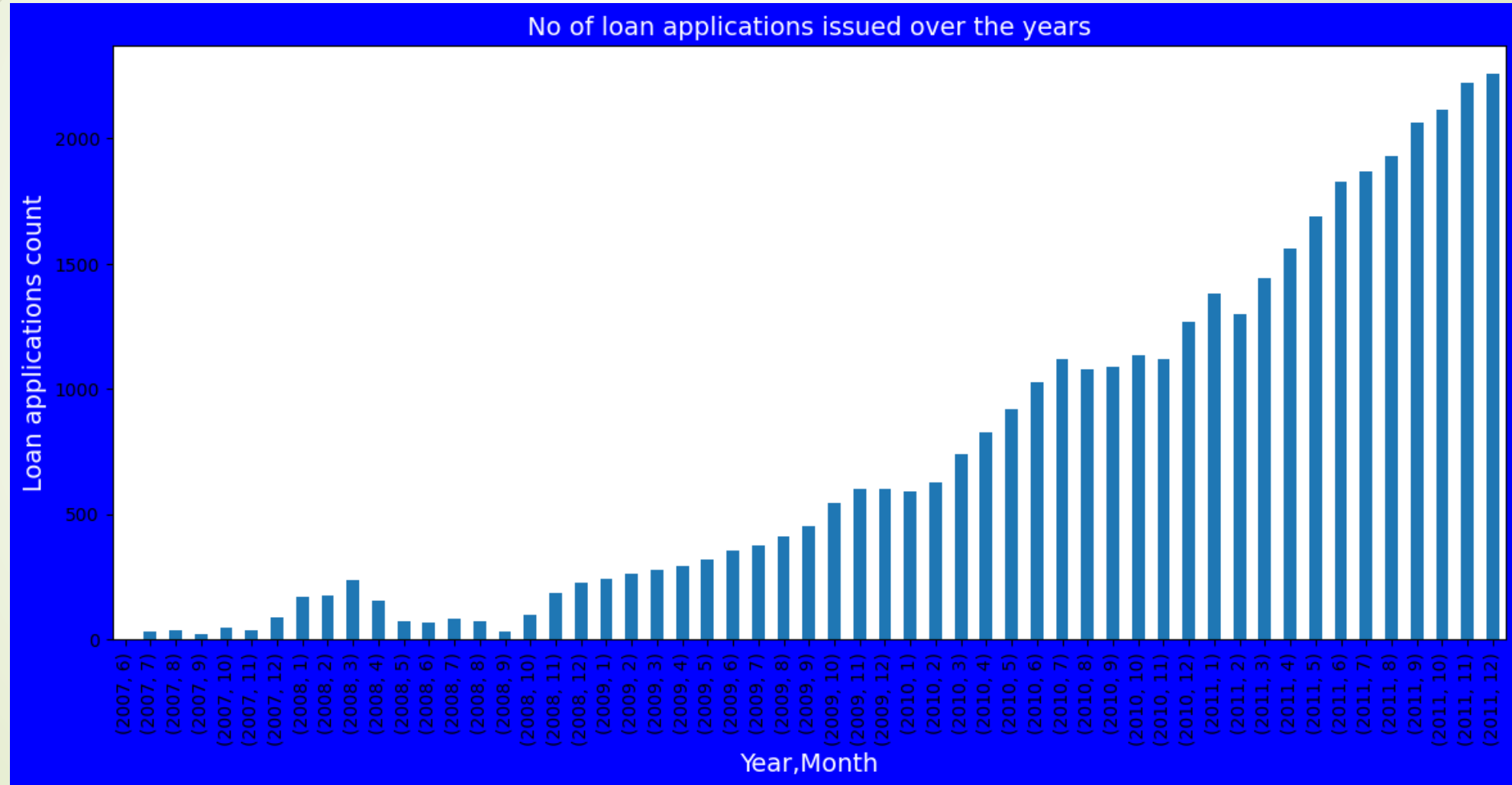
Annual Income – Distribution Plot



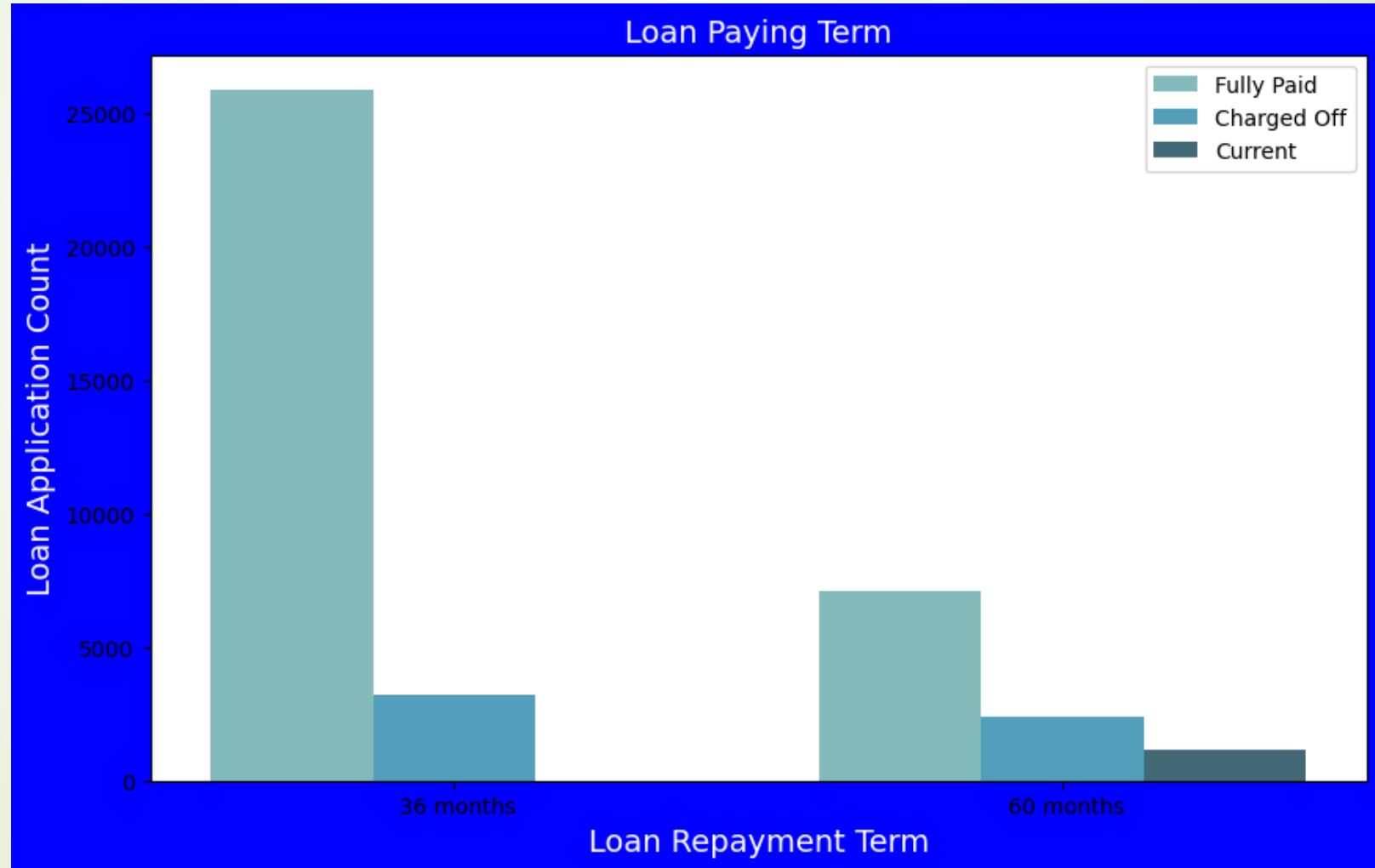
Debt consolidation plays a major role in the purpose of loan requirement



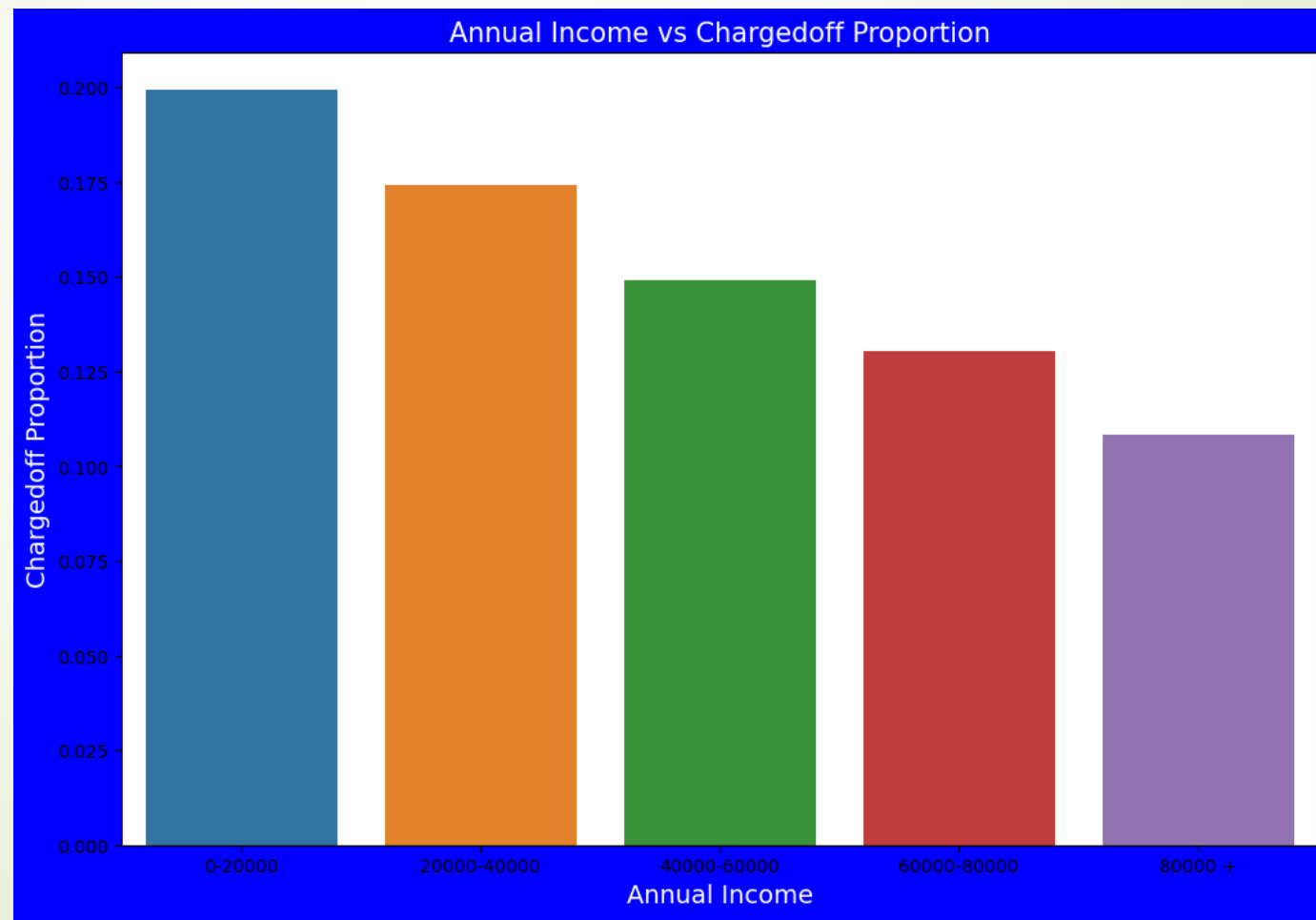
Loan applications has been gradually increased over the year with minor fluctuation



Loan Repayment Graph

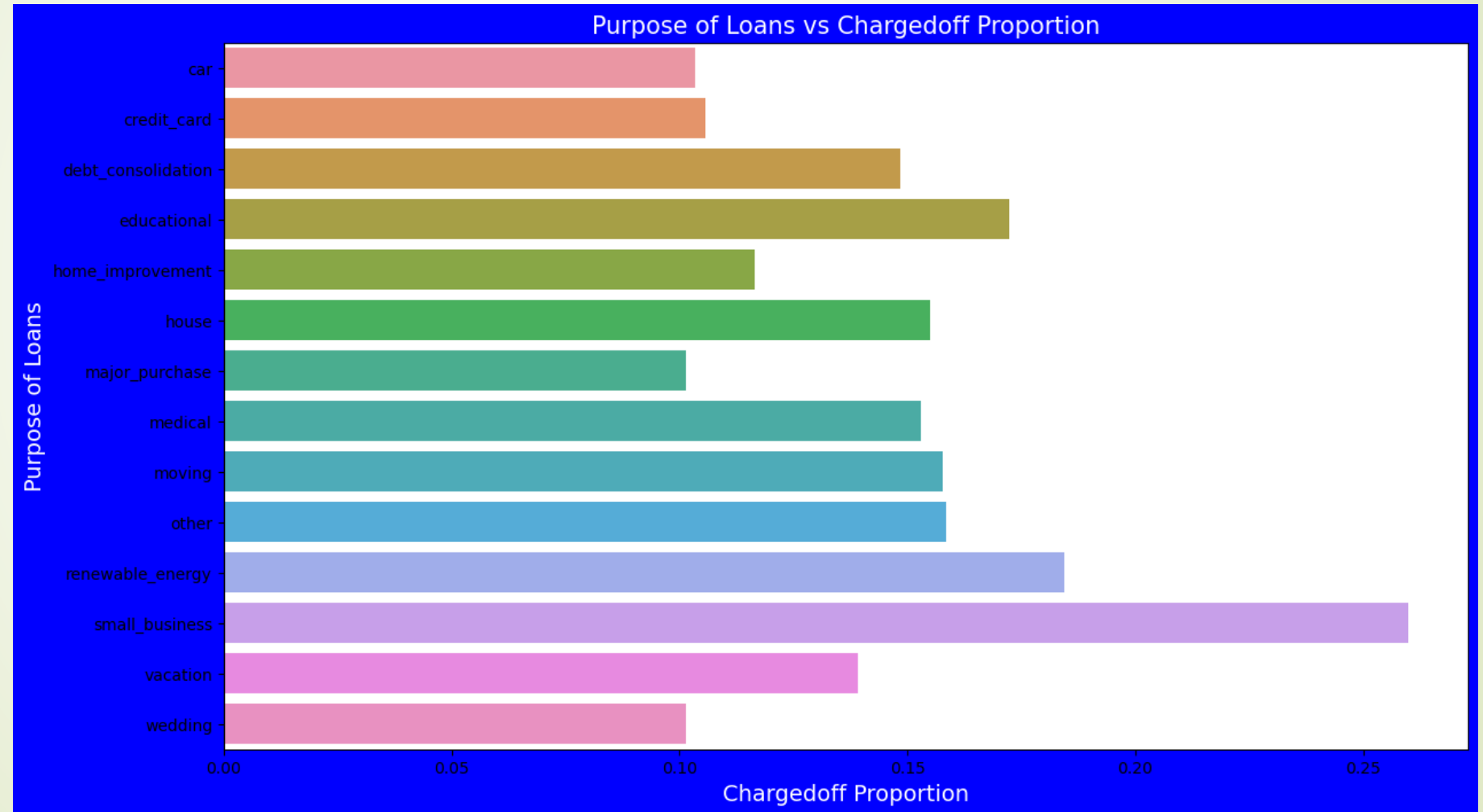


Bivariate Analysis on annual income against Chargedoff_Proportion



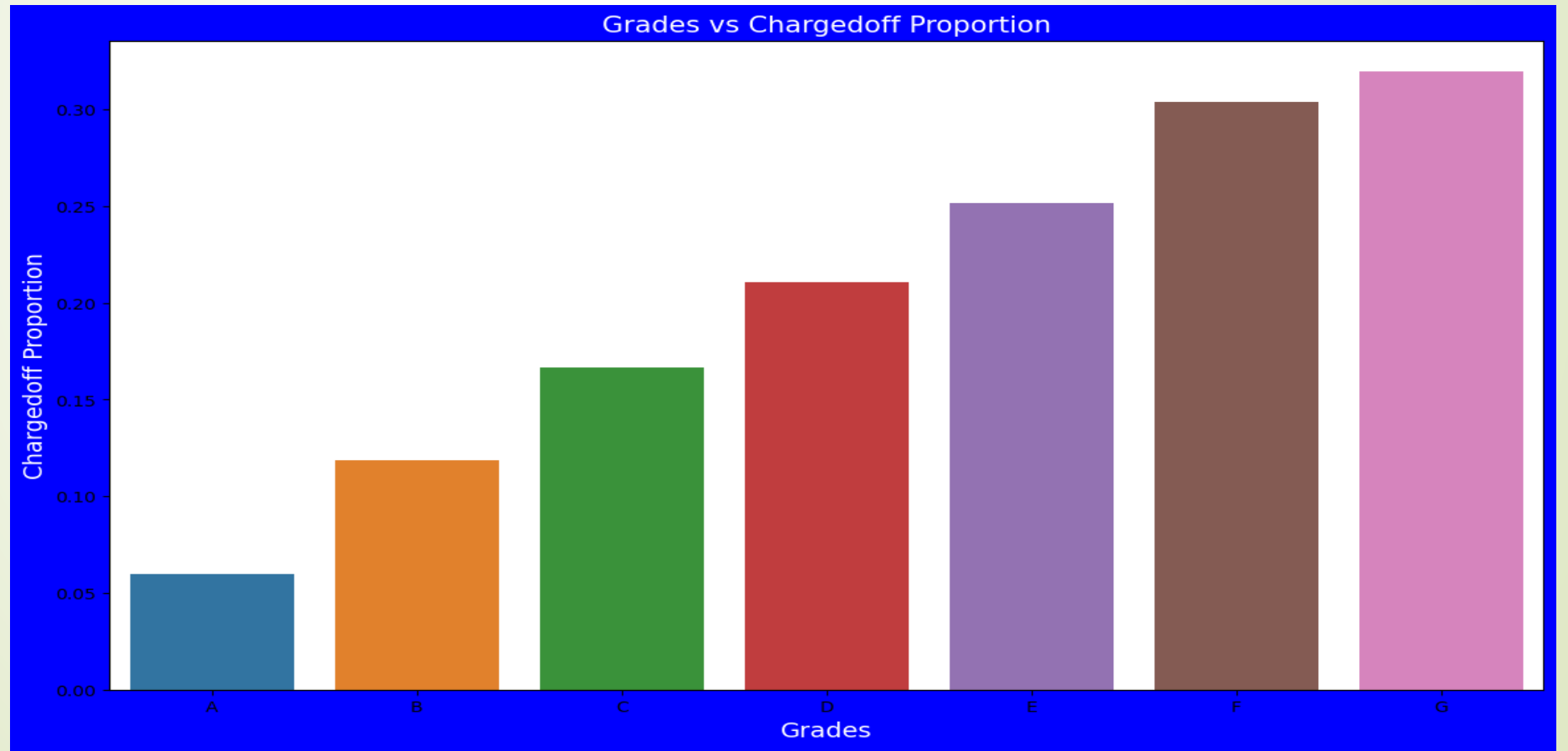
Observation on Loan vs charged off :

Small business loan may lead to high % charge off



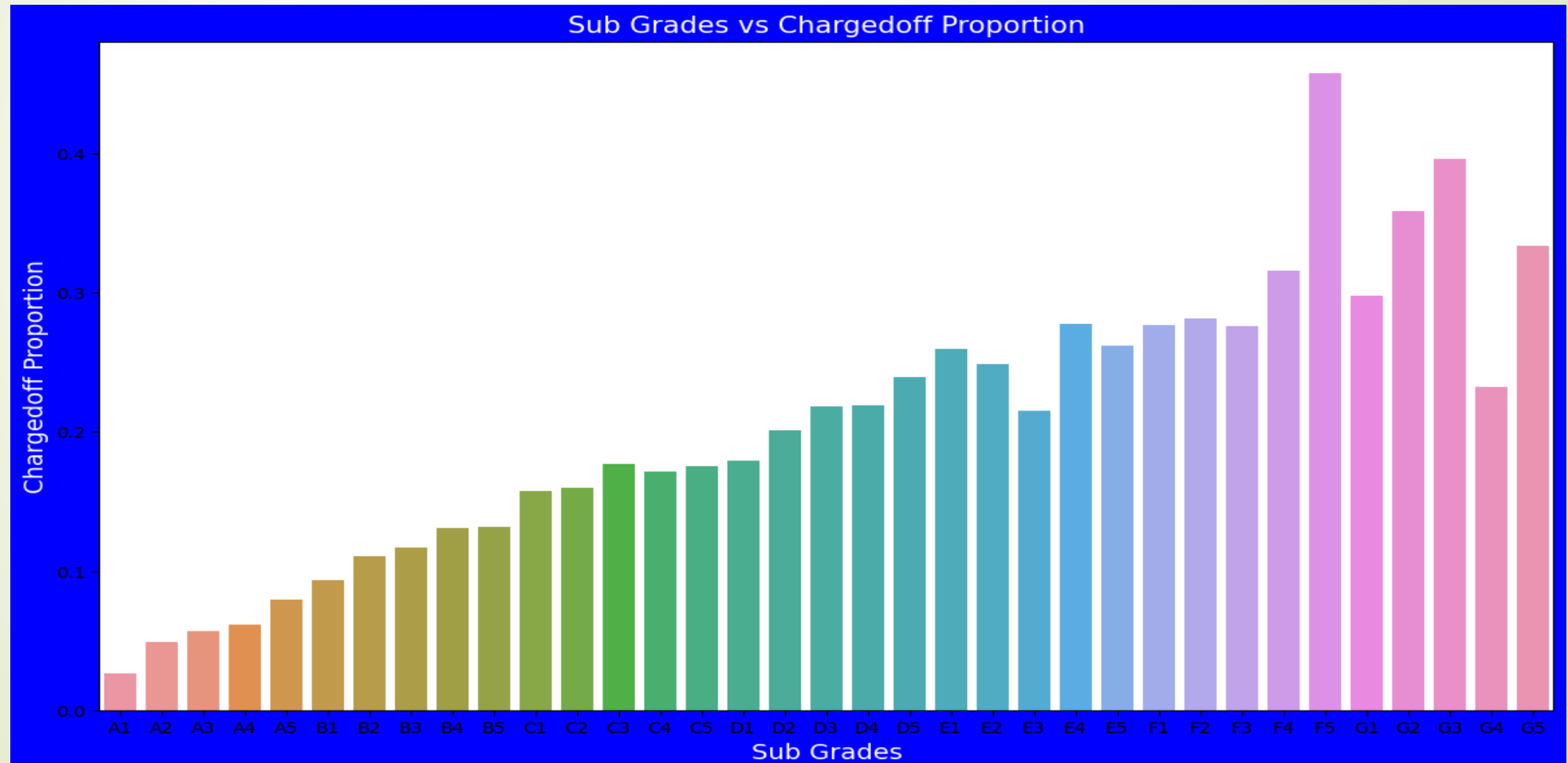
Observations on Chargedoff_Proportion:

- 1) Grade "A" has very less chances of charged off.
- 2) Grade "F" and "G" have very high chances of charged off.
- 3) Chances of charged off is increasing with grade moving from "A" towards "G"



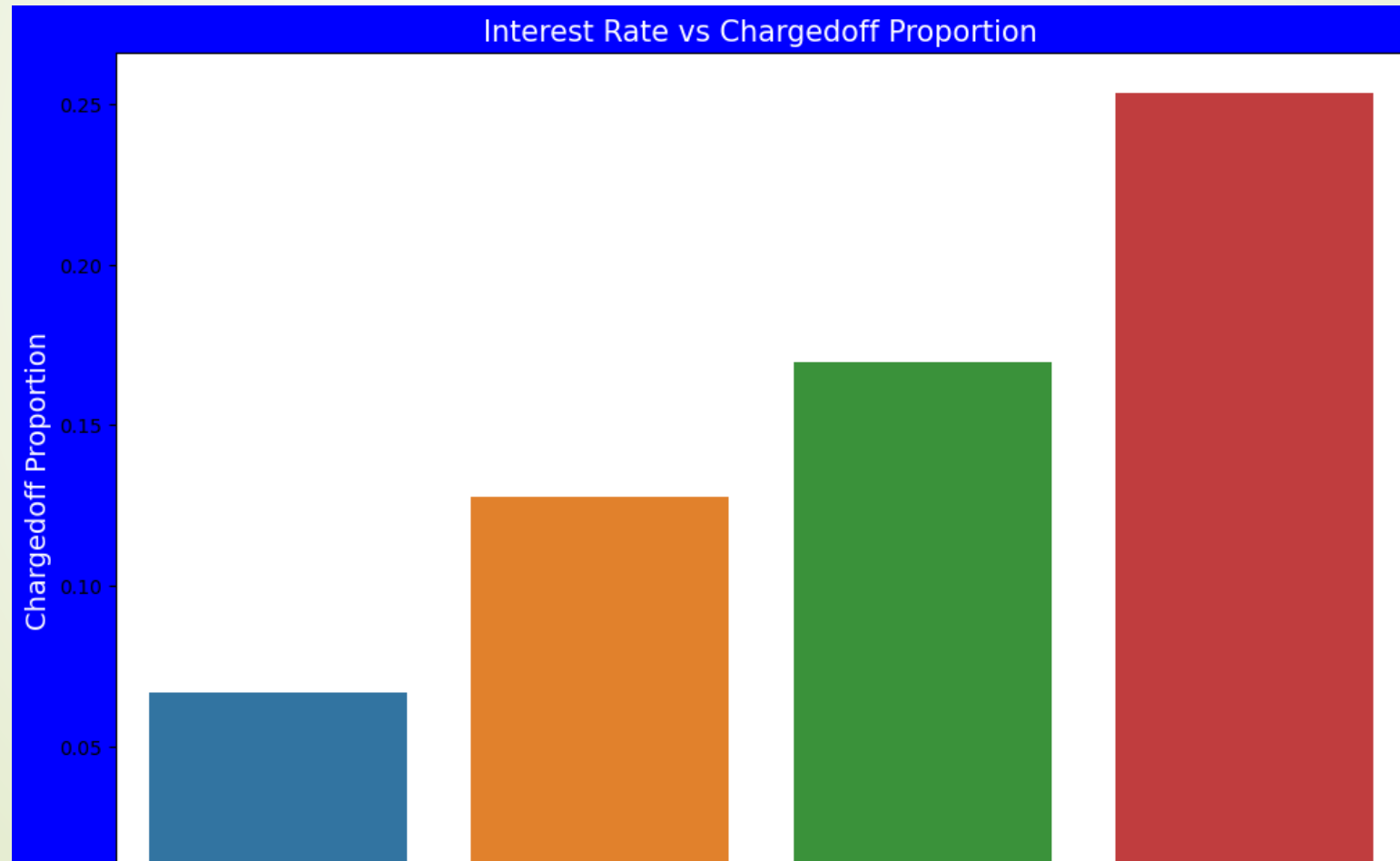
Observations:

- 1) Sub Grades of "A" has very less chances of charged off.
- 2) Sub Grades of "F" and "G" have very high chances of charged off.
- 3) Proportion of charged off is increasing with sub grades moving from sub grades of "A" towards sub grades of "G"



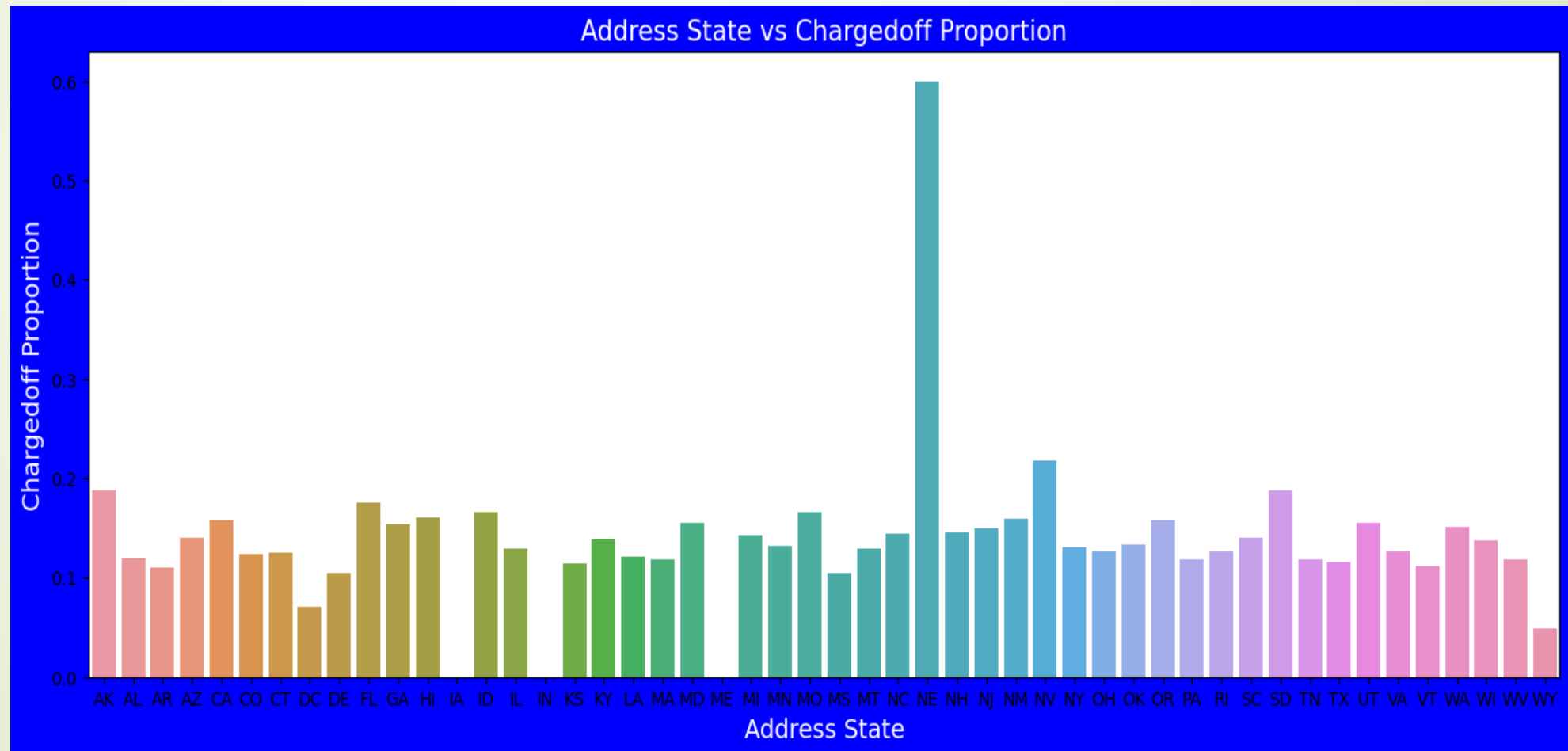
Observations on Interest rate vs charged off:

- 1) interest rate less than 10% has very less chances of charged off. Interest rates are starting from minimum 5 %.
- 2) interest rate more than 16% has good chances of charged off as compared to other category interest rates.
- 3) Charged off proportion is increasing with higher interest rates.



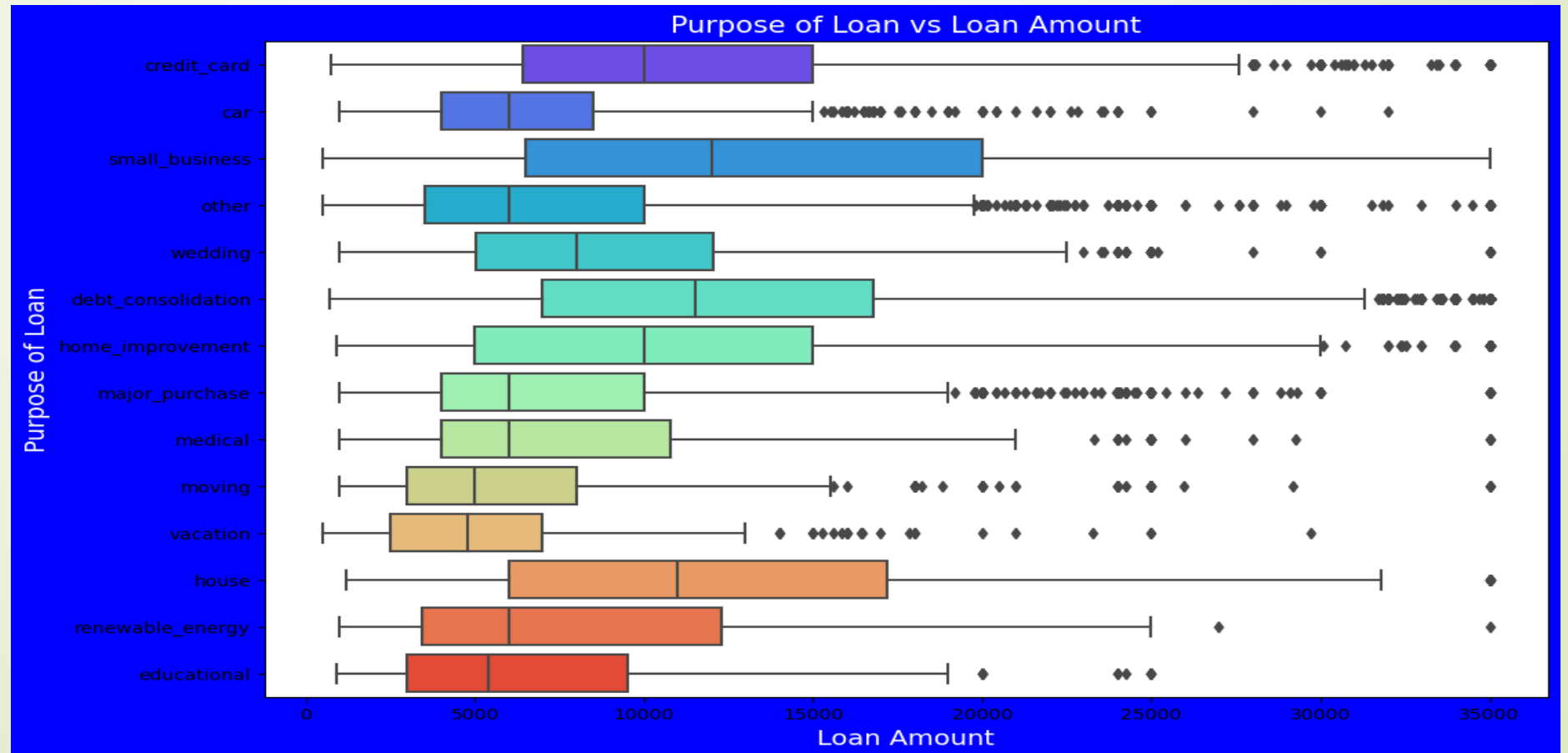
Observations On Address vs charged off propostion :

- 1) states NE has very high chances of charged off but number of applications are too low to make any decisions.
- 2) NV,CA and FL states shows good number of charged offs in good number of applications.



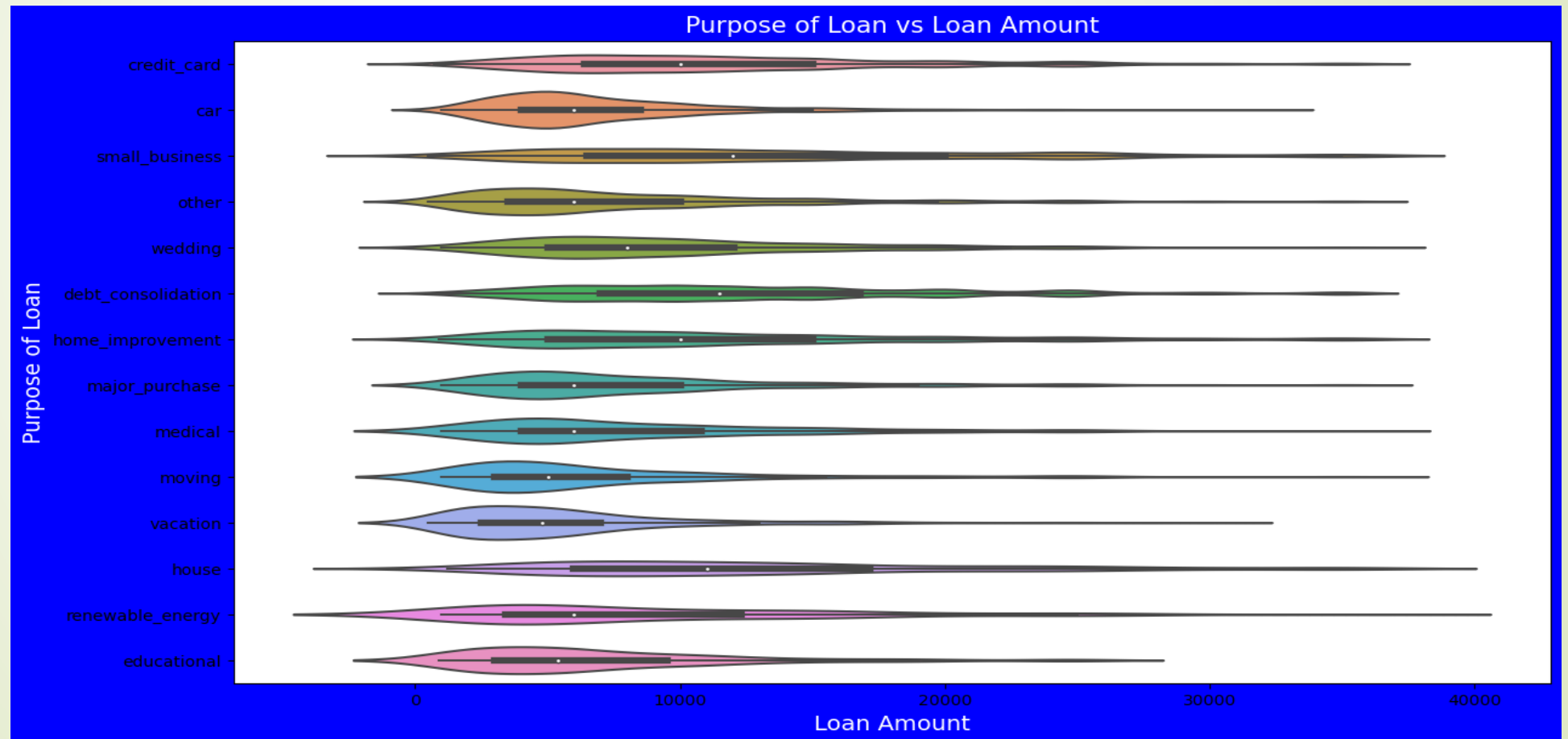
Observation on purpose Of loan vs Loan amount:

- 1) Median, 95th percentile, 75th percentile of loan amount is highest for loan taken for small business purpose among all purposes.
- 2) Debt consolidation is second and Credit card comes 3rd.



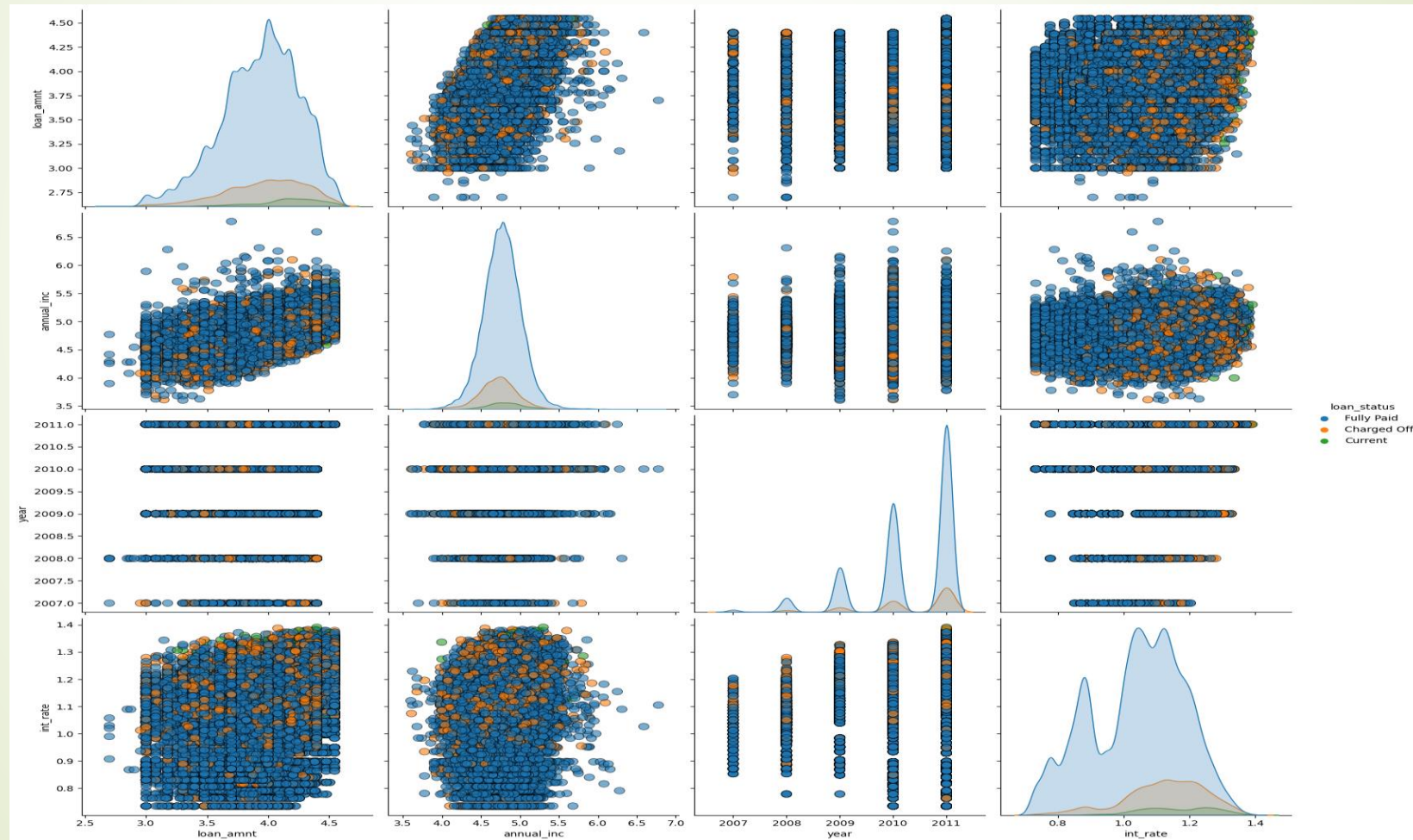
Observation on purpose Of loan vs Loan amount:

- 1) Loan taken for small business purpose, Debt consolidation and Credit card are somewhat evenly distributed
- 2) as compare to loan taken for other purposes.



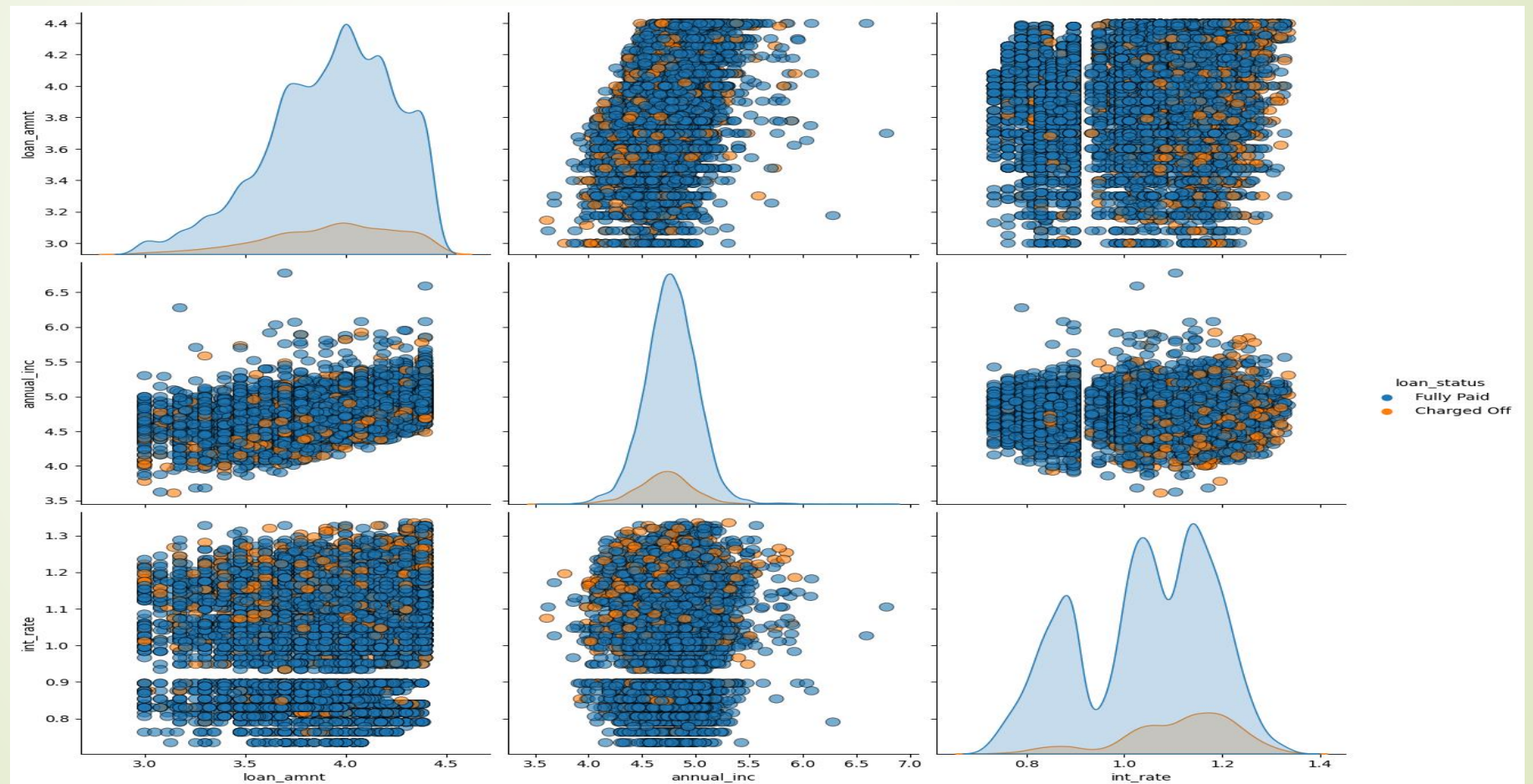
Observation:

- 1) Higher the interest rate higher charged off ratio
- 2) Higher the annual income higher the loan amount slightly.
- 3) increase in number of charged off with increase in year.
- 4) interest rate is increasing with loan amount increase



Observation:

- 1) Higher the interest rate higher charged off ratio
- 2) Higher the annual income higher the loan amount slightly
- 3) Interest rate is increasing with loan amount increase this results in high charged off.



Conclusion

All the below variables were established in analysis of Application data frame as leading to default. Checked these against the Approved loans which have defaults, and it proves to be correct

1. Medium income
2. 25-35 years old , followed by 35-45 years age group
3. Male
4. Unemployed
5. Laborer, Salesman, Drivers
6. Business type 3
7. Own House - No

Other IMPORTANT Factors to be considered

- Days last phone number changed - Lower figure points at concern
- No of Bureau Hits in last week. Month etc. – zero hits is good
- Amount income not correspondingly equivalent to Good Bought – Income low and good value high is a concern
- Previous applications with Refused, Cancelled, Unused loans also have default which is a matter of concern. This indicates that the financial company had Refused/Cancelled previous application but has approved the current and is facing default on these.