

Problem Statement

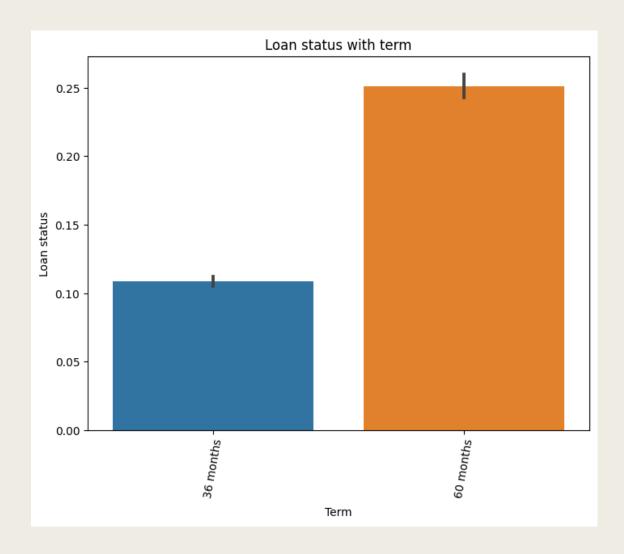
When the company receives a loan application, the company has to make a decision for loan approval based on the applicant's profile. Two types of risks are associated with the bank's decision:

- If the applicant is likely to repay the loan, then not approving the loan results in a loss of business to the company
- If the applicant is not likely to repay the loan, i.e. he/she is likely to default, then approving the loan
 may lead to a financial loss for the company

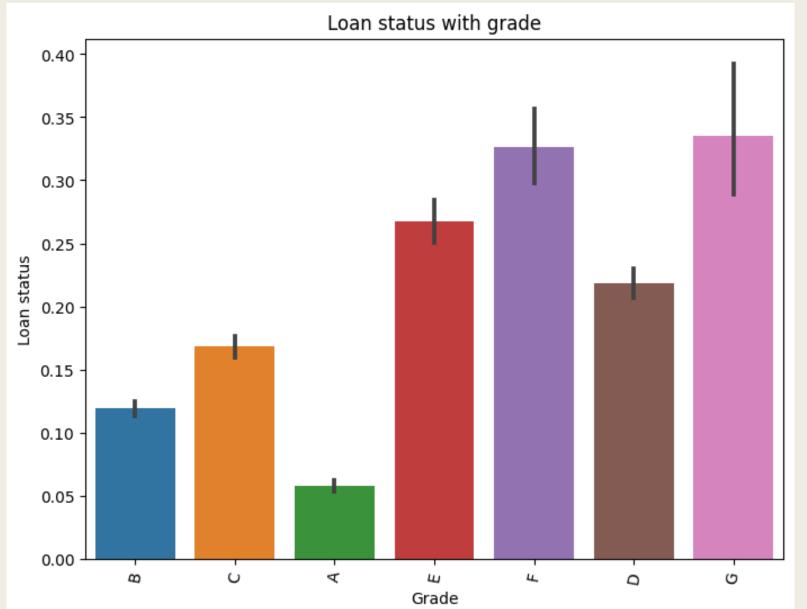
Analysis Approach

- Identify target column from database.
- Identify dependent variables.
- Remove unnecessary information.
- Use univariate and bivariate methods to represent the graph and find default rate area.

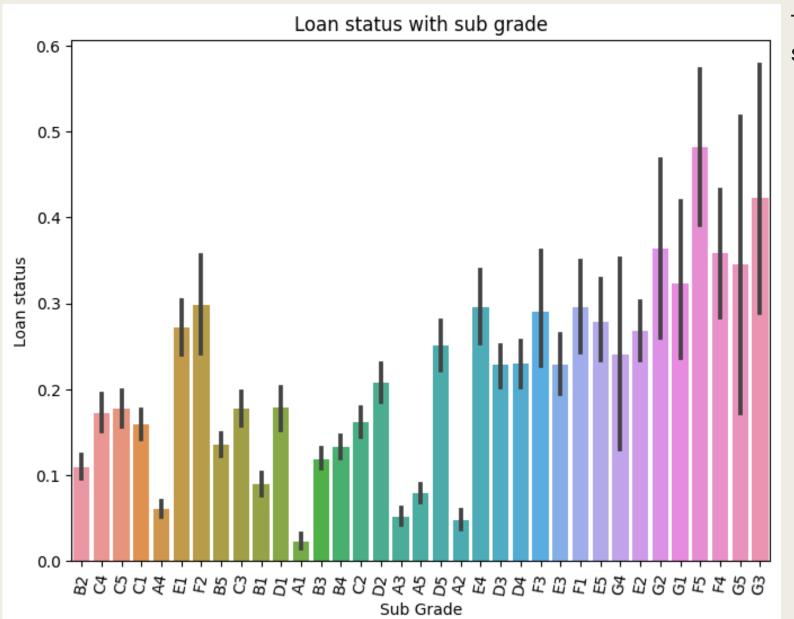
Results in business terms



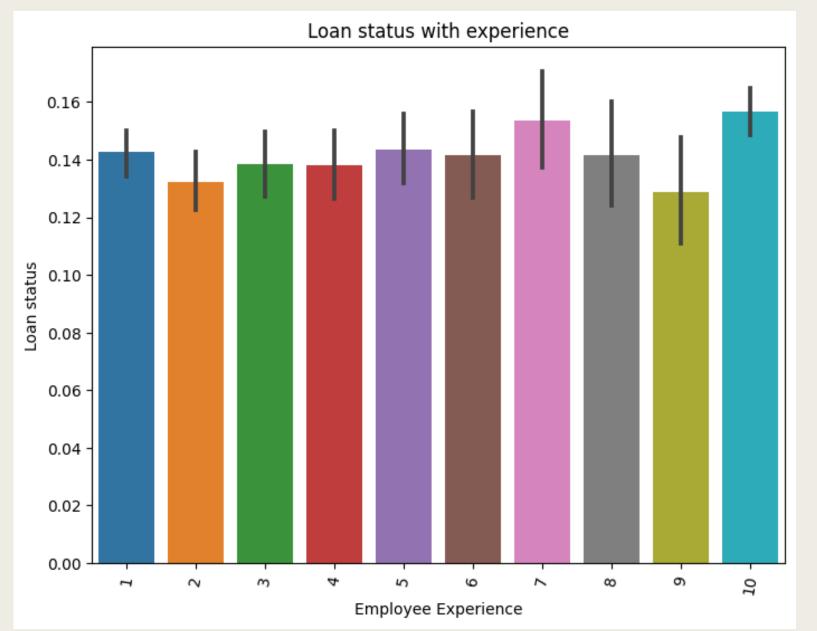
There is a high risk of default rate when term is 60 months.



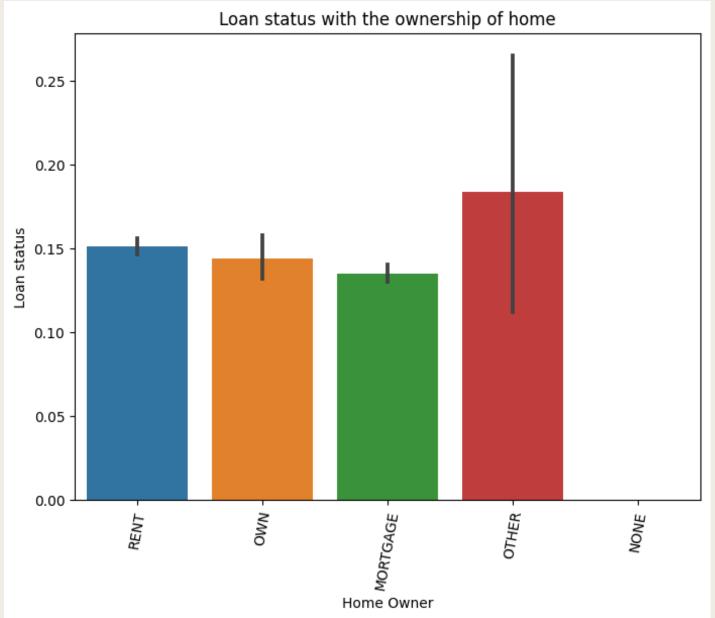
Default rates are high with grade F and G



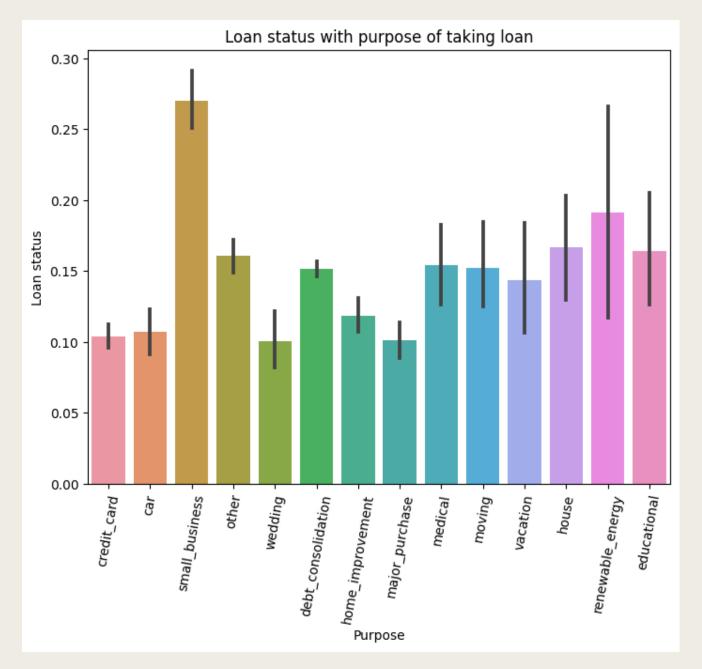
There is a high risk of default with sub grade F5.



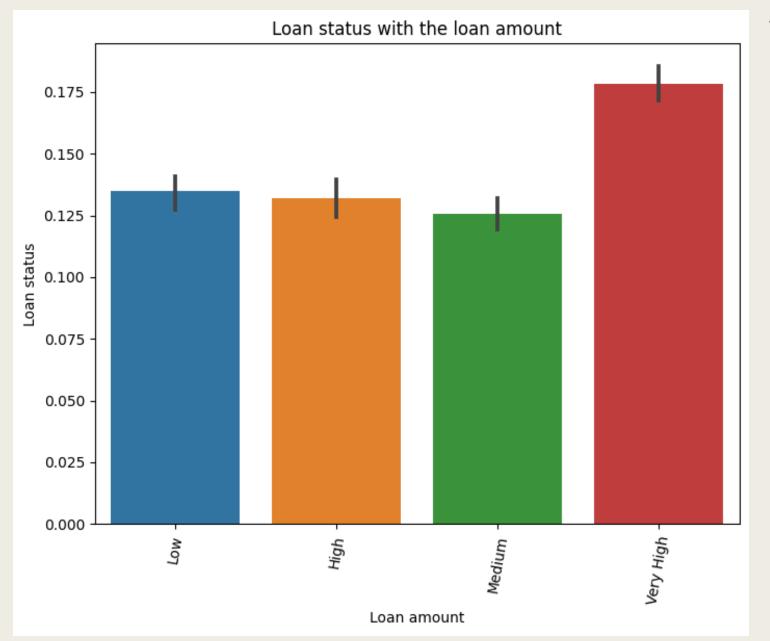
There is a high risk of default with 10 years of experience of employee.



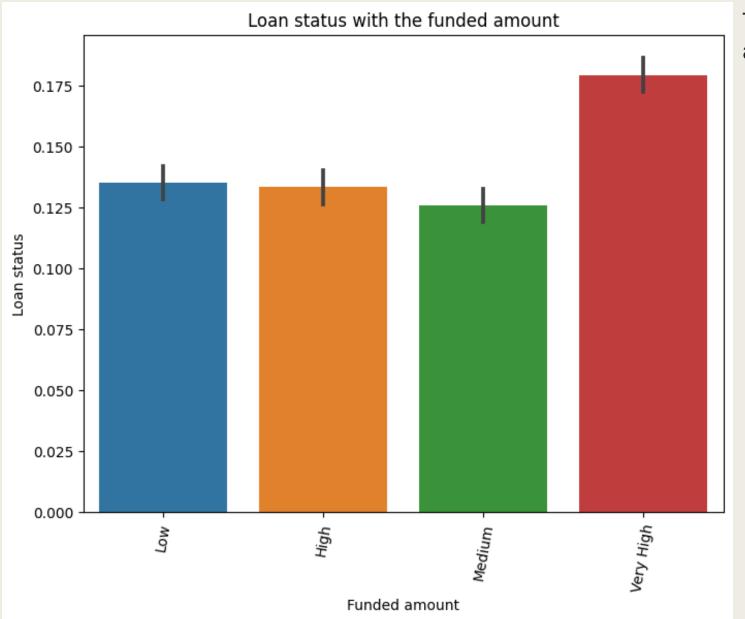
There is a high risk of default with the person who selected 'other' option.



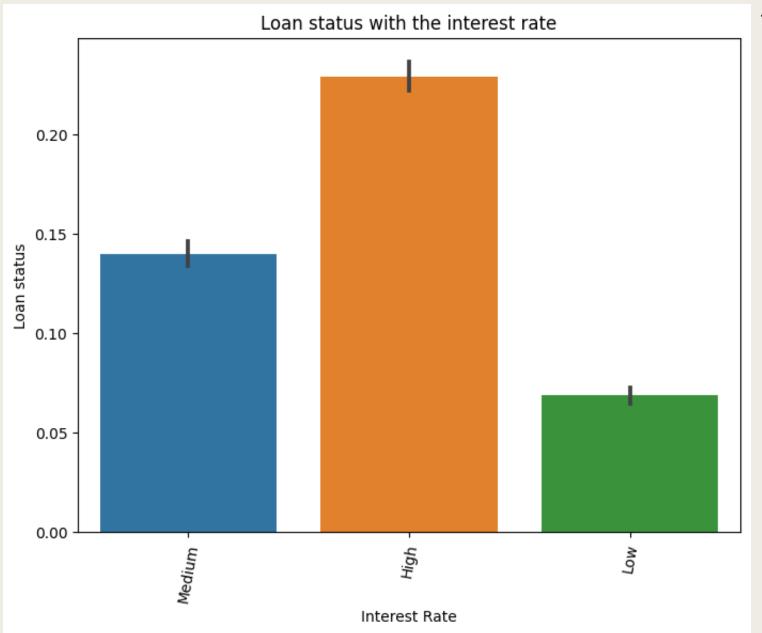
There is a high risk of default when borrower take loan with small business purpose.



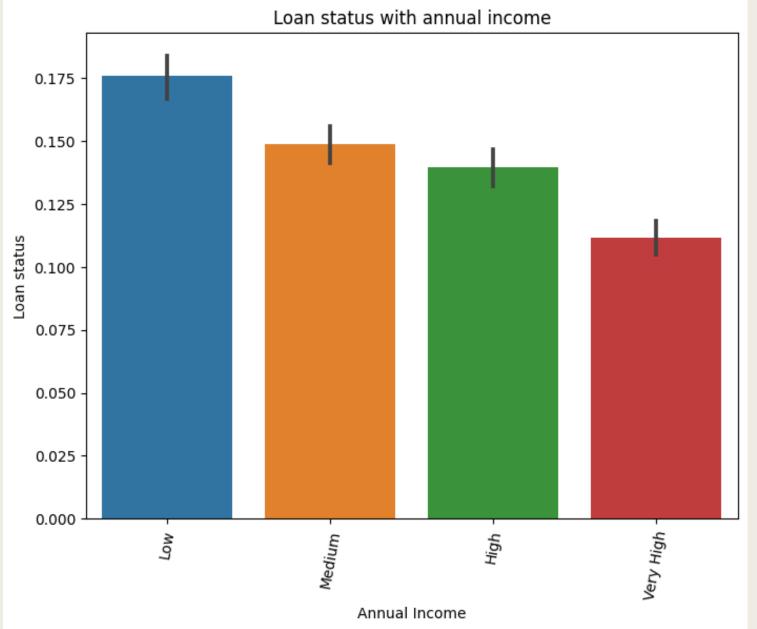
There is a high risk of default when amount is high



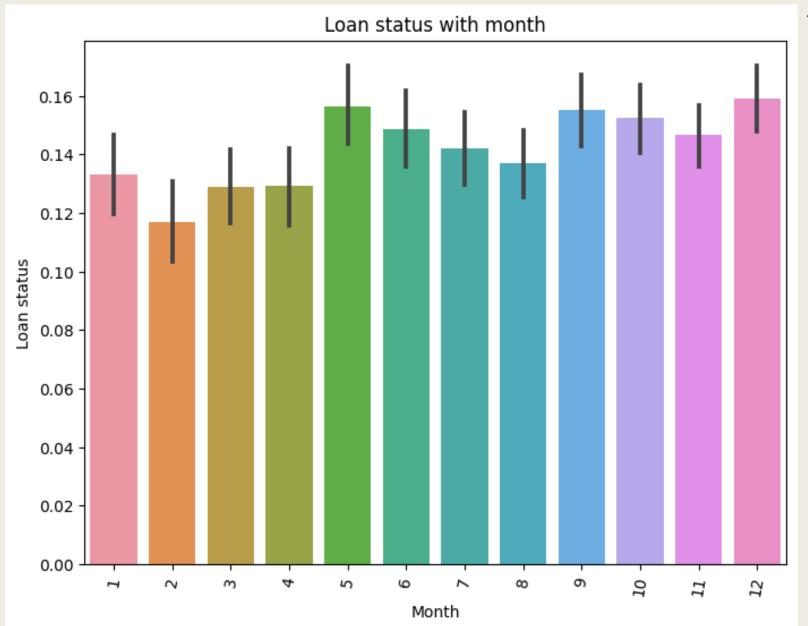
There is a high risk of default when amount is high



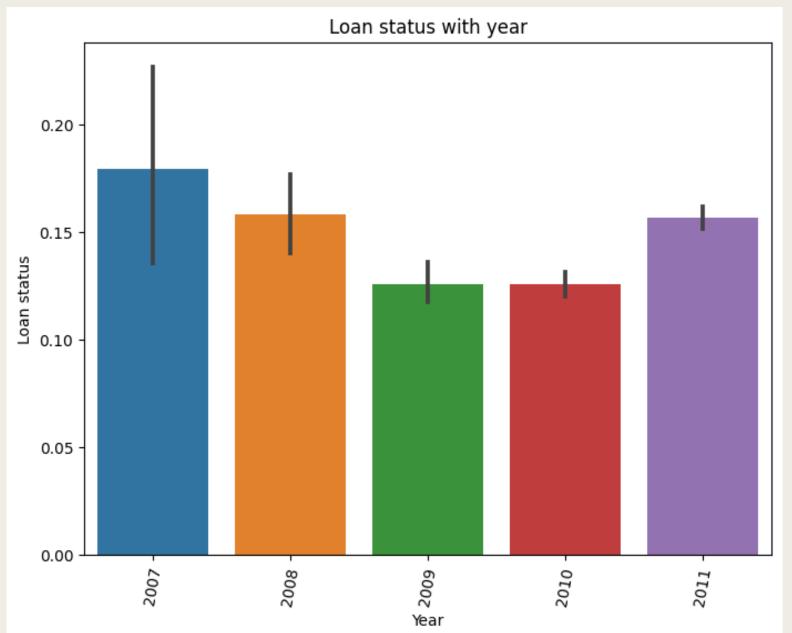
There is a high risk of default when interest rate is high



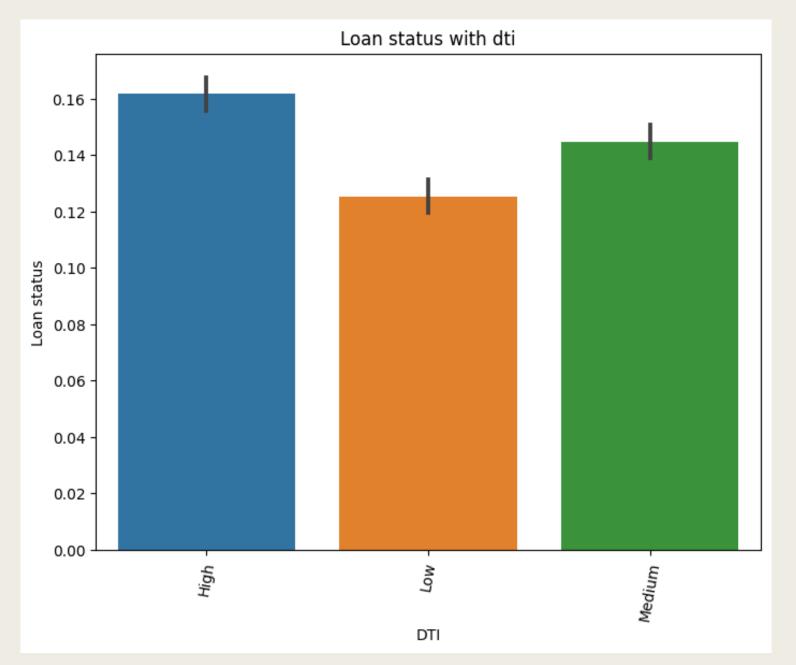
There is a high risk of default where annual income is low.



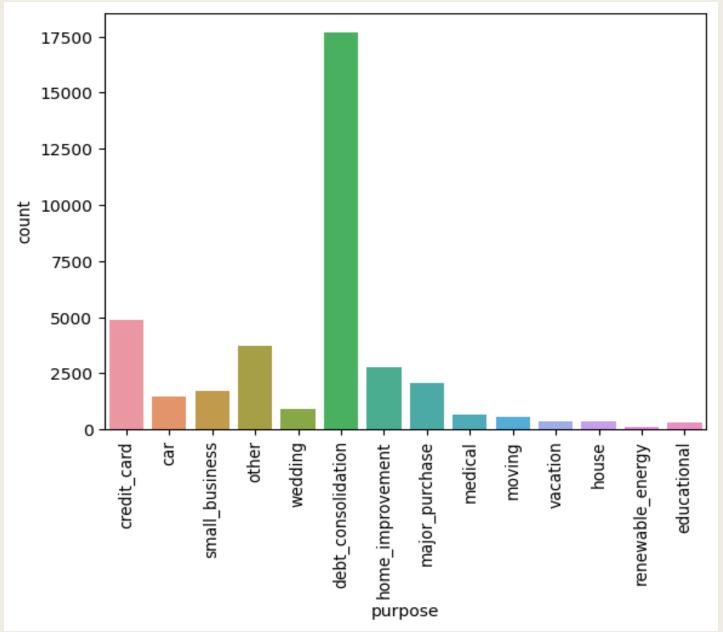
The default rate is high in the month of May and December.



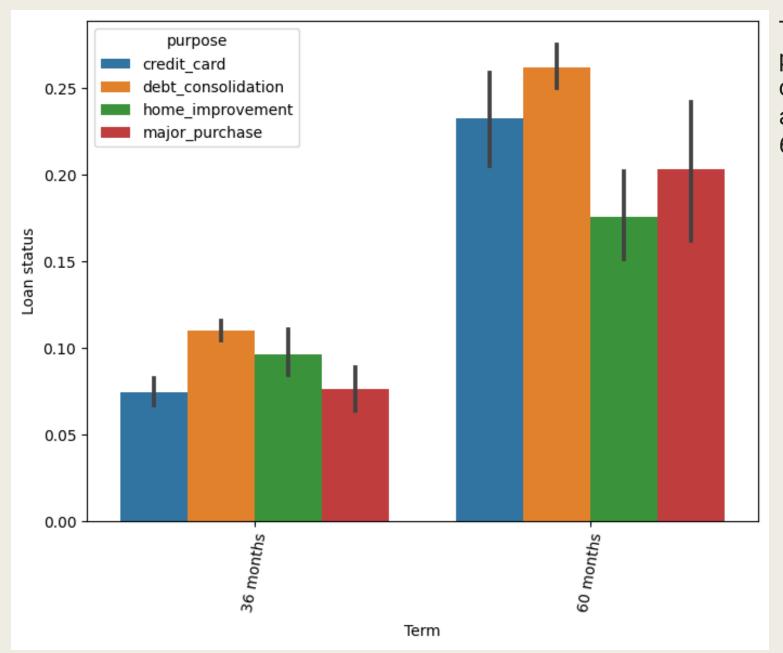
The default rate is high in the year of 2007 followed by 2008



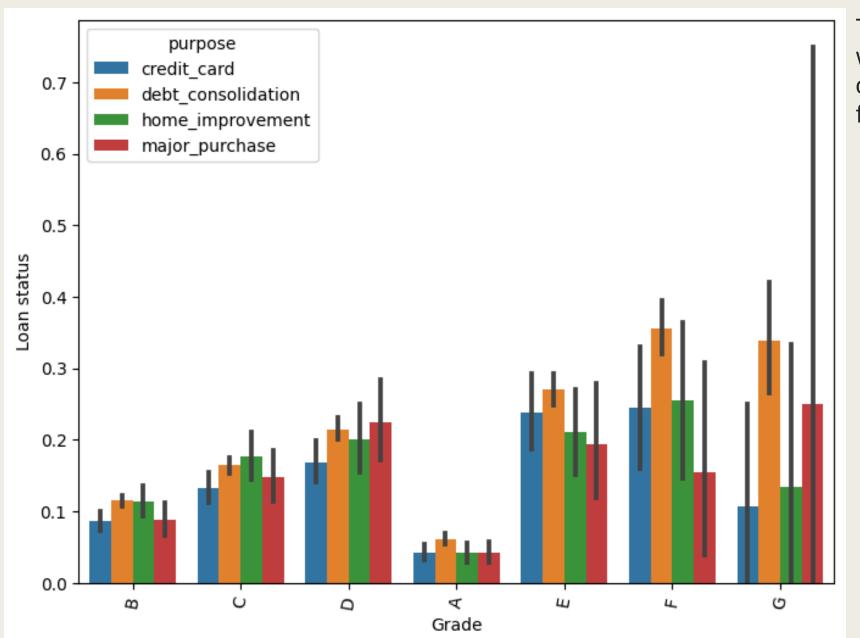
The default rate is high when dti is high.



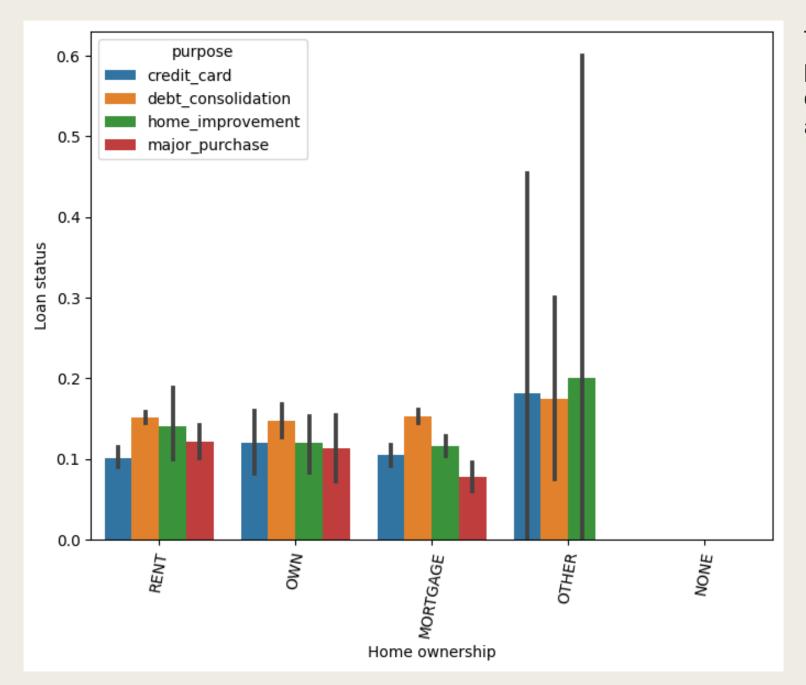
This shows all purposes of loan with count.



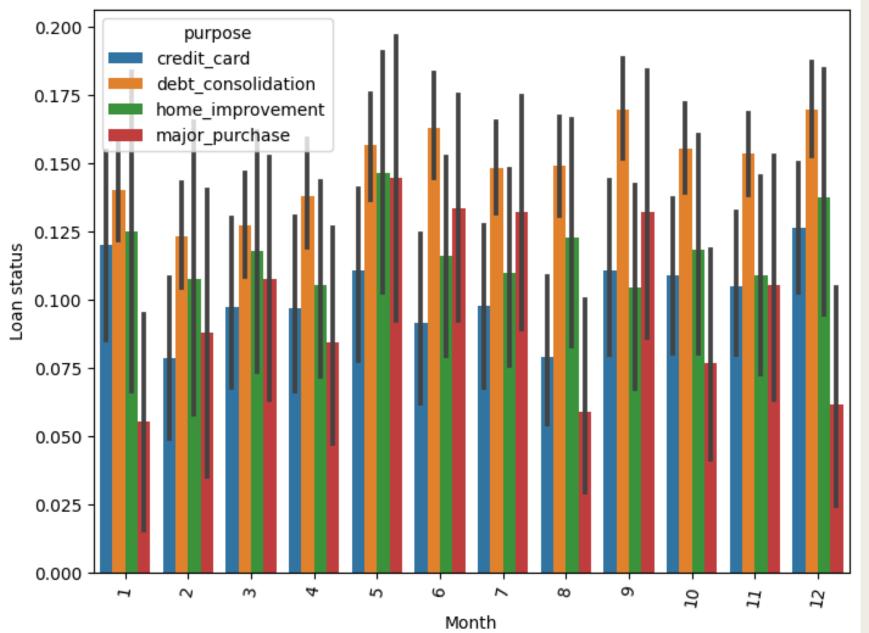
The default rate is high when purpose are debt consolidation, credit card, home improvement and major purchase and term is 60 months



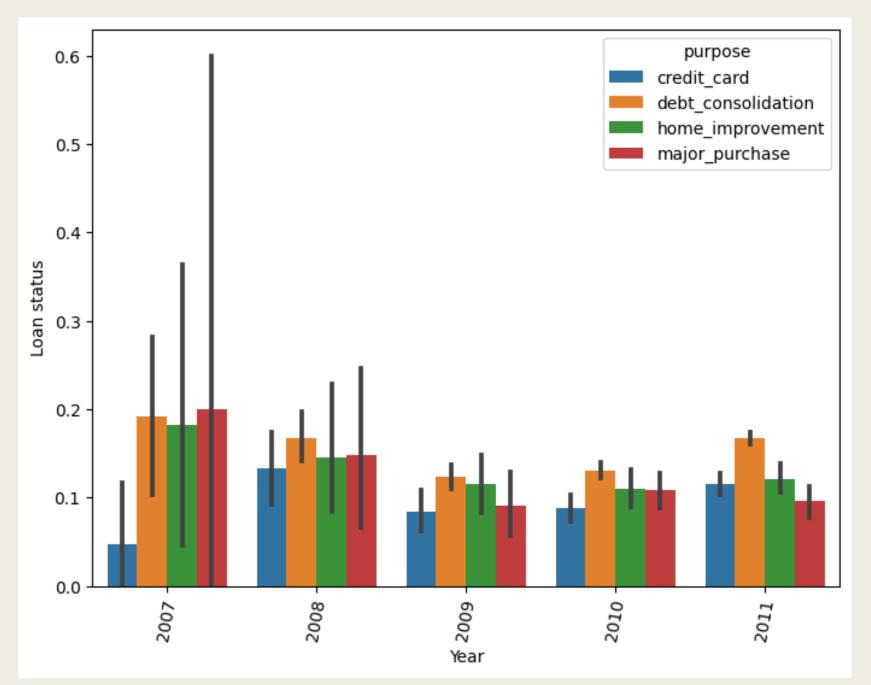
The default rate is high when purpose is debt consolidation and grade F followed by G



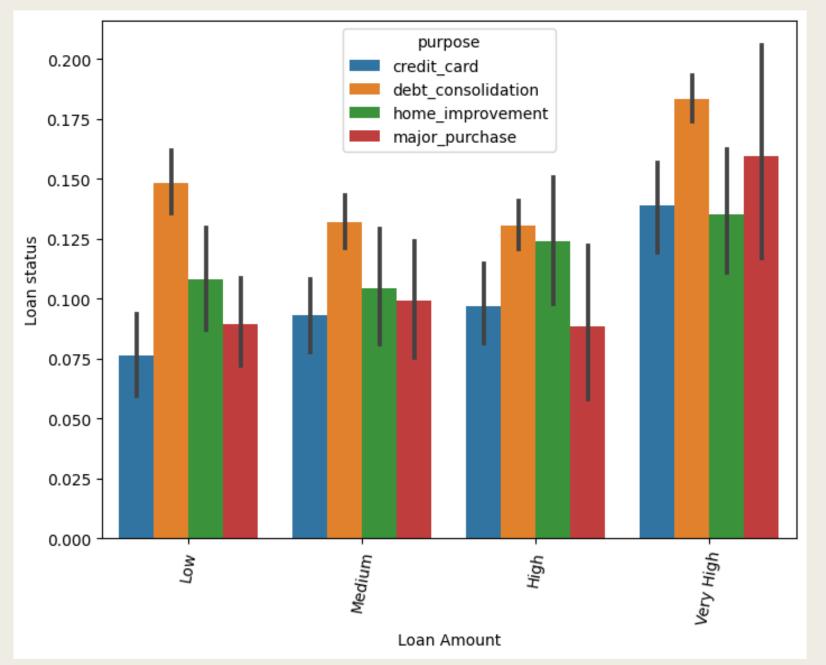
The default rate is high when purpose are debt consolidation, credit card, home improvement and home ownership is other.



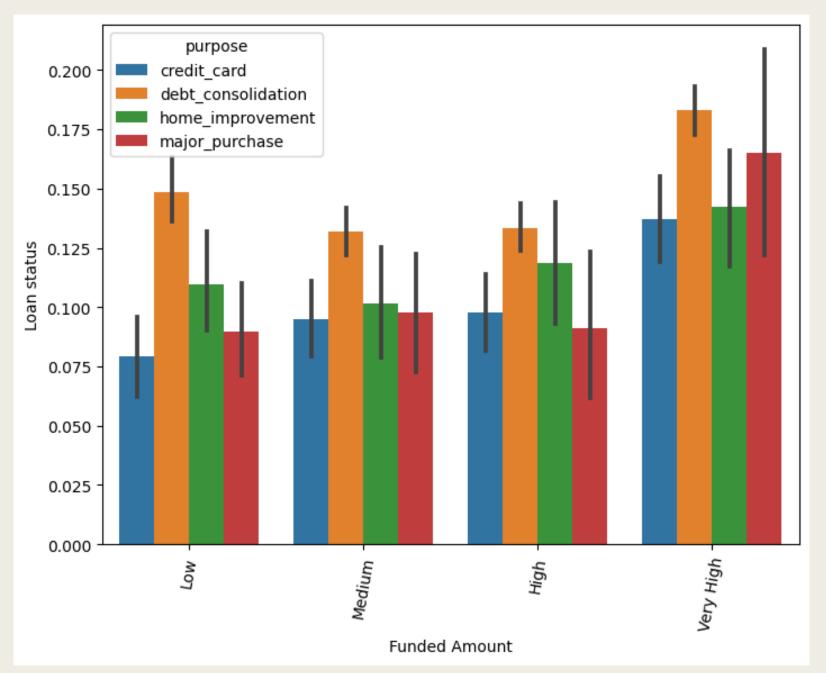
The default rate is high when purpose is debt consolidation and months are 6, 9 and 12



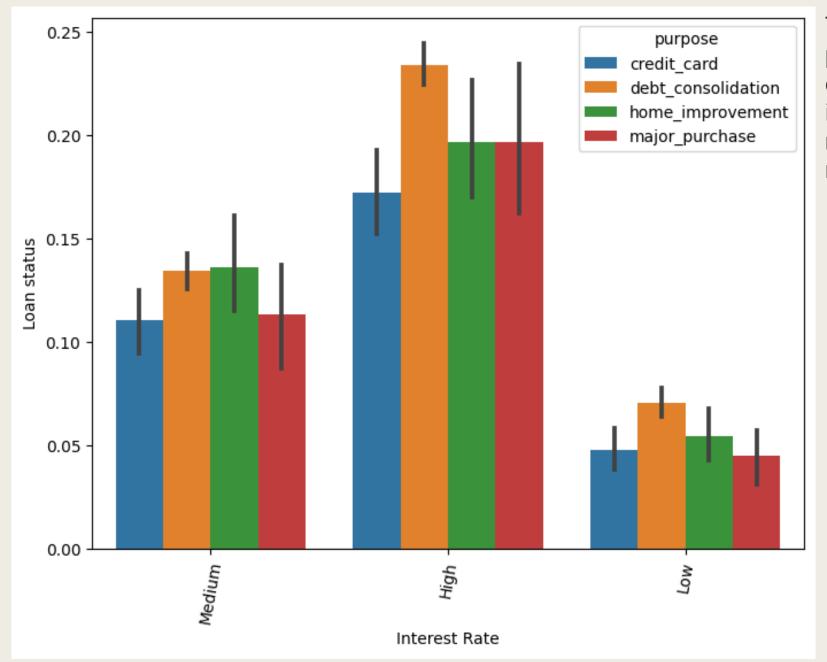
The default rate is high when purpose are debt consolidation, home improvement and major purchase and year is 2007. whereas default rate in 2008 with all selected purpose is high.



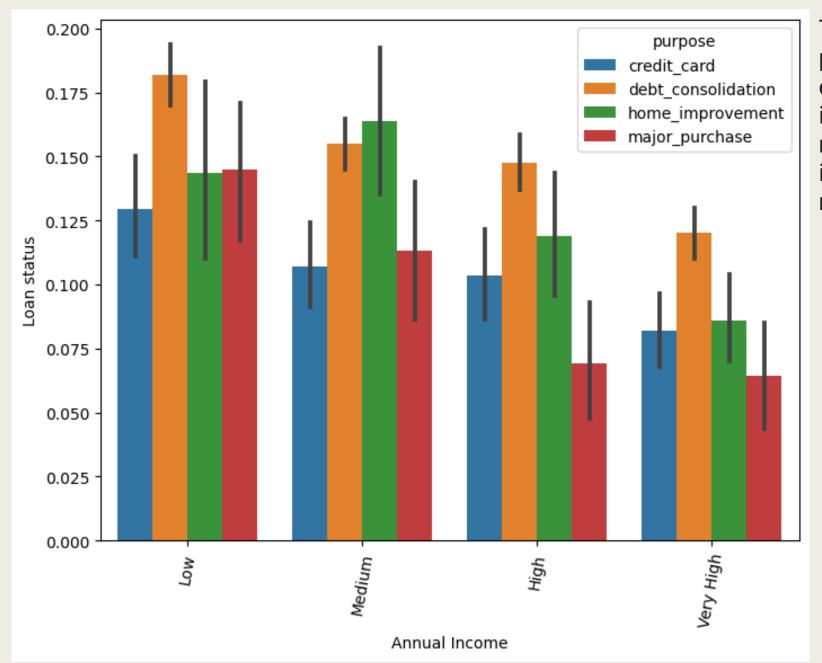
The default rate is high when purpose are debt consolidation, home improvement, credit card and major purchase and loan amount is very high. The default rate is also high when loan amount is low but purpose is debt consolidation.



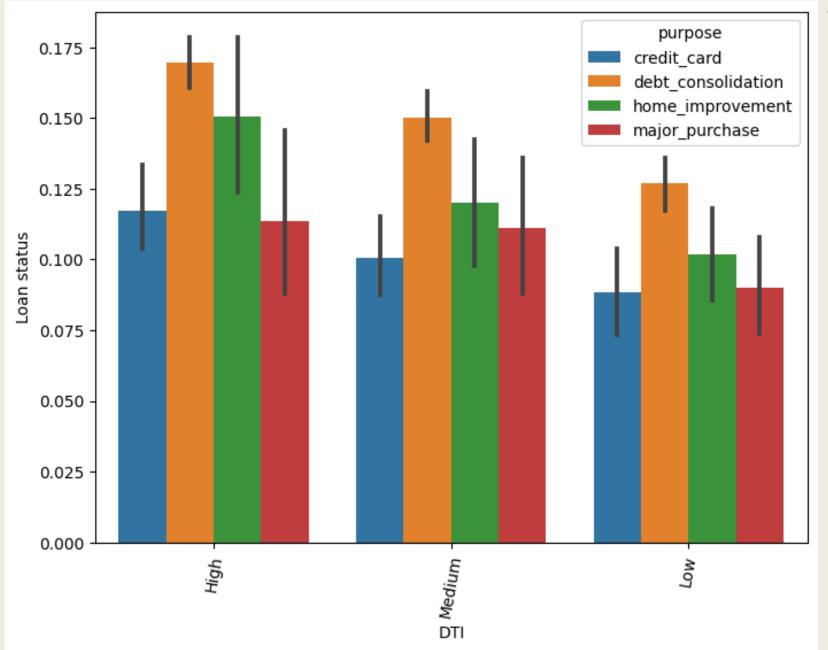
The default rate is high when purpose are debt consolidation, home improvement, credit card and major purchase and funded amount is very high. The default rate is also high when funded amount is low but purpose is debt consolidation.



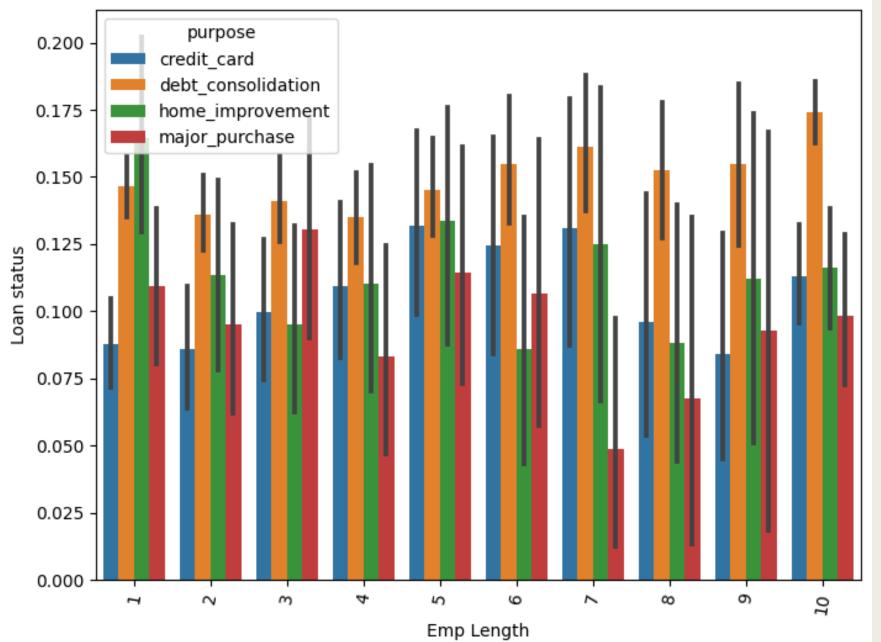
The default rate is high when purpose are debt consolidation, home improvement, credit card and major purchase and interest rate is very high.



The default rate is high when purpose are debt consolidation, home improvement, credit card and major purchase and annual income is low followed by medium.



The default rate is high when purpose are debt consolidation, home improvement, credit card and major purchase and dti is very high.



The default rate is high when purpose are debt consolidation and employee length is between 7 to 10.