

LENDING CLUB CASE STUDY

SUBMISSION

Name:

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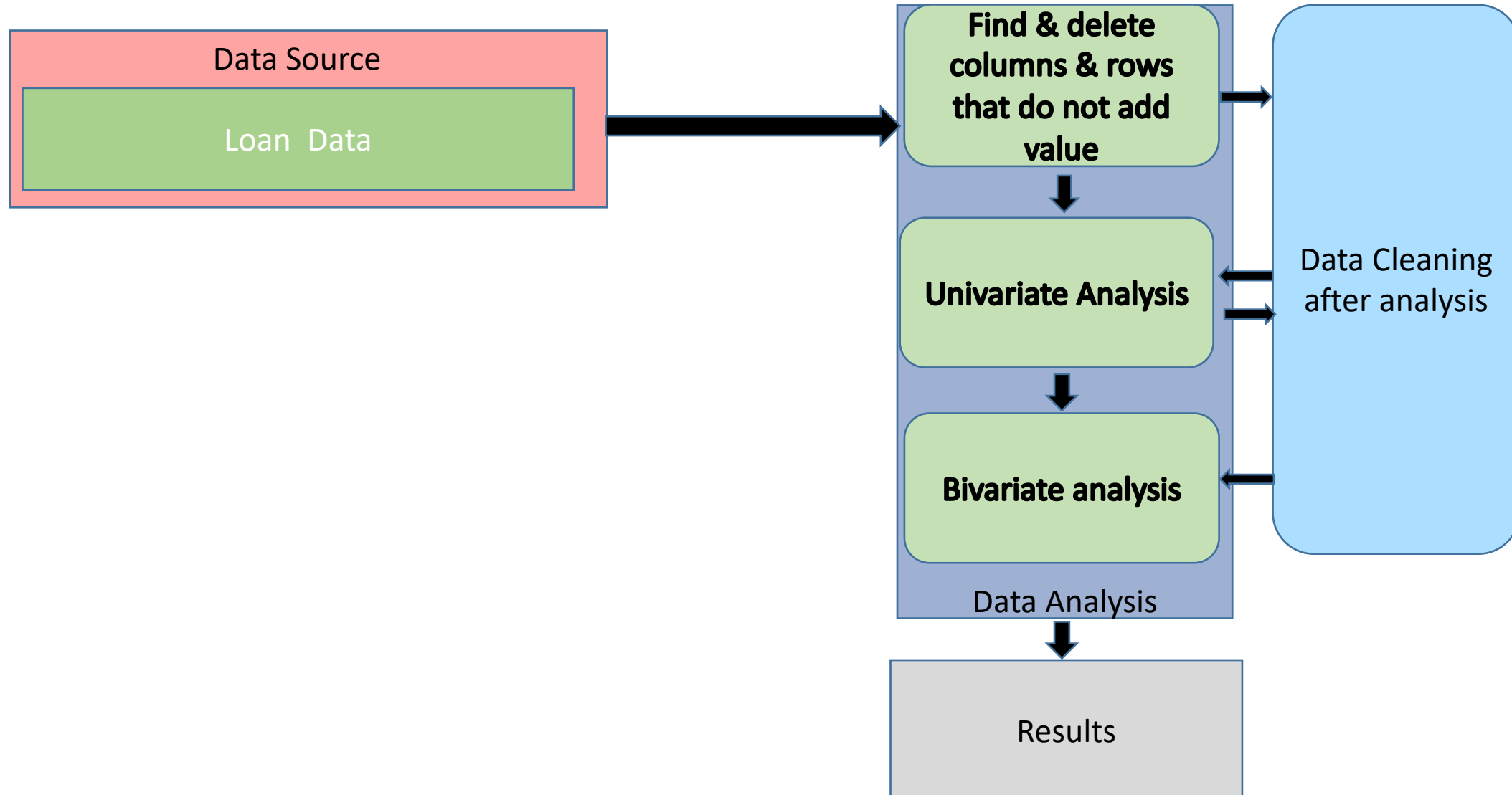
ABSTRACT

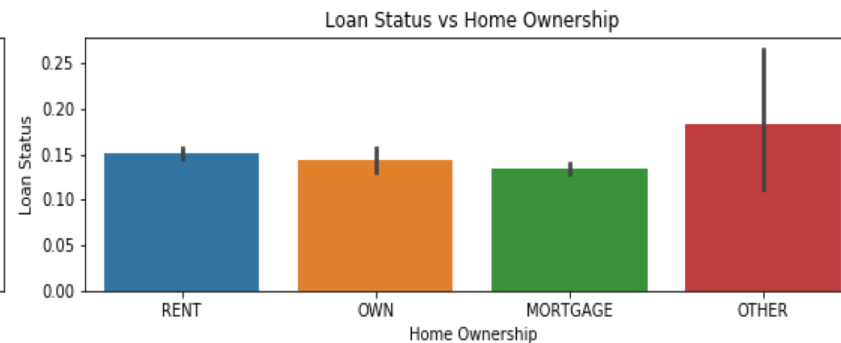
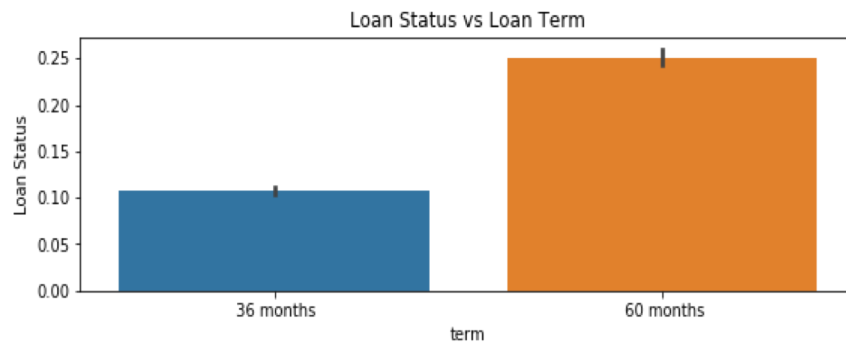
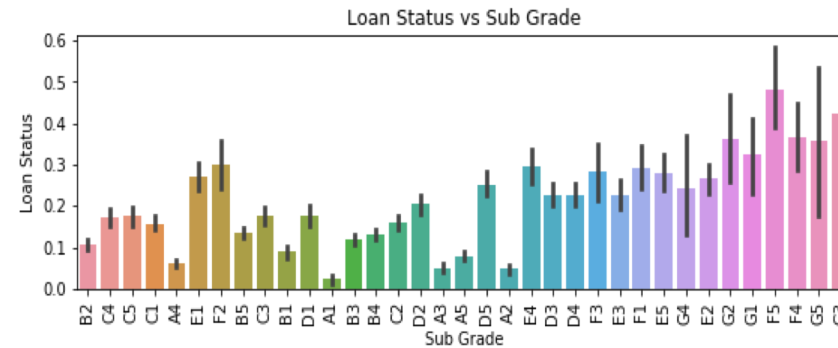
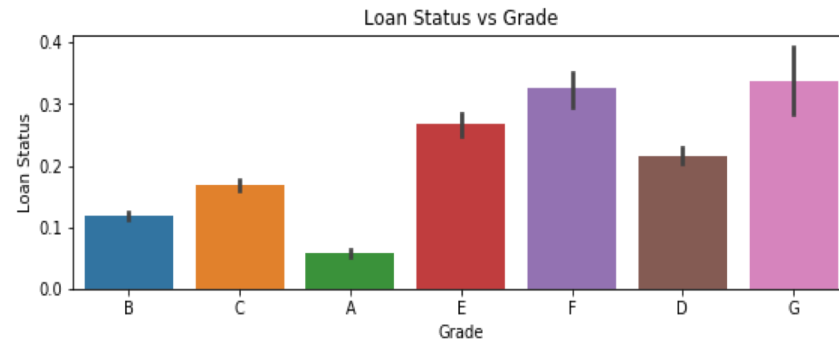
Lending Club is the largest online loan marketplace. It has two main risks involved:

- 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

Hence, our **objective** is to analyse and identify the variables that are strong indicators of default.

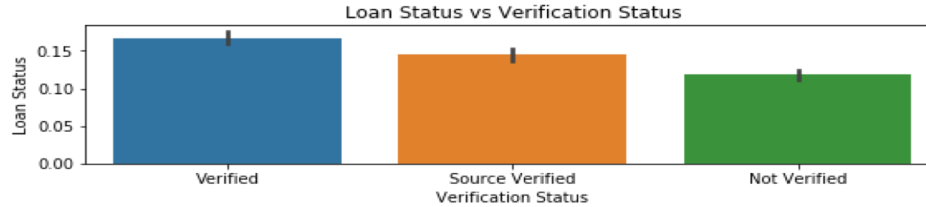
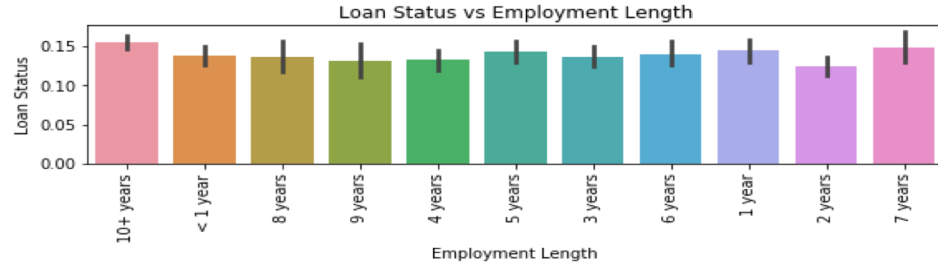
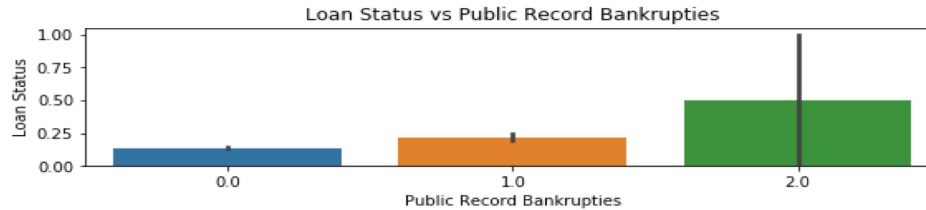
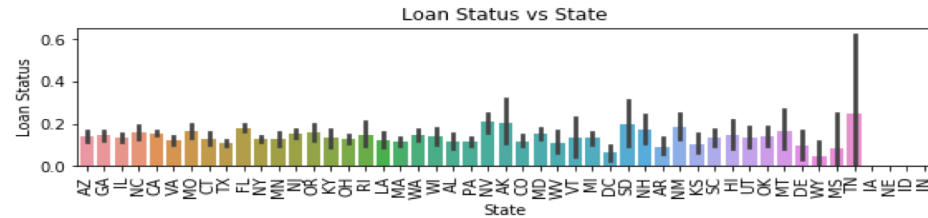
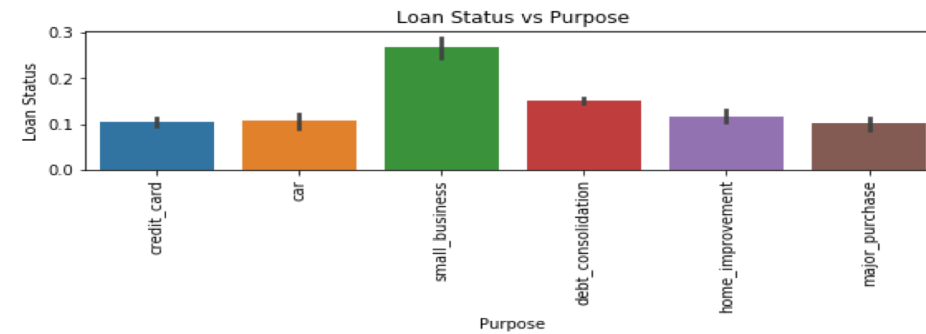
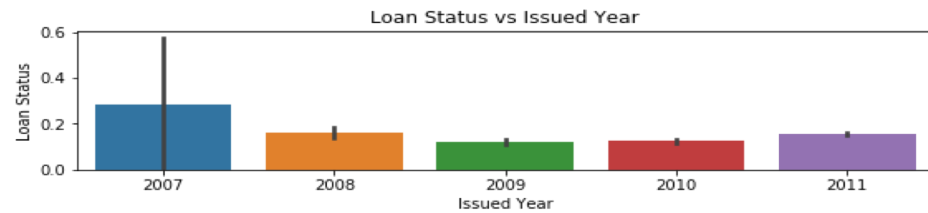
PROBLEM SOLVING METHOD





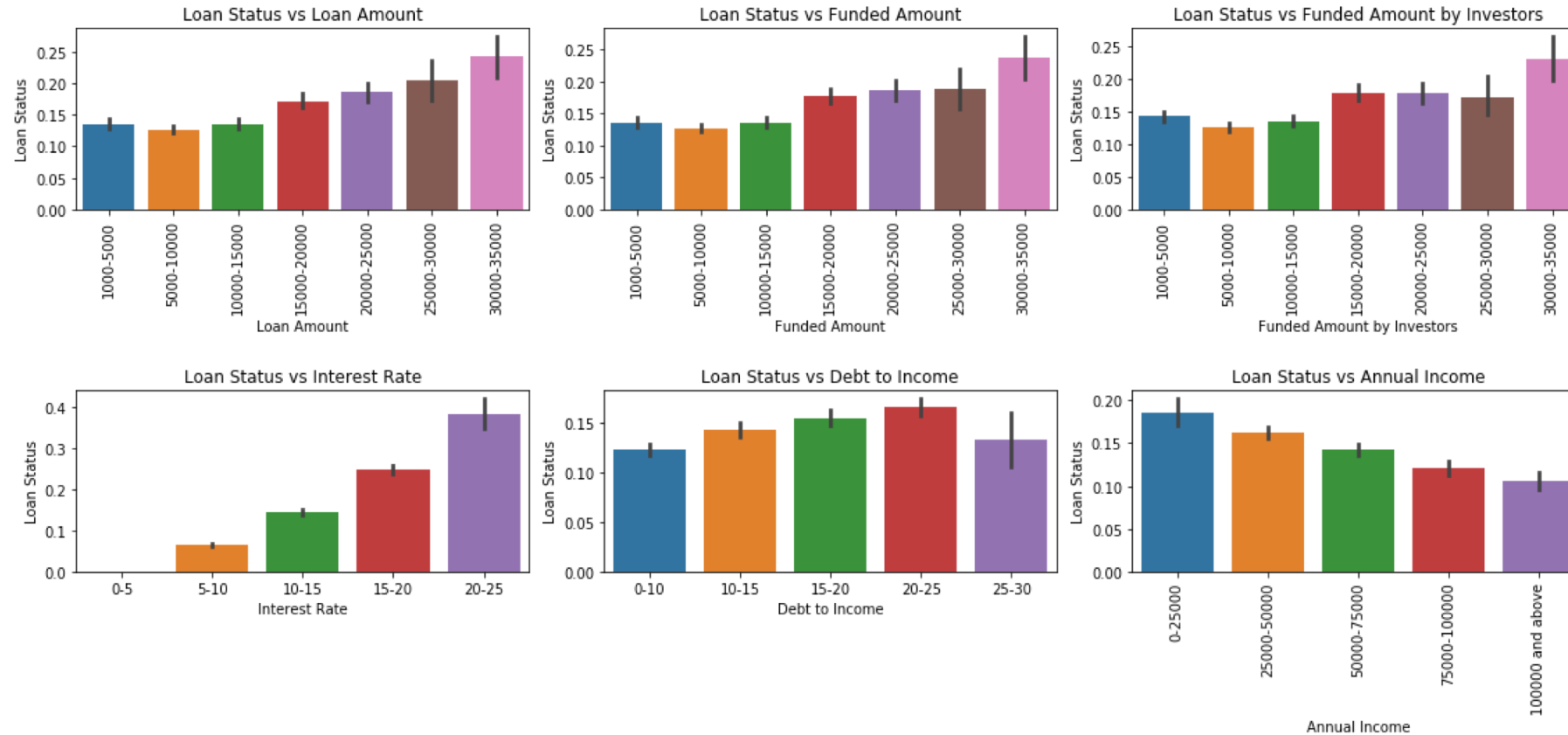
Observations:-

- Percentage of defaulters is increased from grade A to grade G and it is high for loan grade G.
- Percentage of defaulters are relatively increased from sub grade A1 to sub grade G3. However, we can see that % of defaulters are high for sub grade F5.
- Percentage of defaulters are high with loan Term.
- Defaulters are high for homeownership as 'Other'. If we don't consider other, defaulters are high for Borrowers who are staying for rent.



Observations:-

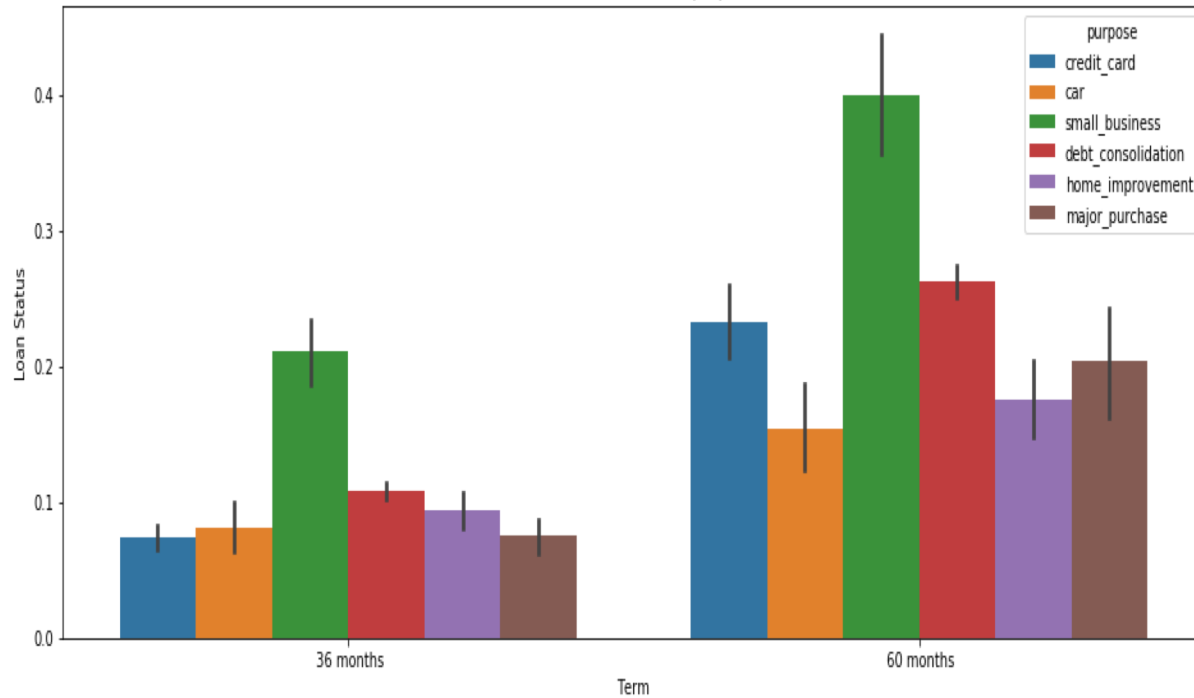
- % of defaulters are high in year 2007 and then gradually decreased and in 2011 increased again.
- Percentage of defaulters are high for borrowers who run small business
- Percentage of defaulters are high in state TN. There are no defaulters in the states NE, ID and IN.
- Defaulters are high for borrowers who has public record bankruptcies equal to '2'
- There is no specific pattern observed for length of employment with Loan Status
- Borrowers who are verified by lending club are tend to more defaulters



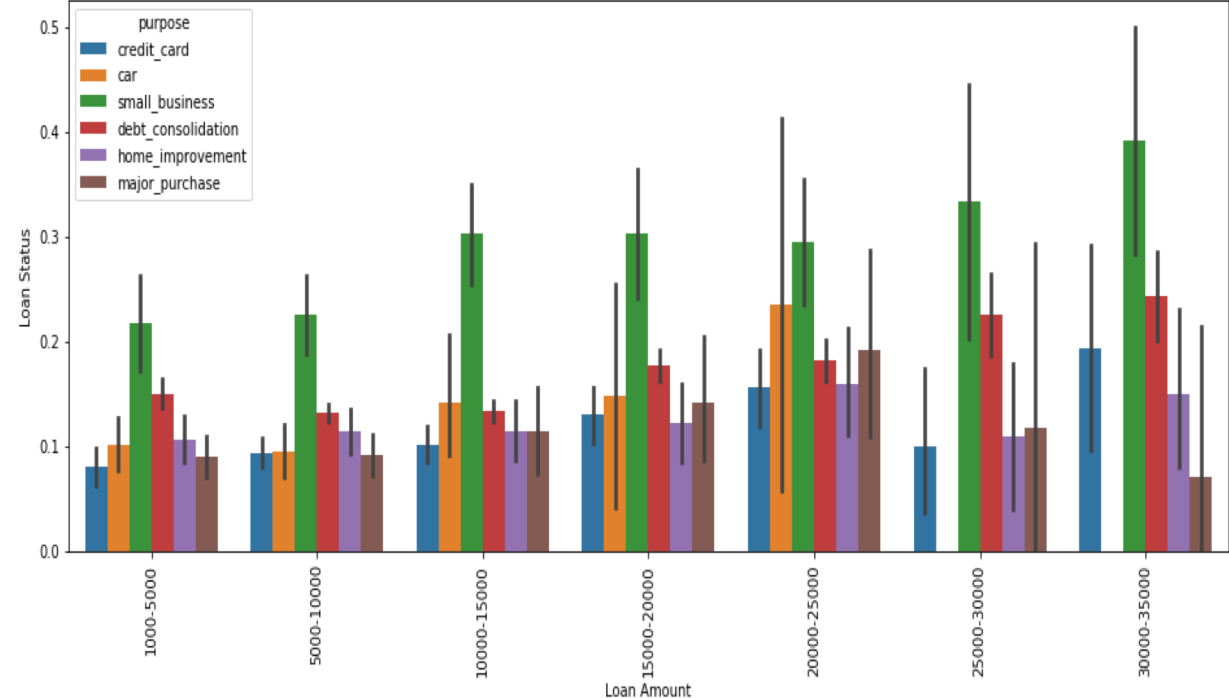
Observations:-

- Percentage of defaulters are high for borrowers who took loan amount between 30k to 35k.
- Percentage of defaulters are high for borrowers who are funded with amount between 30k to 35k.
- Percentage of defaulters are high for borrowers who are funded by investors with amount between 30 to 35k
- % of defaulters are high for the borrowers who took loan at interest rate between 20 to 25%.
- Percentage of defaulters are high for the borrowers who has debt to income between 20 to 25.
- Percentage of defaulters are high for the borrowers who has annual income less than 25K.

Loan Status vs Term & purpose



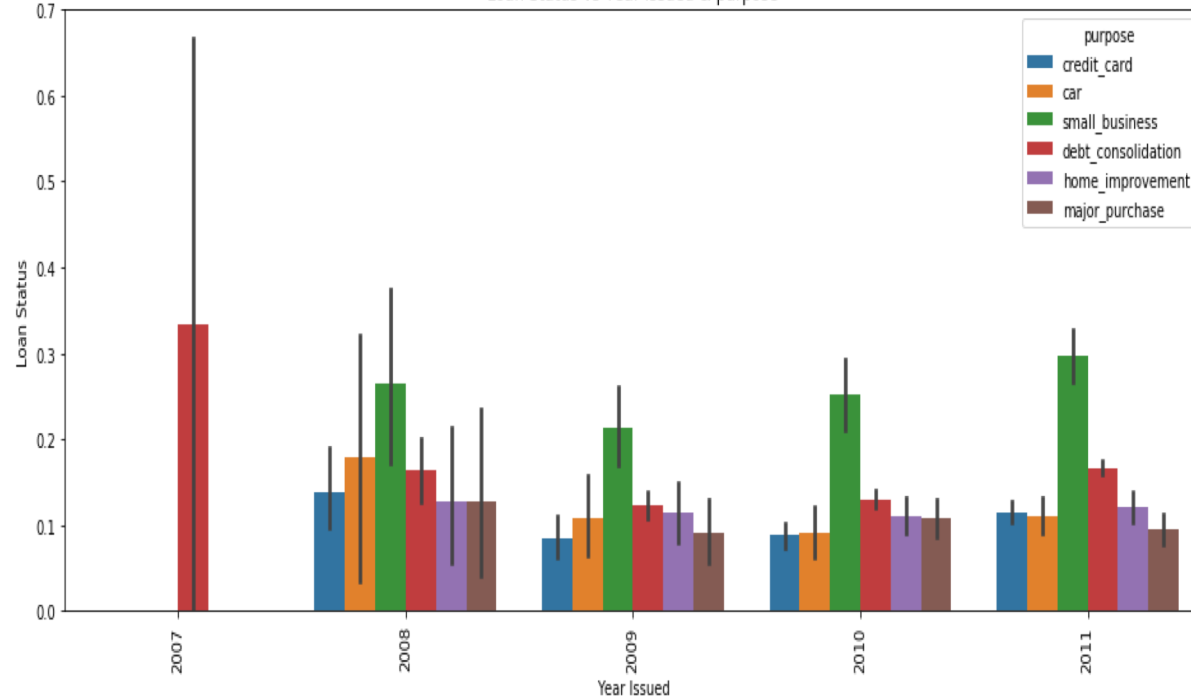
Loan Status vs Loan Amount & purpose



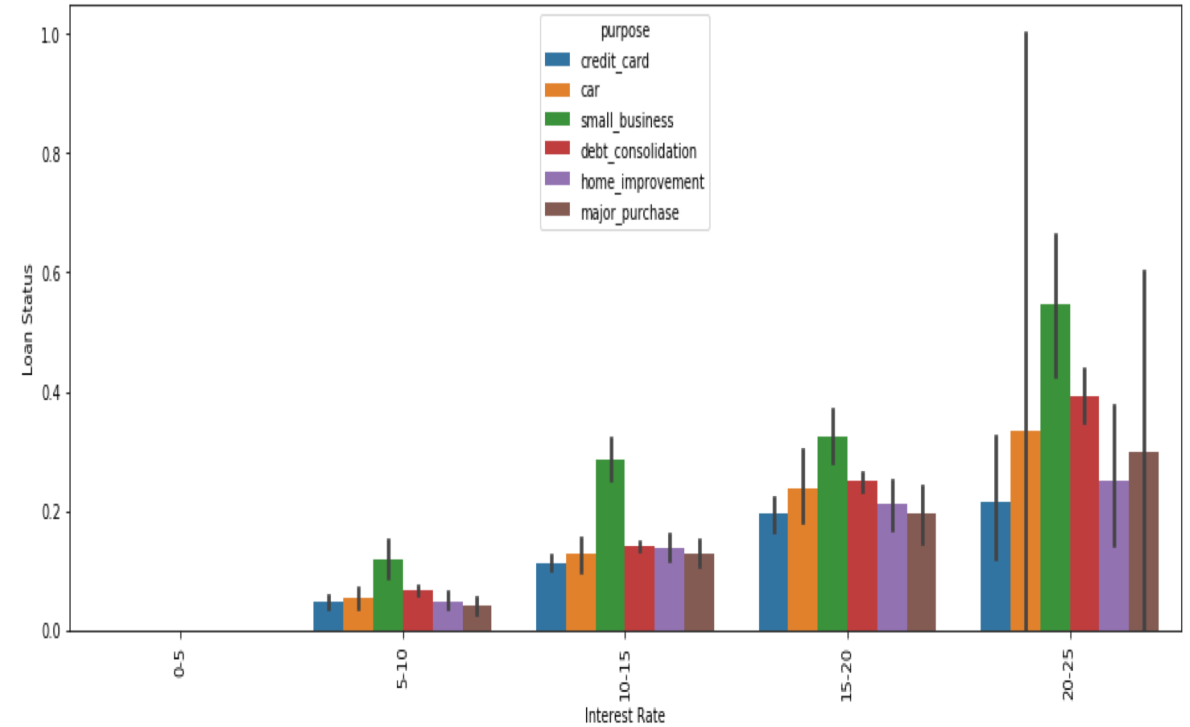
Observations:-

- For the loan term 30 and 60 months, we can see that percentage of defaulters are more who took loan for small business and then debt consolidation.
- The borrowers whose loan amount is between 25k to 35k for small business are more defaulters. Irrespective of loan amount the defaulters are less whose loan amount is between 1K to 5K.

Loan Status vs Year Issued & purpose

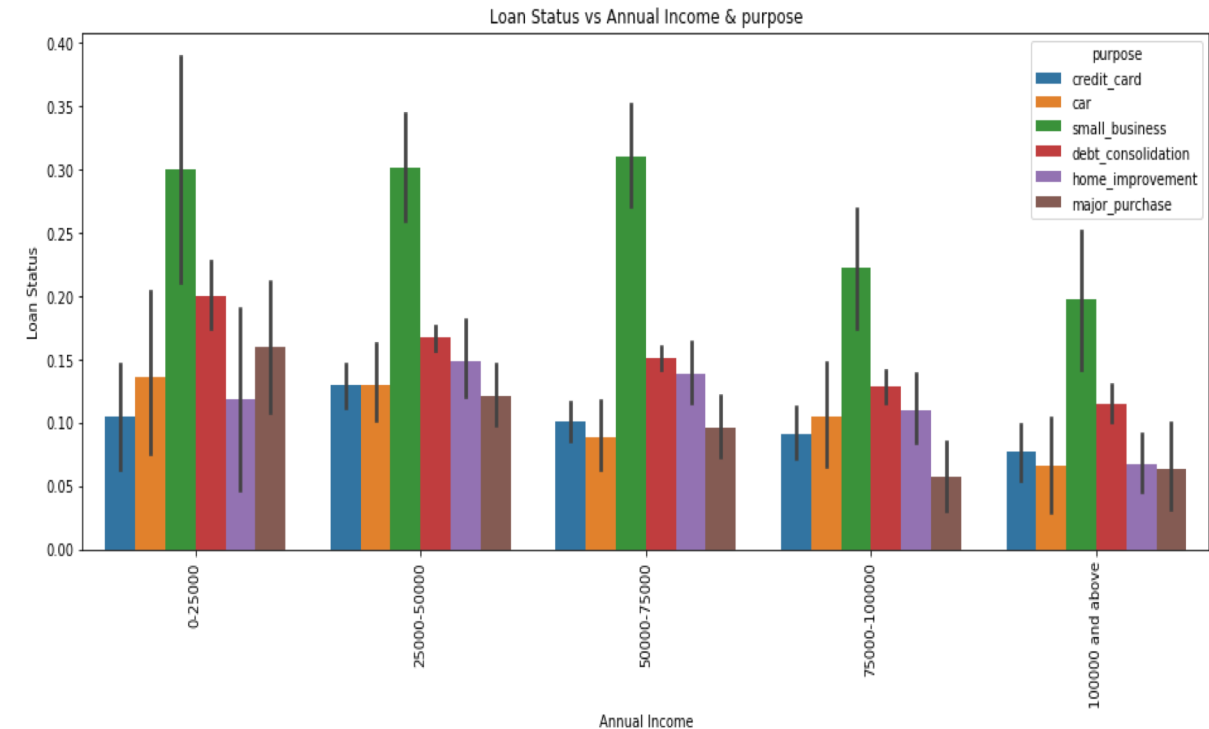
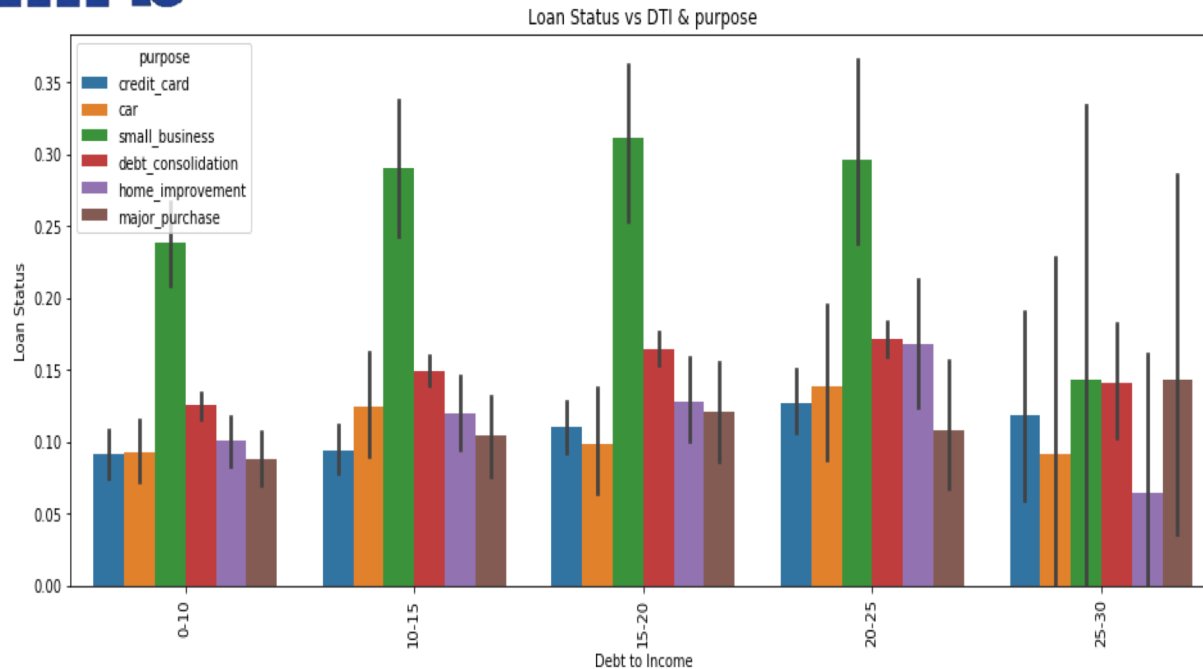


Loan Status vs Interest Rate & purpose



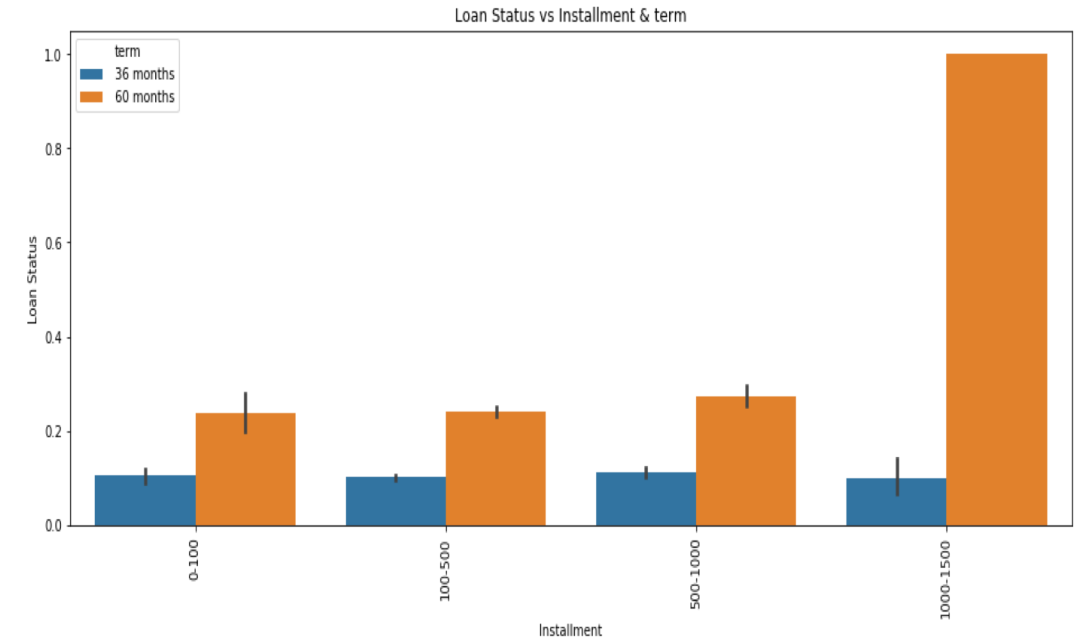
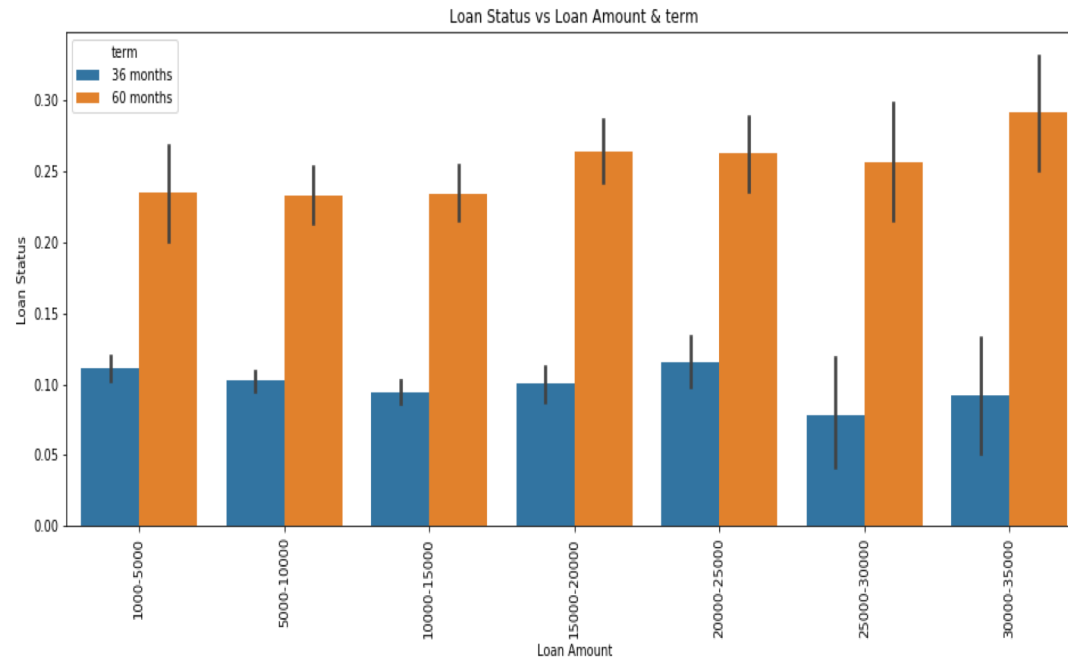
Observations:-

- Most people who took loan in 2007 for debt consolidation are more defaulters
- Irrespective of the purpose, the borrowers who took loan with interest rate 20 to 25% are more defaulters.



Observations:-

- From the above plot we can see that the defaulters are less whose debt to income is in range of 25 to 30 irrespective of the purpose of the loan.
- Irrespective of the DTI range, the default % is more for people who took loan for small business.
- Irrespective of the annual income range, borrowers who took loan for small business are more defaulters.
- After Small business, people who took loan for debt consolidation are more defaulters.
- Default % is relatively less for the borrowers who has annual income greater than or equal to 100K and less for whose annual income is less than equal to 2500.



Observations:-

- Irrespective of the loan amount, people took loan for 60 month tenure are more defaulters.
- Irrespective of the Interest Rate, people took loan for 60 month tenure are more defaulters.

Conclusions

- **Application Variables:-**

- Percentage of defaulters are high for borrowers who run small business
- Percentage of defaulters are high in state TN. There are no defaulters in the states NE, ID and IN
- Defaulters are high for the borrowers who has annual income less than 25K.
- Defaulters are high whose homeownership is 'Other'. If we don't consider other, defaulters are high for Borrowers who are staying for rent.

- **Loan Variables:-**

- Percentage of Defaulters are increased from grade A to grade G and it is high for loan grade G.
- Default percentage is high for loan term 60 months compared to 36 months.
- Defaulters are high in the year 2007.
- Defaulters are high for the borrowers who has public record bankruptcies are 2.
- Borrowers whose income is verified by lending club are more defaulters.
- Defaulters are high for borrowers who took loan amount between 30k to 35k.
- % of defaulters are high for the borrowers who took loan at interest rate between 20 to 25%
- % of defaulters are high for the borrowers who has annual income less than 25K.
- % of defaulters are high for the borrowers who has debt to income between 20 to 25.
- Defaulters are high for borrowers who are funded with amount between 30k to 35k. 3.