

# Lending Club Case Study

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# Lending Club Analysis: Overview

Lending Club 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.

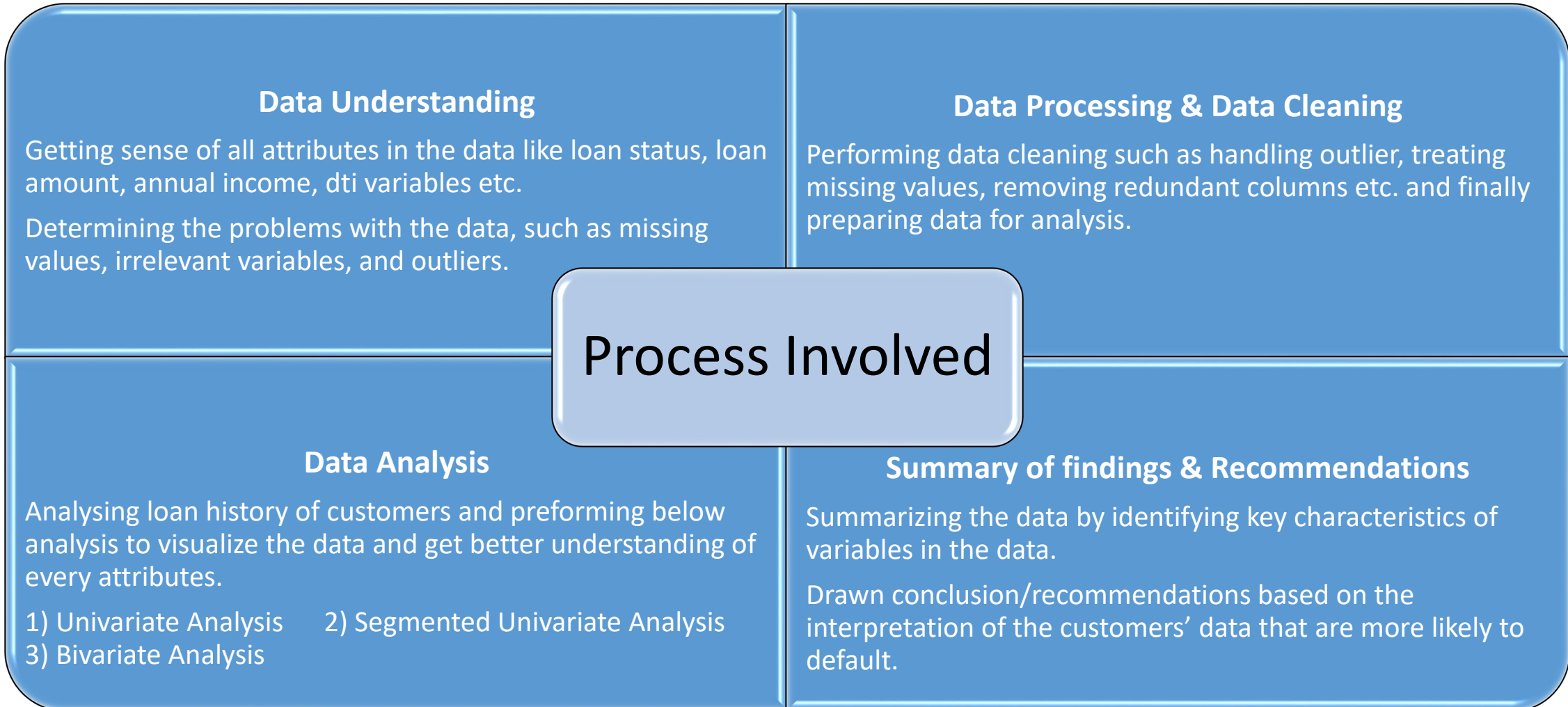
## **Business objective:**

To reduce credit risk by identifying risky loan applicants.

## **Strategy:**

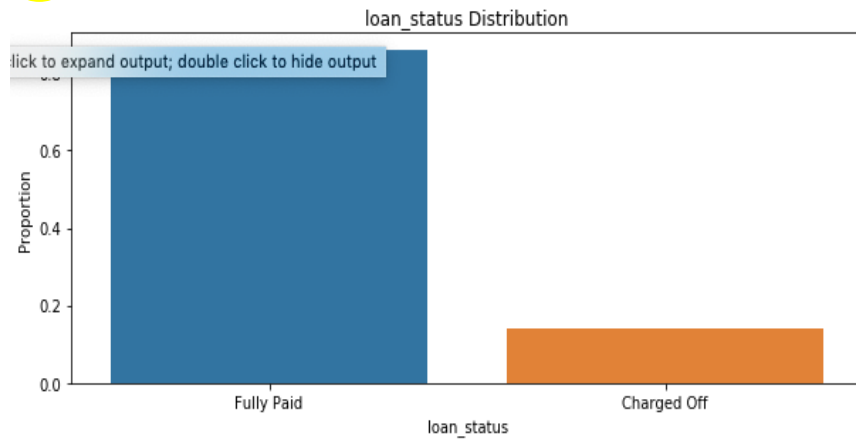
To examine the history of risky customers (who may fail to repay a loan or meet contractual obligations) and to understand the driving factors behind loan default.

# Lending Club Analysis:

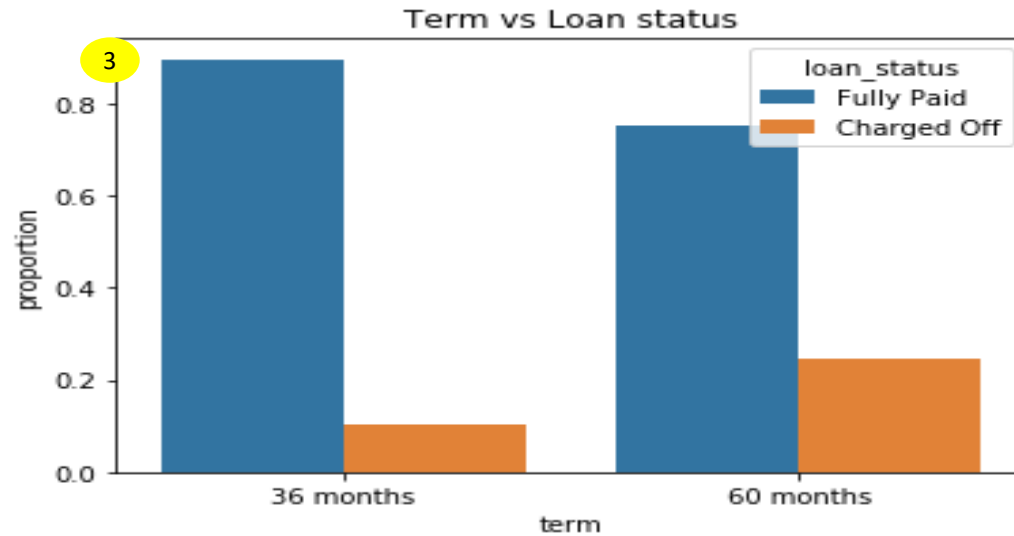
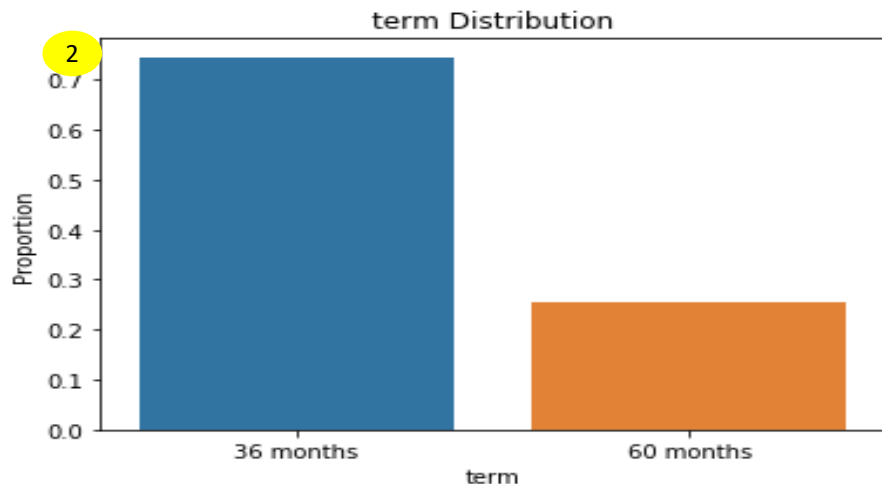


# Distribution of customers based on Loan Status & Term

1

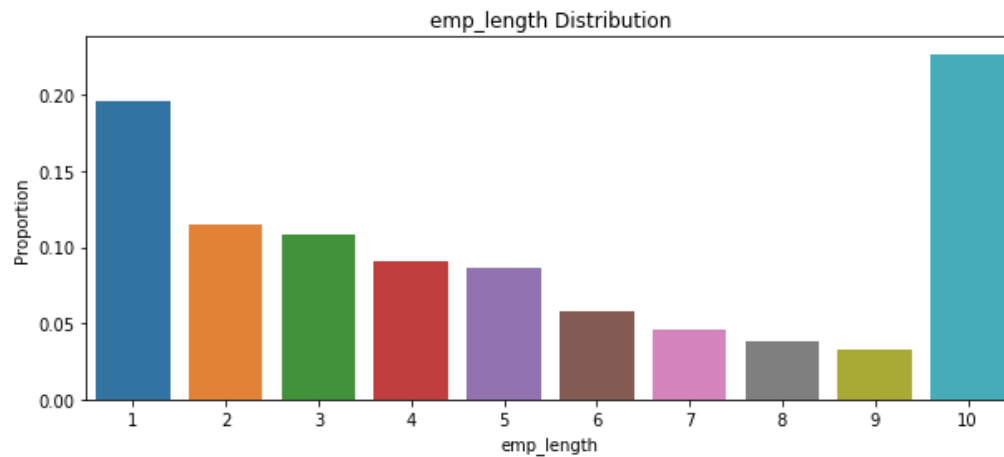


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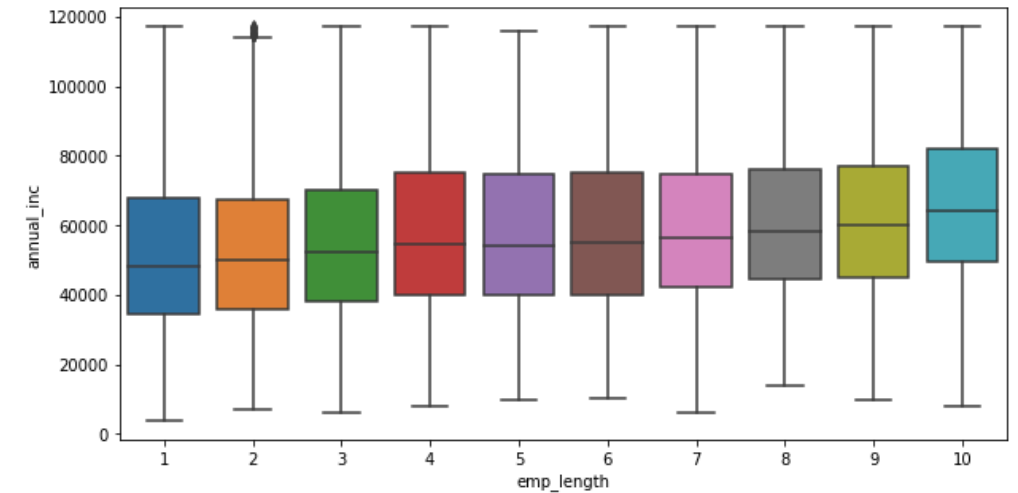


- ✓ The charged off borrowers are around 15% and fully paid loan amount customers are around 85%. 1
- ✓ There are two loan terms – 36 & 60 months. Around 75% borrower took loans with 36 months. 2
- ✓ Out of 25% total customers that took loan or 60 months term, 28% are defaulters. 3

# Distribution of customers based on their experience

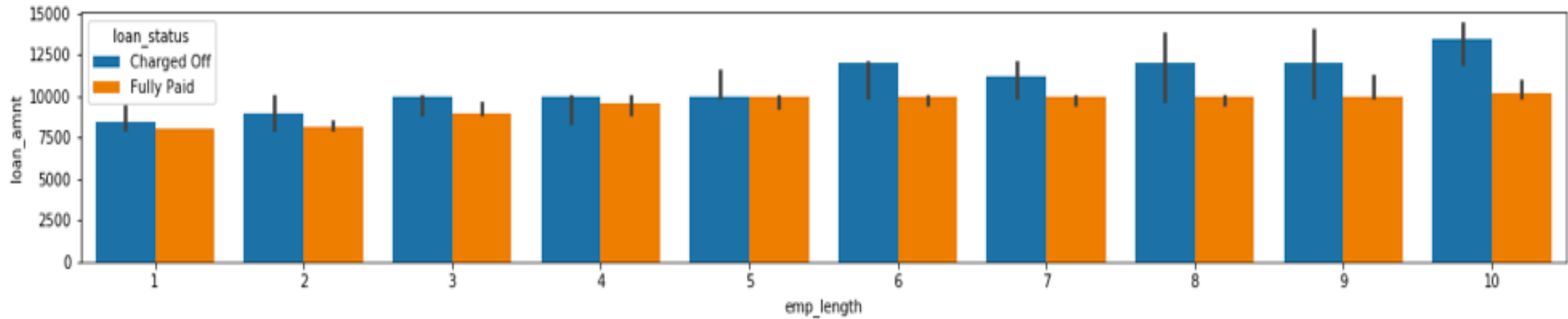


Maximum borrowers have employment length of 10+ years



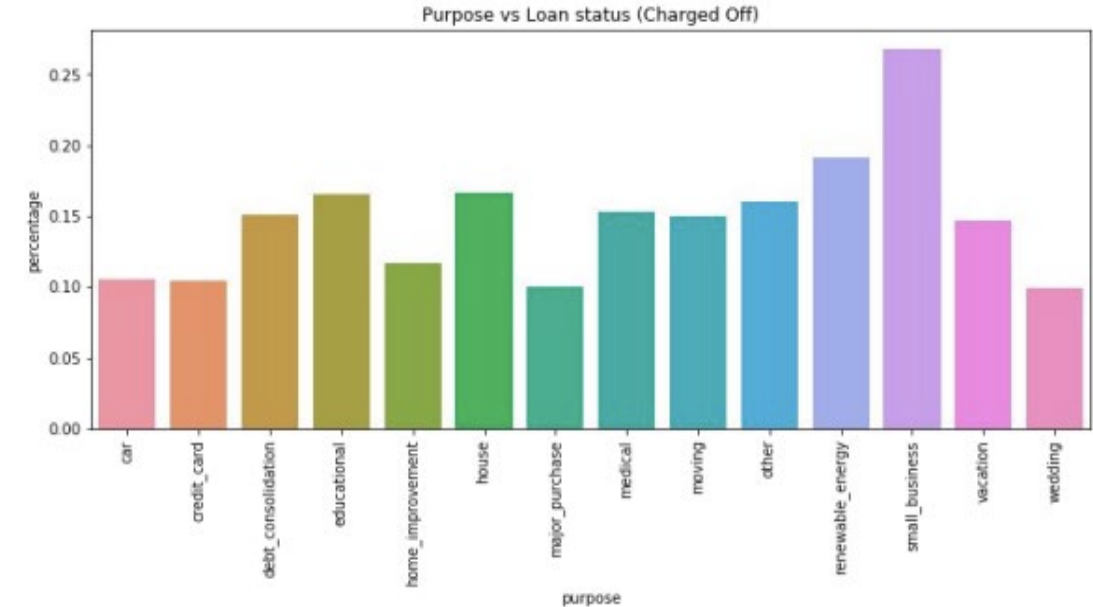
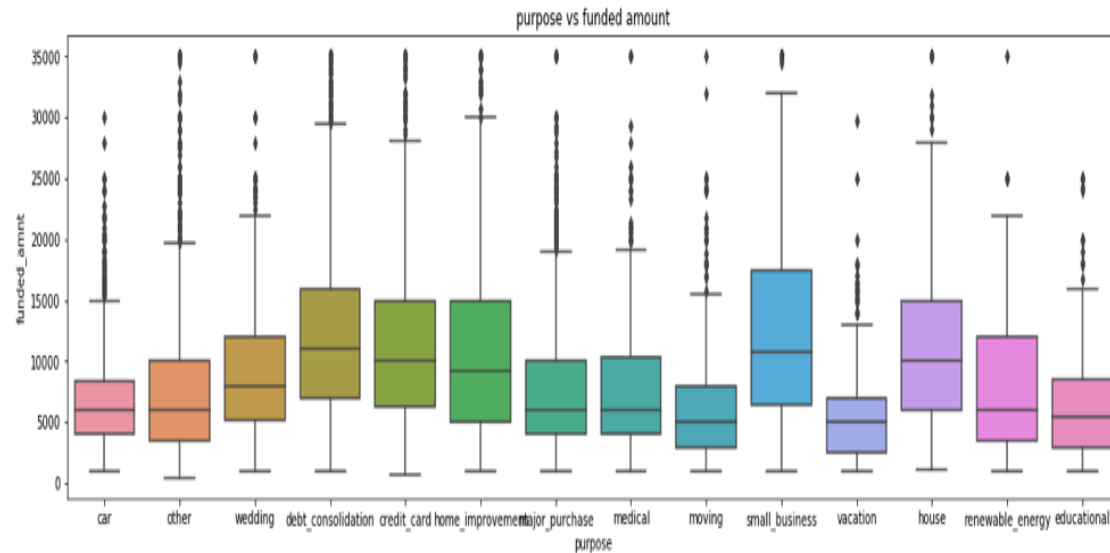
From the graph, we can conclude that more is the experience, higher is the salary.

# Distribution of customers based on their experience



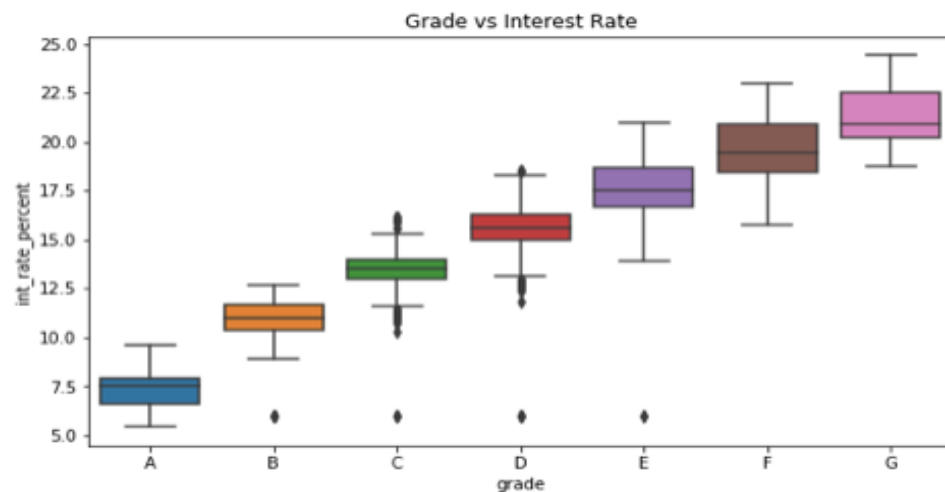
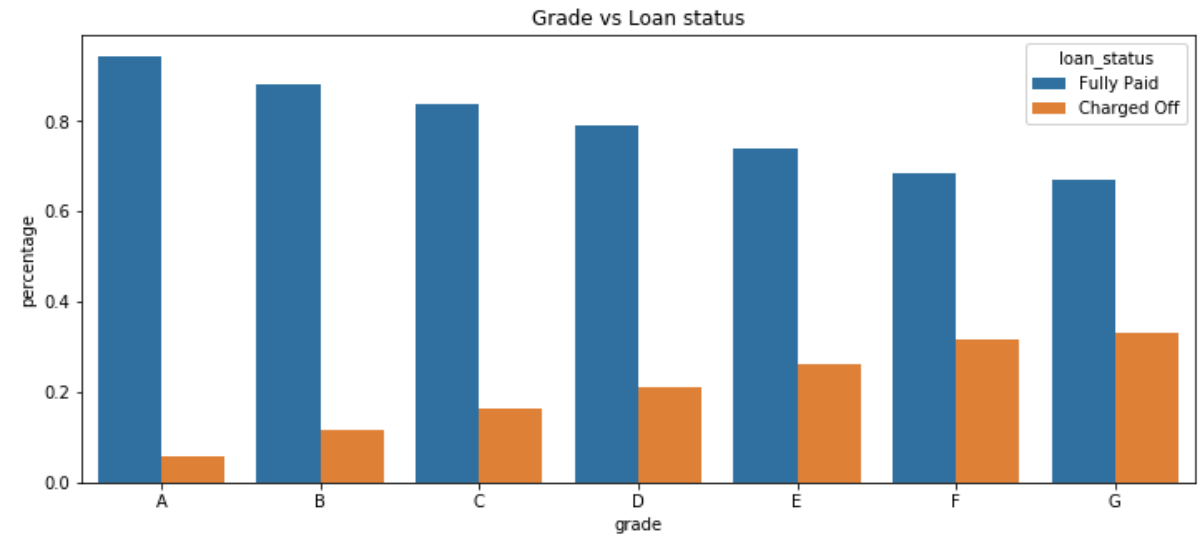
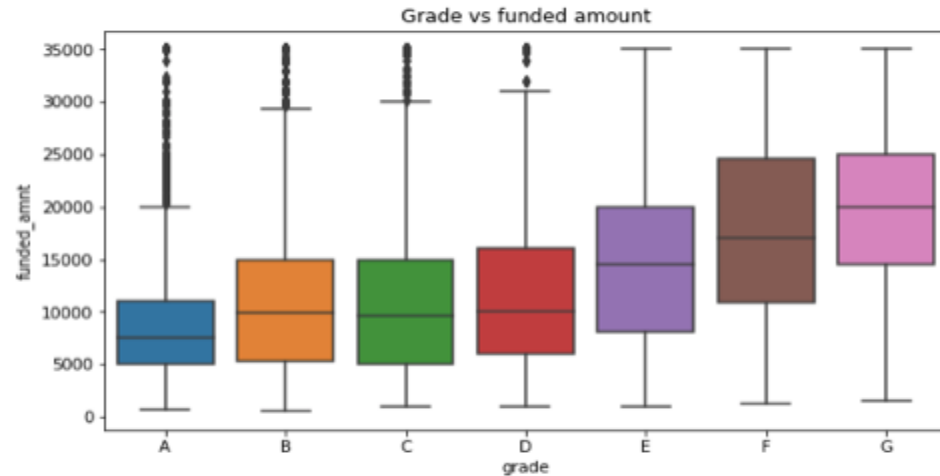
Borrowers with higher experience took more loan resulting in higher default rate.

# Distribution of customers based on their purpose of taking loans and their loan status



Customers that took loans for small business followed by debt consolidation shows the increasing trend of defaulting.

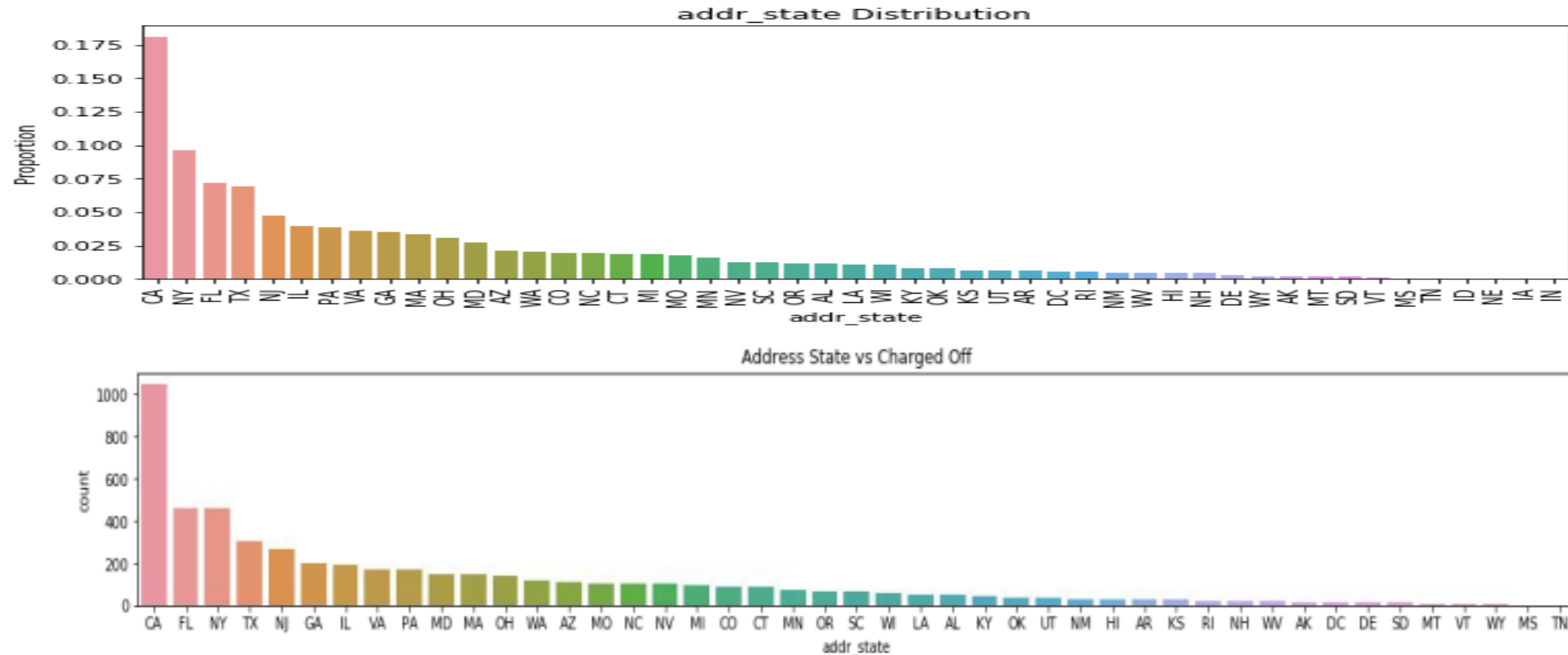
# Distribution of Customers based on their grades



Customers with lower grades (F,G) tend to take more loan at higher interest rate resulting in higher default rate.



# Charged Off customers' status based on geographical area



Regions(CA, FL, NY, TX) which have taken more loan have higher default rate then the regions which took lesser loan (MT, VT, WY, TN)

# Observations:

❖ In the lending case study, we observed that the loan amount, investor amount and funding amount are strongly correlated.
❖ The charged off borrowers are around 15% and fully paid loan amount customers are around 85%.
❖ There are two types of loan terms – 36 & 60 months. Around 75% borrower took loans with 36 months term.
❖ Out of 25% total customers who took loan for 60 months term, 28% are defaulters.
❖ We have observed that there is a negative co-relation between Annual income and DTI(Debt-to-income ratio)
❖ Lower grade category customers (F,G) took more loan amounts on higher rate as compared to higher grade customers (A,B,and so on.)
❖ Another observation is that there is a positive correlation between annual income and employment years. That means income increases with work experience.
❖ Borrowers with higher experience took more loan resulting in higher default rate.
❖ Further we have observed from the bivariate analysis that the interest rate increases with the loan amount.

## Conclusion:

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| ✓ Lending Club should be very vigil in providing loans for 60 months term as they have more default rate.   |
| ✓ More investigation is required while providing loans to higher experienced people as there is higher default rate in this segment.  |
| ✓ Lending club should do a thorough due diligence while giving loans to smaller businesses as they show high probability of default.  |
| ✓ Lending club should do a proper auditing of the businesses to ensure that there is no existing loans as there can be a higher chance of loan consolidation.   |
| ✓ Lending club should examine the grade metrics of the borrower as they are good parameter of evaluating the default chances and should do a thorough investigation of the businesses with lower grade (F,G). |