Lending Club Case Study

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<Abstract>

•Lending Club provides loan to its applicants for majority of purpose like car loan,small businesses, debt consolidation etc.

•A wide range of grades of borrowers is available who can avail loans on a given span of interest.

•The aim of this analysis is to predict a pattern by observing parameters by which a borrower may turn up into a defaulter.

•Such analysis will surely help the bank/company from monetary losses.

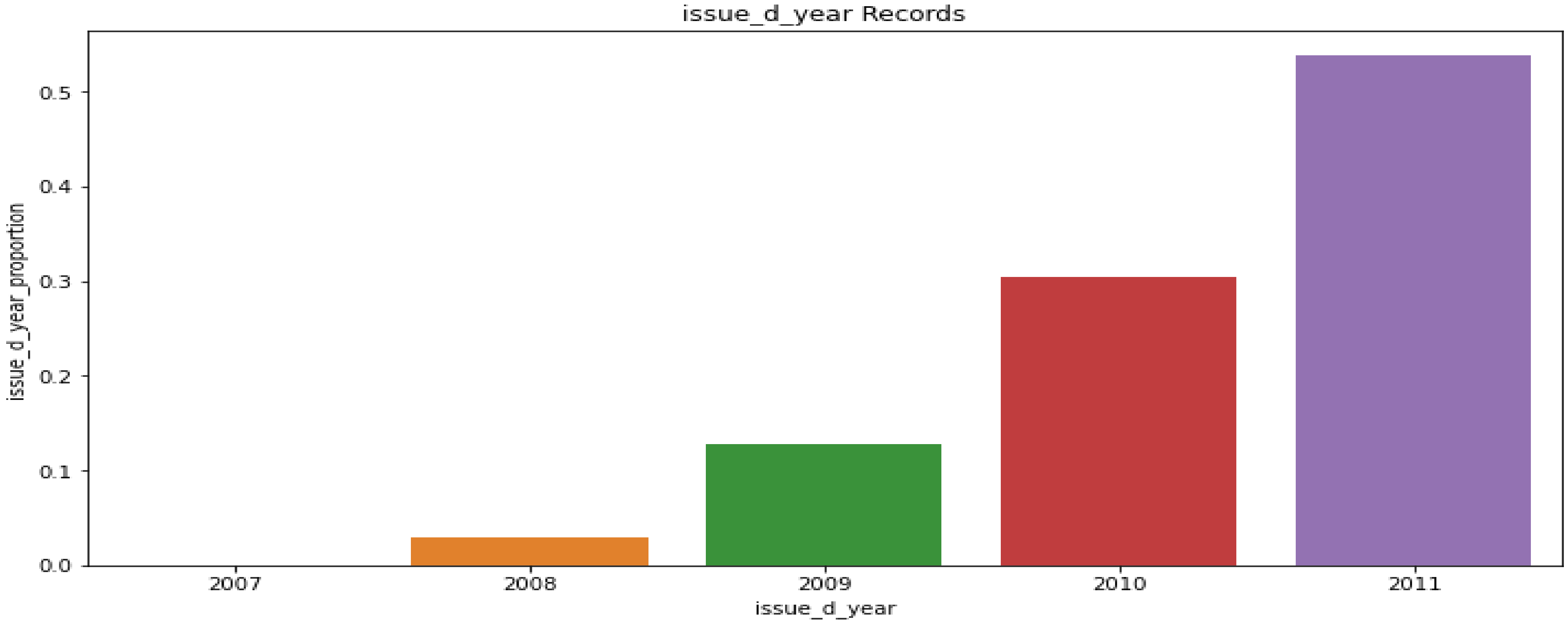
<Problem solving methodology>

- ***Data Cleaning-*** Removing unnecessary columns , null rows from given data.
- ***Data Understanding*** – Acknowledging important parameters from data dictionary given to analyze.

- ***Univariate Analysis –***Analysing sorted columns and observing their distribution .
- ***Bivariate Analysis*** – Comparing two sorted columns and their correlation with each other.

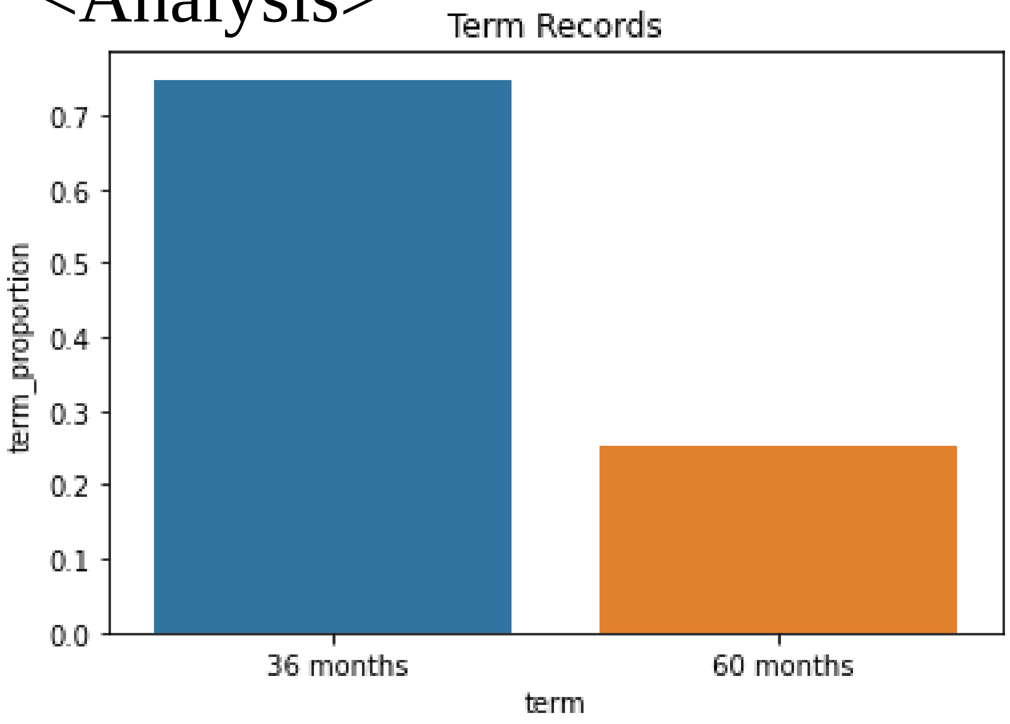
- ***Results and Recommendations*** – Observing all plots and patterns will lead to identifying would be loan defaulters.

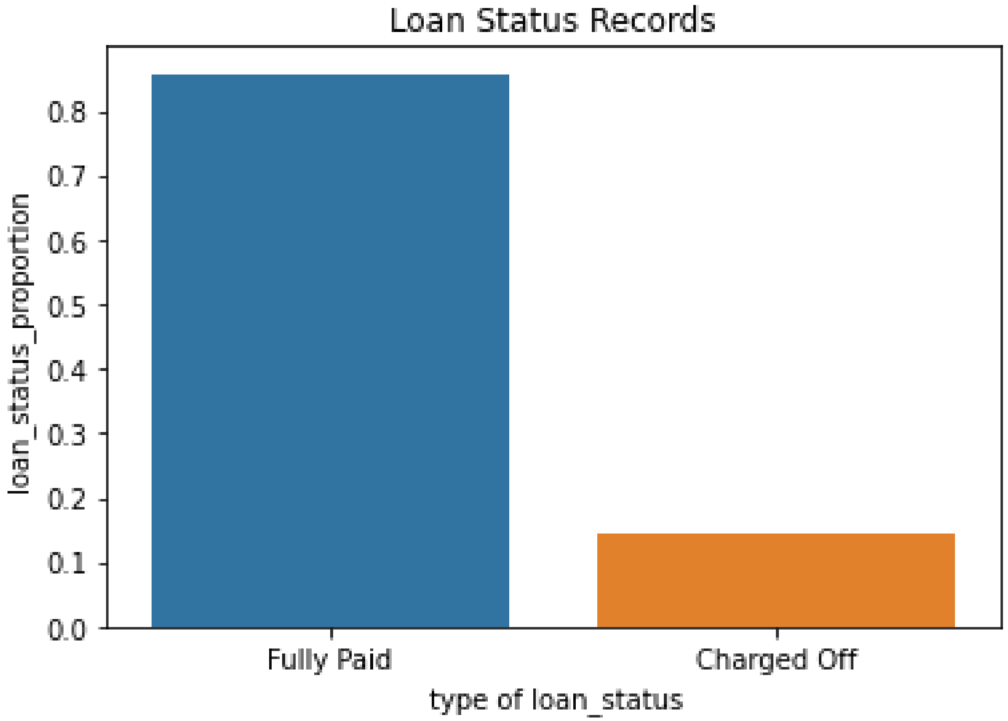
<Analysis>



- Business of Lending club is on rise since from the year 2008.The company allocated maximum loan in the year 2011.

<Analysis>





- The club offers two term plans mainly, 36 months and 60 months plan. About more than 75% borrower took 36 month plan.
- Charged off defaulters accounts to about 15% while rest are in fully paid domain .

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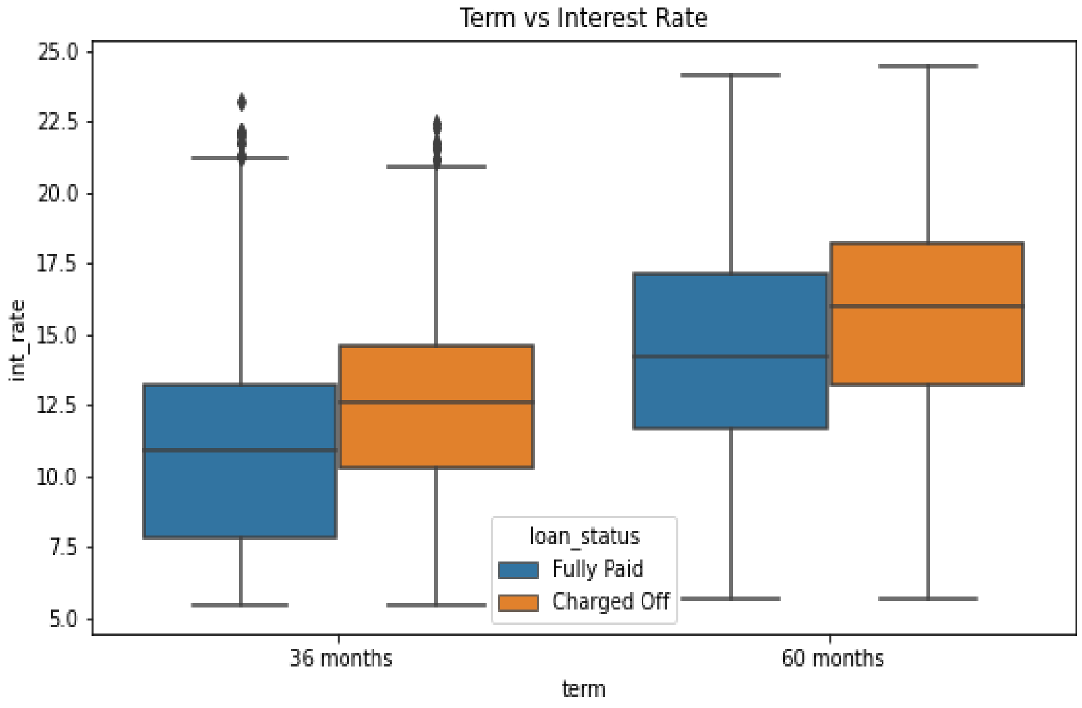

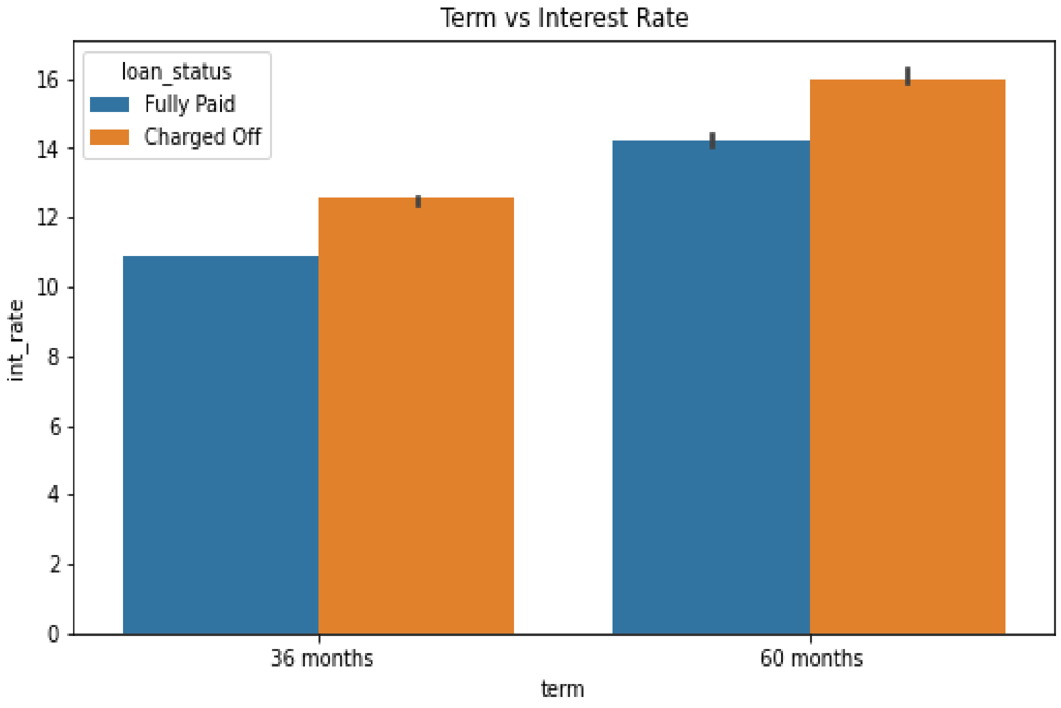

- It can be observed that when there is high rate of interest involved, borrowers default considerably.
- Default rate is high in 60 months term plan because borrowers took large chunk of loan which they could not pay back.

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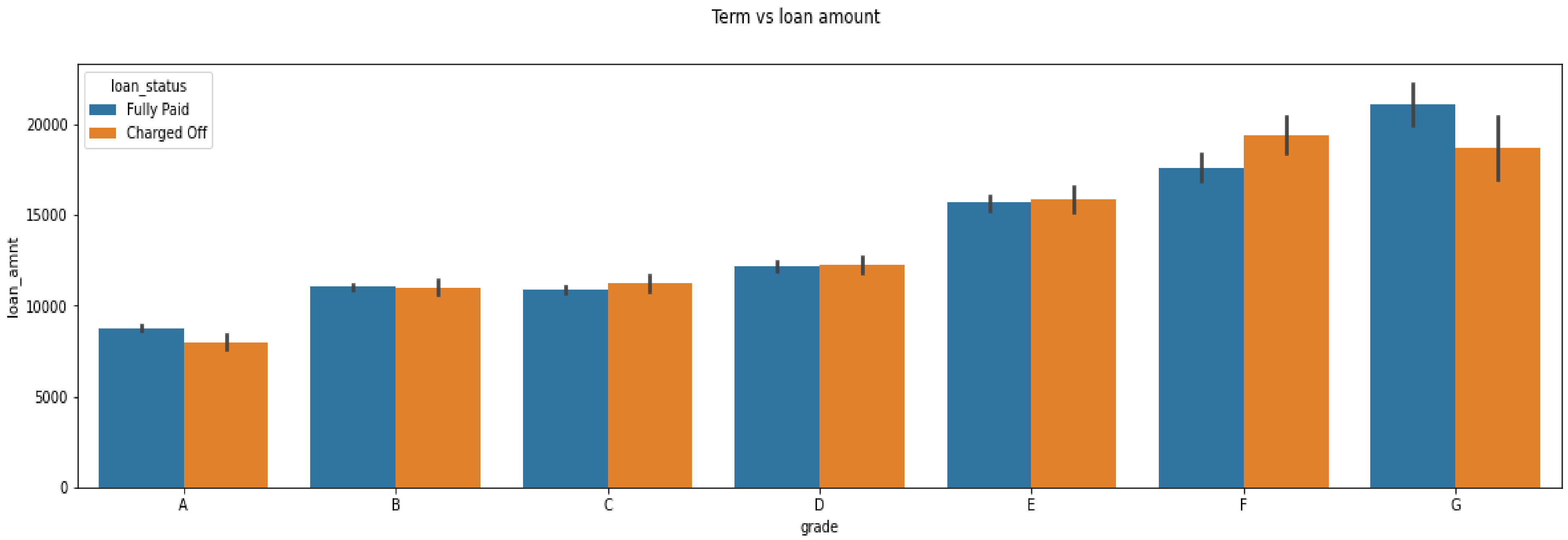

- Further it can be seen that when grade of borrowers decline ,charged off rate shoots up.
- This could be due to higher interest rates subjected to them.

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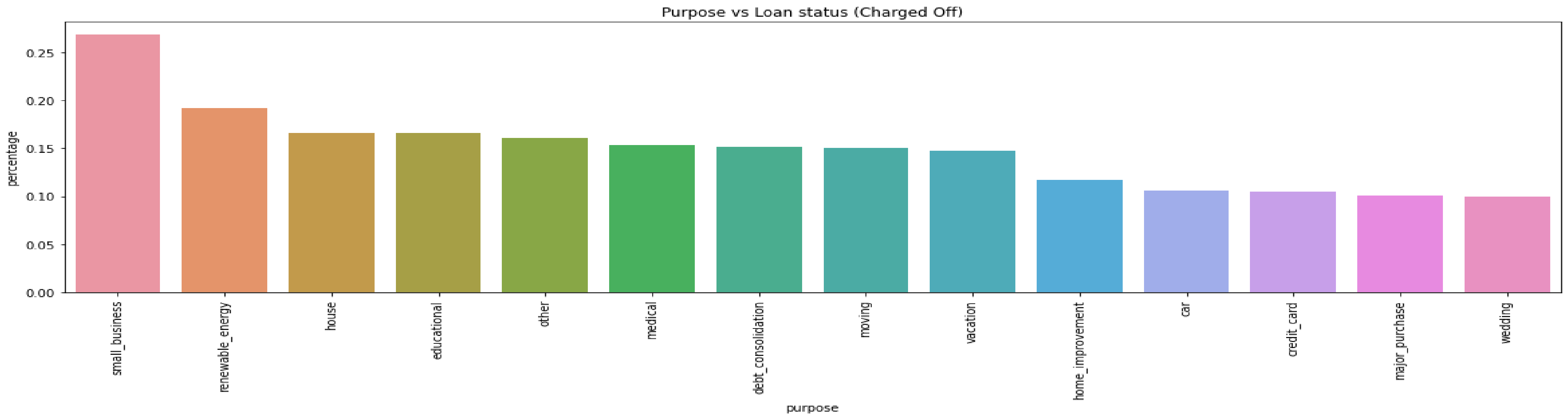
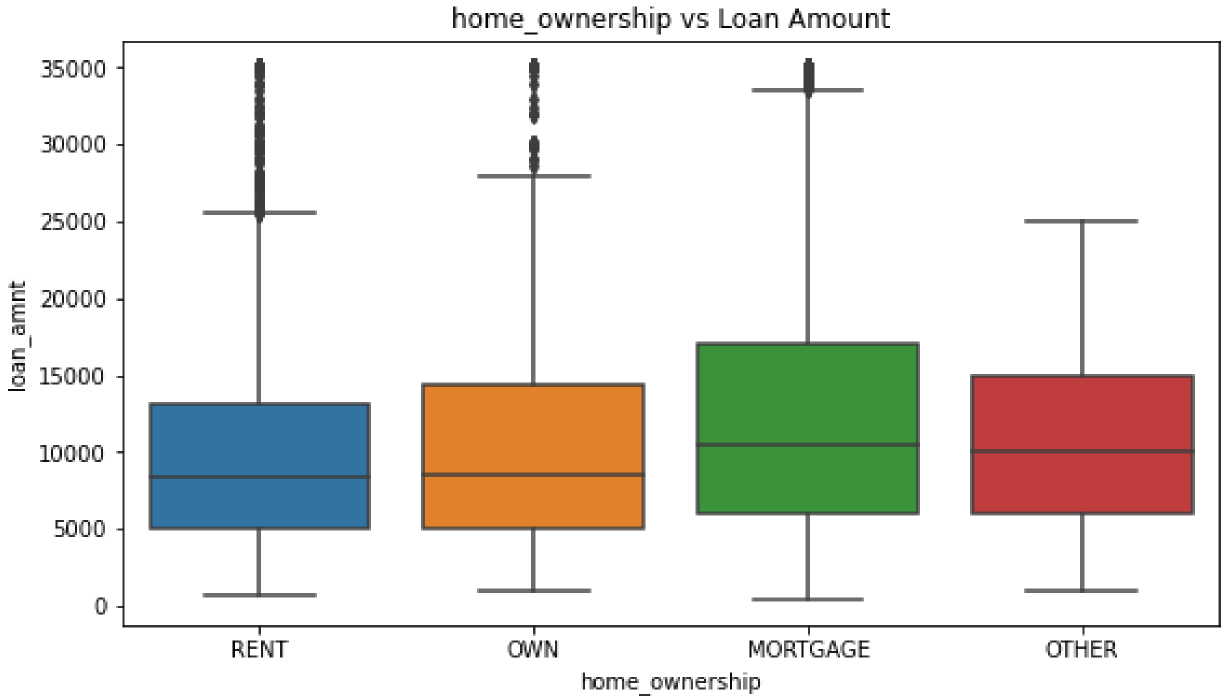
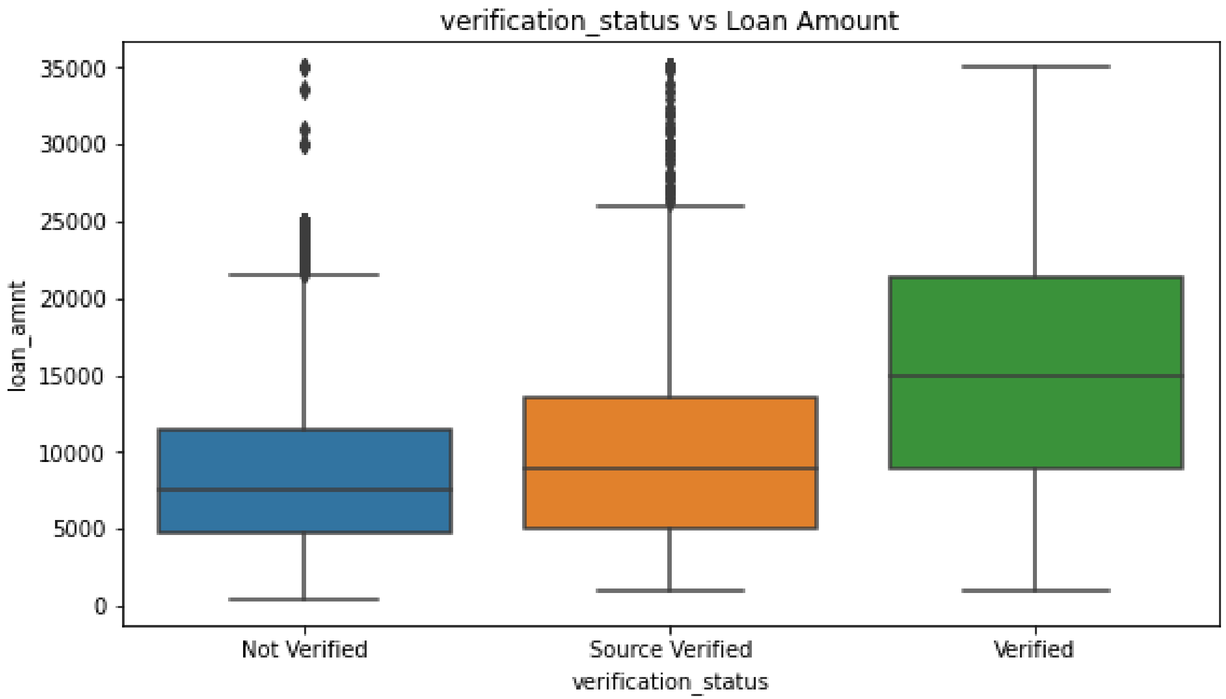


- Above plot shows purpose of the charged off borrowers for which they took loan.
- Among all charged off defaulters, borrowers who took loan for **small businesses** could not pay back forms highest section.

<Analysis>





•Borrowers living in mortgaged houses took most chunk of loan offered by the company.

•A large number of loans approved are still not verified which goes against the policy of Lending Club.

•Such laxity could lead company to go into capital loss in form of loan defaulters.

<Recommendations>

•Low grade employees (F,G) are more prone to default.They should be investigated throughly before loan approval.

•Small business defaulters have probability to default.The club should minimize loan approval to them.

•Loan terms of 60 months plan should be reduced.We can observe higher charge off defaulters in it.

•Loan approval to borrowers living in mortgaged houses should be properly investigated.

•A large number of loan is still not verified before approval.This attitude should be discarded within the club.

•A general precautionary measure like probing public derogatory and bankruptcy records should always be done before loan approval.