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#LifeKoKaroLift

Lending Club Case Study

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Lending Club company is the largest online loan marketplace, facilitating personal loans, business loans, and financing of medical procedures. Borrowers can easily access lower interest rate loans through a fast online interface.

Company wants to understand the **driving factors (or driver variables)** behind loan default, i.e. the variables which are strong indicators of default. The company can utilise this knowledge for its portfolio and risk assessment.

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Downloaded the dataset from upGrad Learning page.

It contains the complete loan data for all loans issued through the time period 2007 t0 2011.

1) All the Loan behavior variables are removed as per the suggestion.

2) All the columns with same values in all the rows are removed.

3) Column '*url* ' is removed as it does not have any significant values.

4) Removed the string '*years*' and '*year*' from the column '*emp_length*' for better analysis.

5) Removed the special characters '+' and '<' from the column '*emp_length*'

1) Columns like grade, subgrade, emp_length, home_ownership, purpose and addr_state are analyzed.

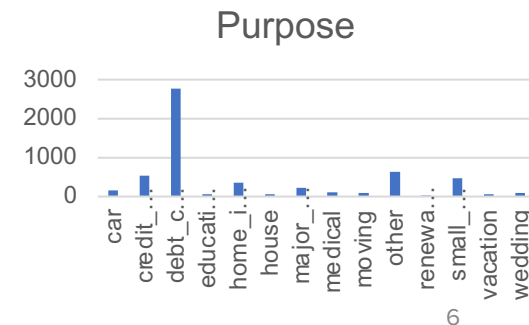2) Employees in grades 'B', 'C' and 'D' are *Charged Off* more compared to other grades*.*
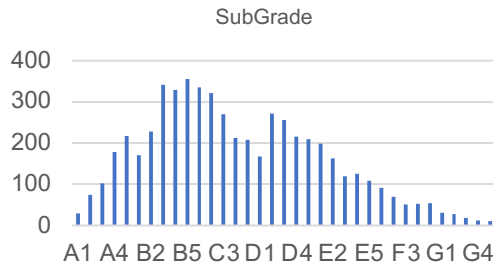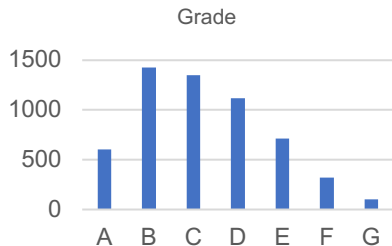
3) Employees over 1 year or less than 1 year and employees over 10+ years experience are charged off.
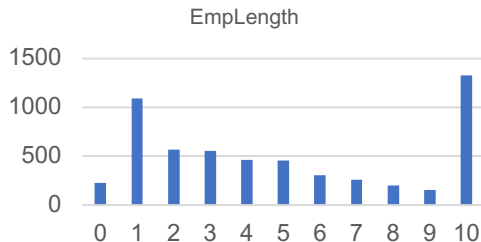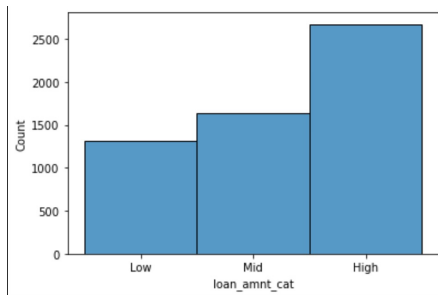
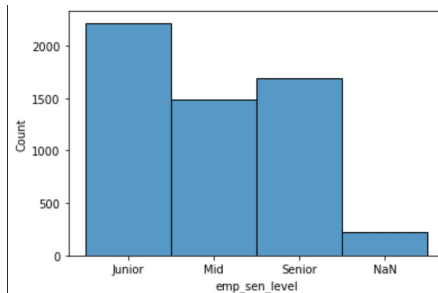4) Employees who does not own house are *Charged Off* more.

HomeOwnership
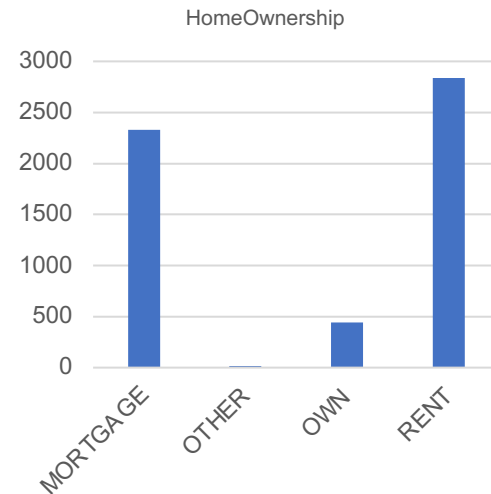
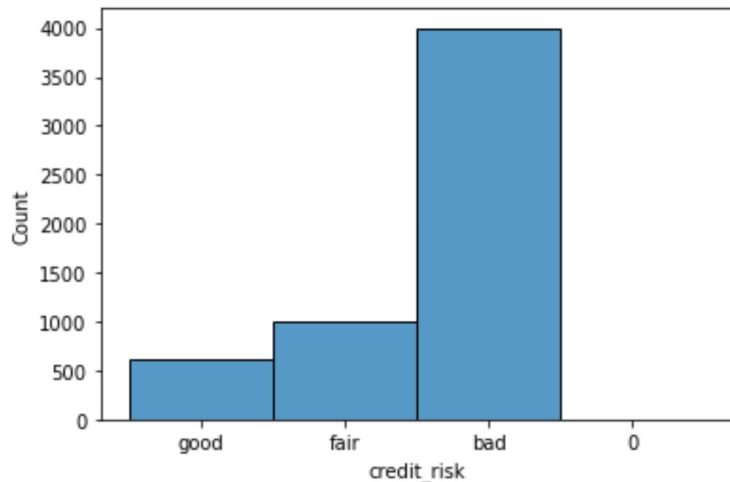5) Most of the employees applied loan for debt consolidation(purpose).

Purpose

1) Columns like loan_amnt, emp_length, dti are analyzed.

2) Employees who took loan amount more than 10K are *Charged Off* more*.*
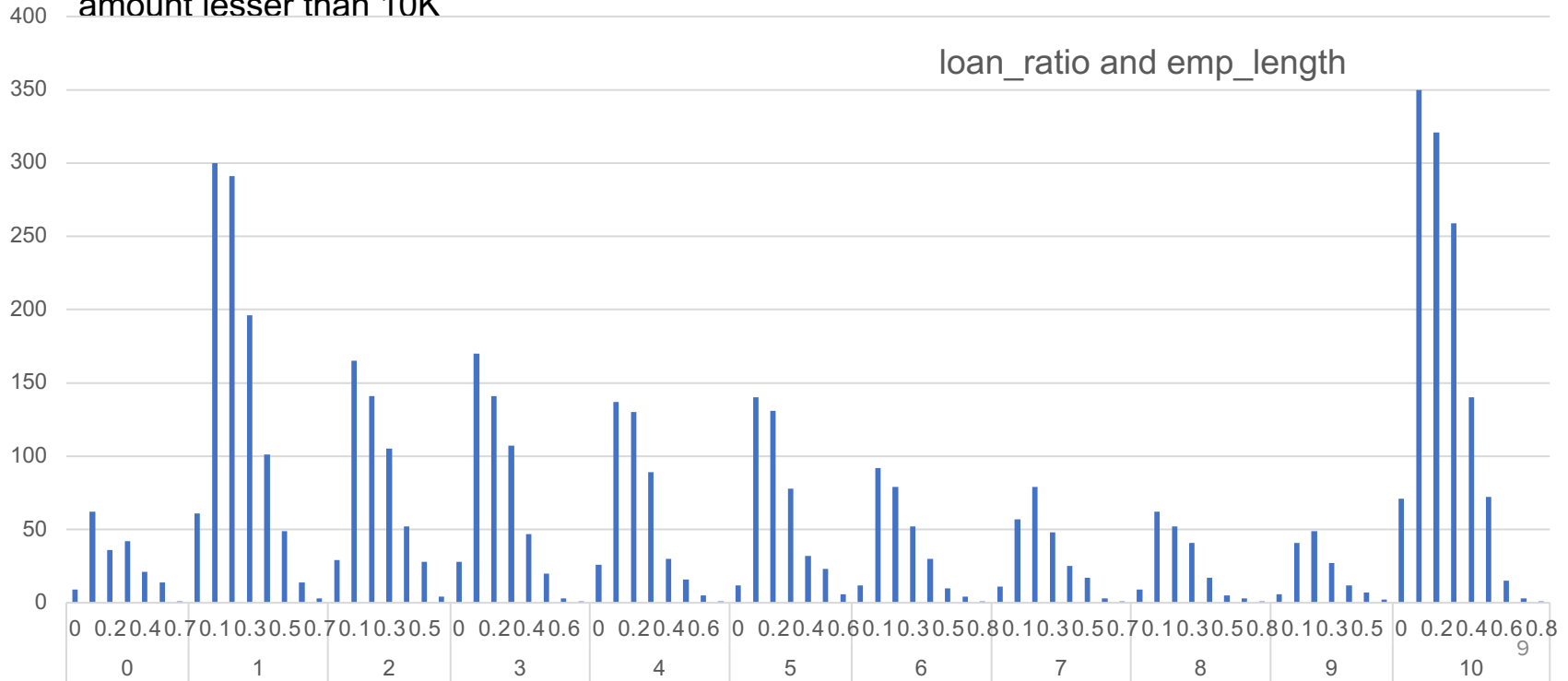

3) Junior employees are *Charged Off* more*.*

4) Employees with bad Credit Risk are *Charged Off* more.

1) Columns like loan_ratio(loan_amnt/annual_inc) and emp_length are analysed. Employees whose experience is of 1 or less than 1 year and 10+ years are defaulting more when they took less loan amount lesser than 10K

loan_ratio and emp_length

1) Columns like emp_length(Seniority) and Purpose are analysed. In all the levels of employees, employees who took loan for debt_consolidation are default more.

Seniority vs Purpose
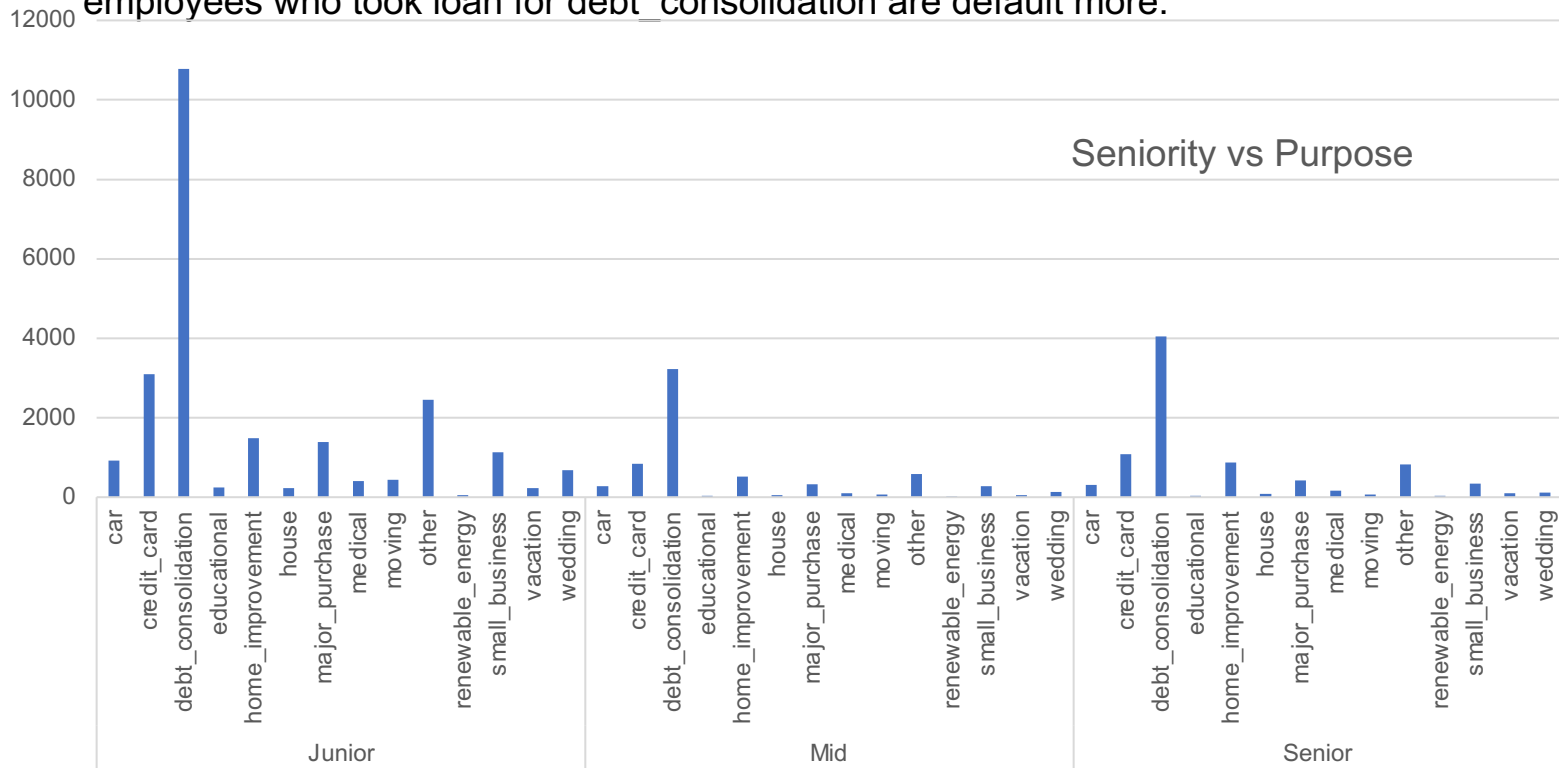
1) HeatMap is created to understand the correlation among other variables among Fully Paid employees.
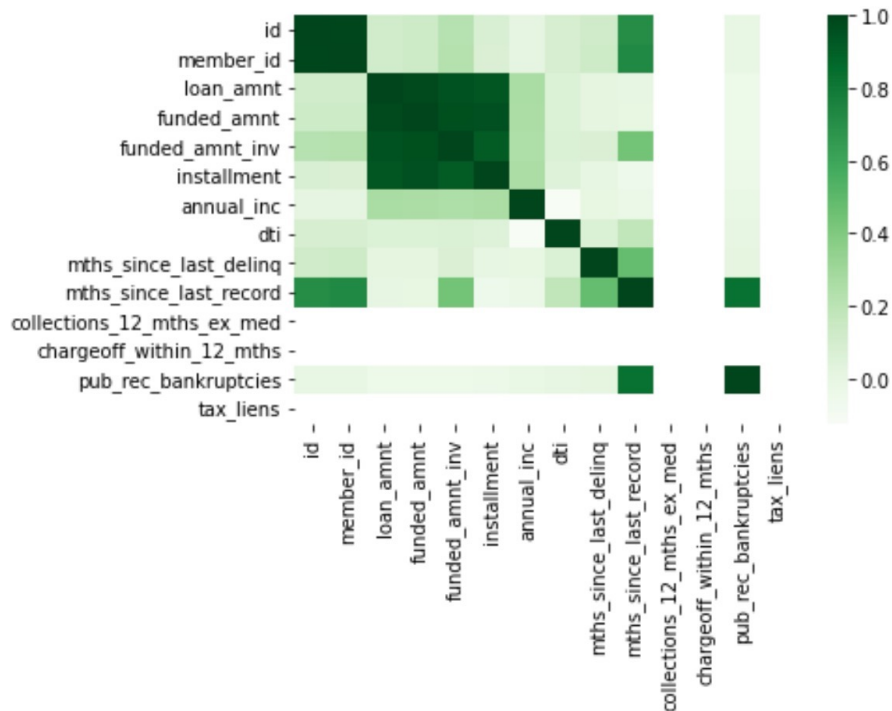
2) Heatmap is created to understand the correlation among other variables among *Charged Off* employees.