Lending Club Case study
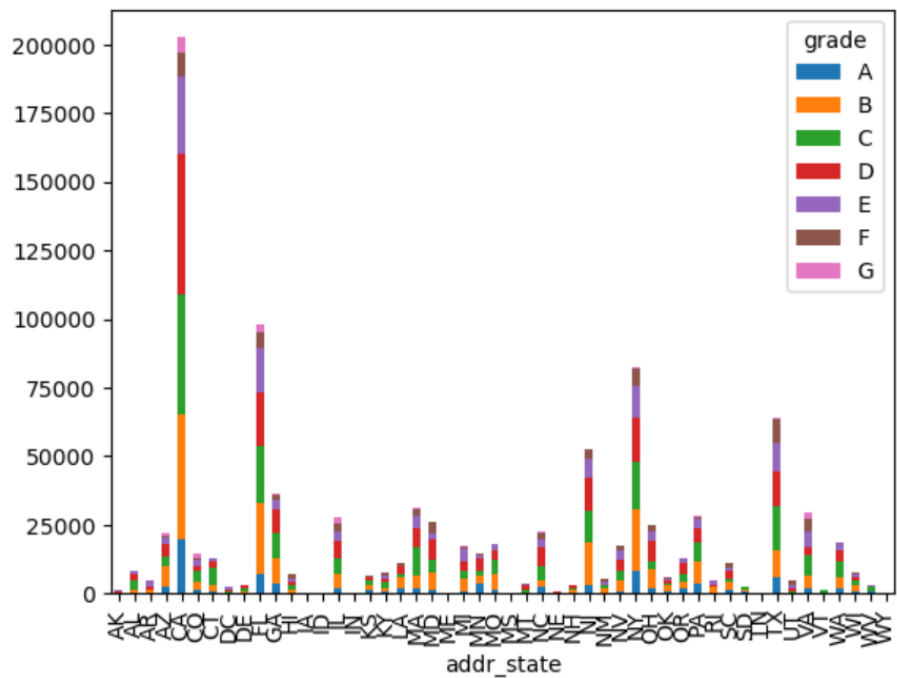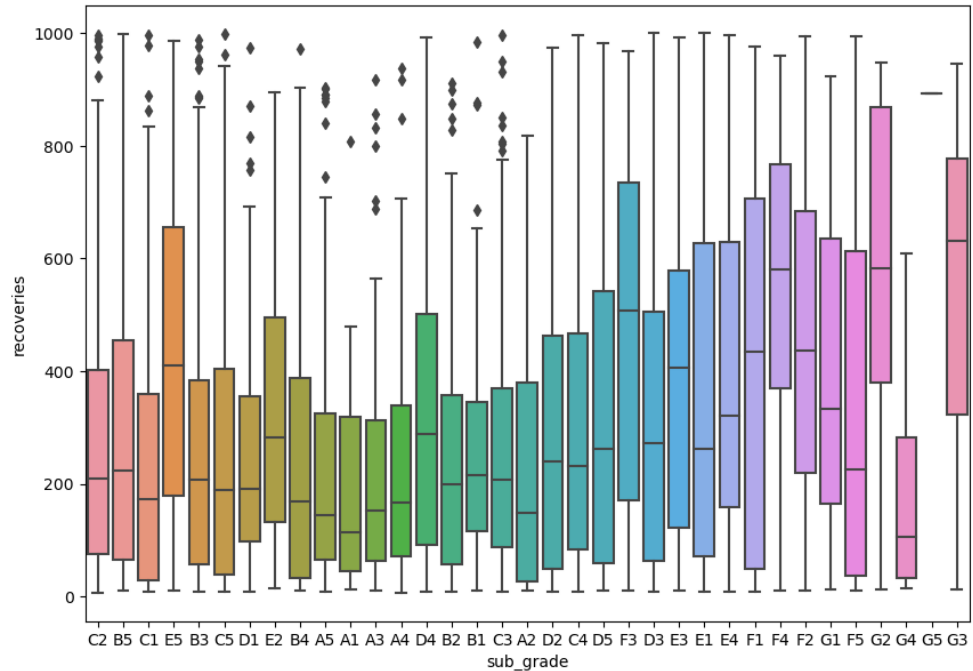
Key Summary

- Applicants categorized under Loan B to G have interest rates above 10% to 25% and also have higher proportion of Loans turning into recoveries
  - Loans with Grade have interest rate charge of under 5%-10%
  - **The Mean value denotes** the Recoveries tend to be higher in all **Loan grades other than Loan Grade"A"**
- Thus denoting any loan applicantcatgorized under Grade B to E have higher chances of Loan turning out to be charged off and hence end with recoveries
- The State wise Loan Grade data denotes **applicants from states other than CA, FL NY and TX have predominantly** more proportion of Loans that are Grade B to Grade E and higher proportion of them **turning into recoveries**

- Applicants with lesser annual income have higher chances of loan turning into "Charged off" cases and thus ending into recoveries
- More than 80% of applicants who have turned into "Recovery have annual income under $10K
- More than half of the **Interest income earned from the sample** turns out be in applicants cases where the Funded amount invested is greater than $20K
  - While for the same applicants who's **funded amount invested is $20 K and below have higher recoveries**

- Applicants with **10+ years of experience have higher** share of charged of cases
  - people with higher employee experience have higher fund amount invested
  - The Median value of Loan amount turning out to be categorized as recoveries are higher in applicants with **Employee Work experience 6 years and above**
  - We can also see that the median value of **Loan amount funded** is also higher for applicants with **Employee work experience greater than 6 years**

- The Median values of applicants loan turning into recoveries is higher in cases of applicants **with Mortgage** than the applicant's who have rented homes
- Applicants especially form **states like CA,GA,MO,OH and TX** have higher chances of **turning into Recoveries** especially under the category people owning houses under Mortgage

- Applicants **under the salary range of 30K to 60K** have **higher proportion** of Loans turning **into recoveries**
- The Median value of Applicants Loan amount turning into recoveries increases for those with annual salary greater than $30K and **comes down only for those with $300K and above**

- The Median value of Loans turning into **recovery is higher** in applicants with Loan purpose as **Credit Card, Small Business, Wedding and house**
- Loans irrespective of any Grades (A-G) have higher amount of loan turning into recovery under the loan purpose of "Debt consolidation
- Loans with purpose of "**Vacation and Moving have lower median value** of loan amount **turning into recoveries**

- The Median values of applicants loan amount turning into recovery is **higher in cases of loans that are "Verified"** than those which are not verified
  - Indicating the verification process is not that effective in preventing applicants loan turning into default

Loan Grade wise Loan Status

Learning's

- Loan Grade type B,C,D, E and F which are collectively 66% and above of the population have higher recoveries than Loan Grade "A"

- Loans with Grade have interest rate charge of under 5%-10%

- Applicants categorized under Loan B to G have interest rates above 10% to 25% , Thus indicating loans from B-G to have higher proportion of Loans turning into recoveries

- The Mean value as can be seen in the box plot denotes the Recoveries tend to be higher in all Loan grades other than Loan Grade"A"

- Thus denoting any applicantcatgorized under Grade B to E have higher chances of Loan turning out to be charged off and hence end with recoveries

- The State wise Loan Grade data denotes applicants from states other than CA, FL NY and TX have predominantly more proportion of Loans that are Grade B to Grade E
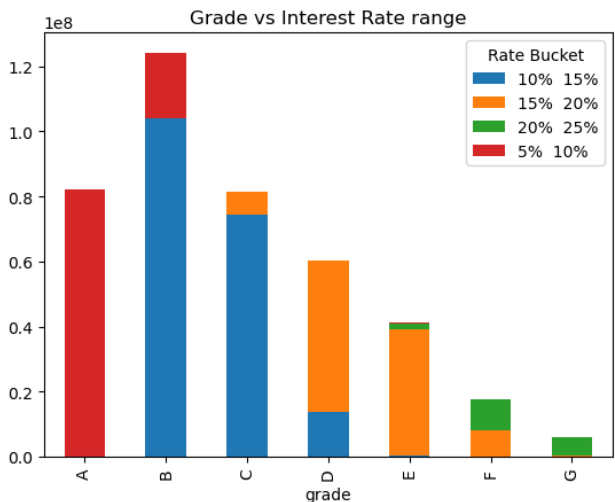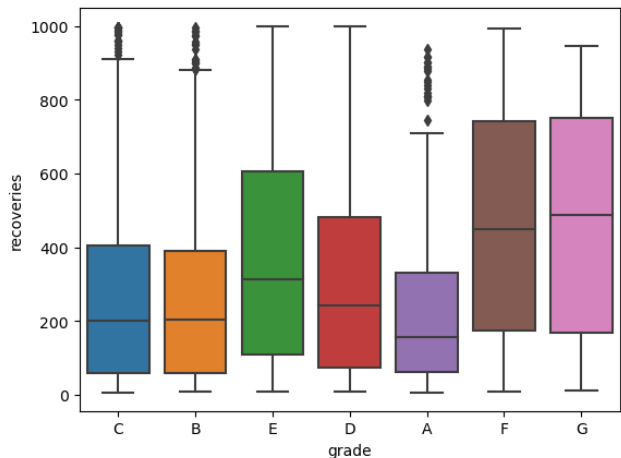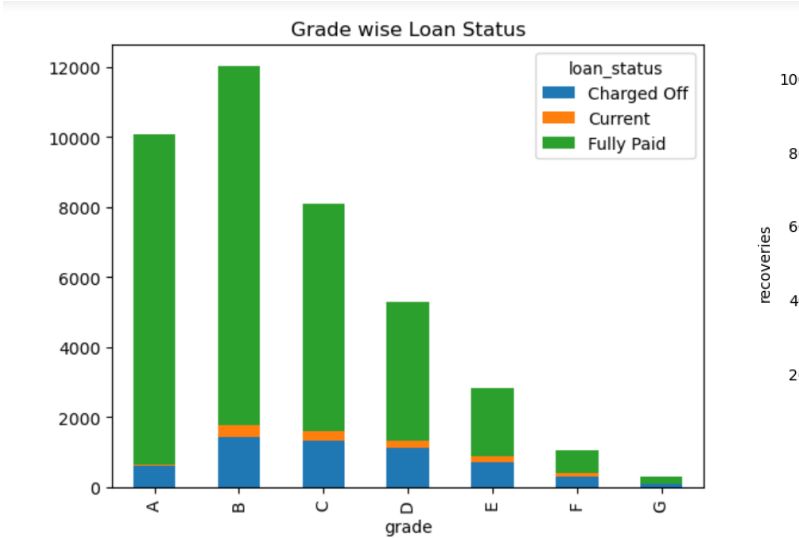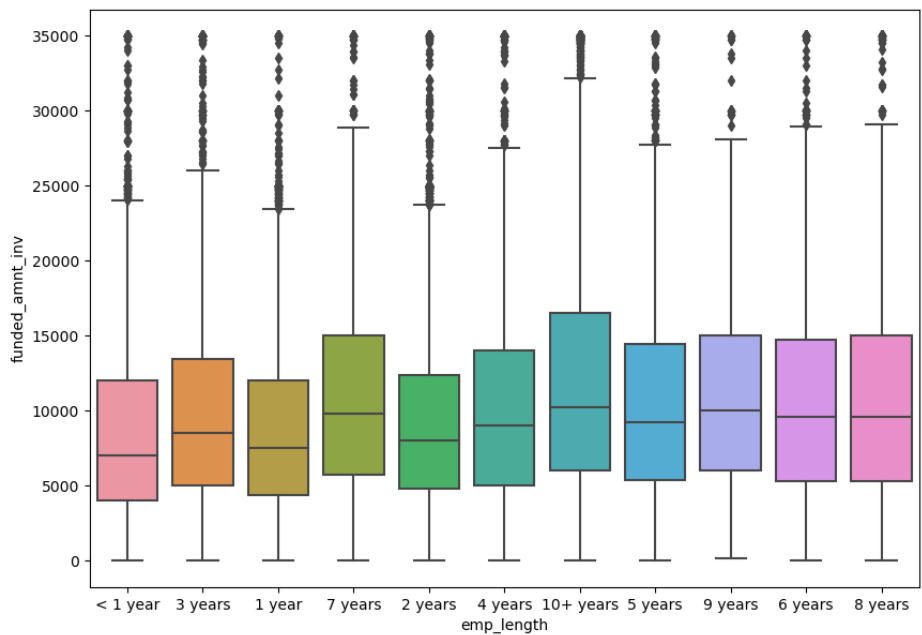
Pair Plot
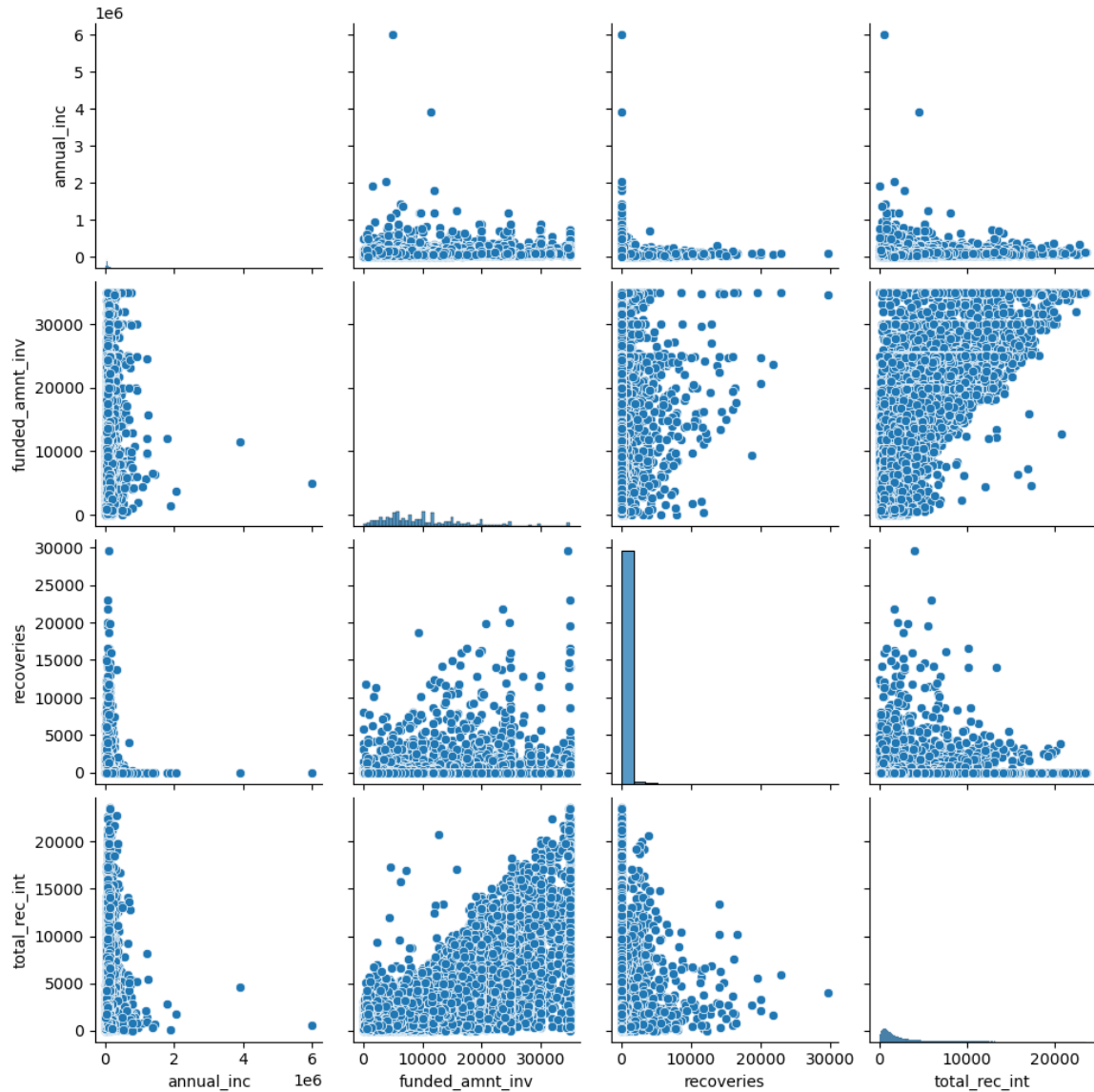
Learning's

- Applicants with lesser annual income have higer chances of loan turning into "Charged off" cases and thus ending into recoveries
- More than 80% of applicants who have turned into "Recovery have annual income under $10K
- More than 50% of the Interest income earned turns out be in applicants cases where the Funded amount invested is greater than $20K
- While for the same applicants who's funded amount invested is $20 K and below have higher recoveries

Employee Length of Experience to loan status
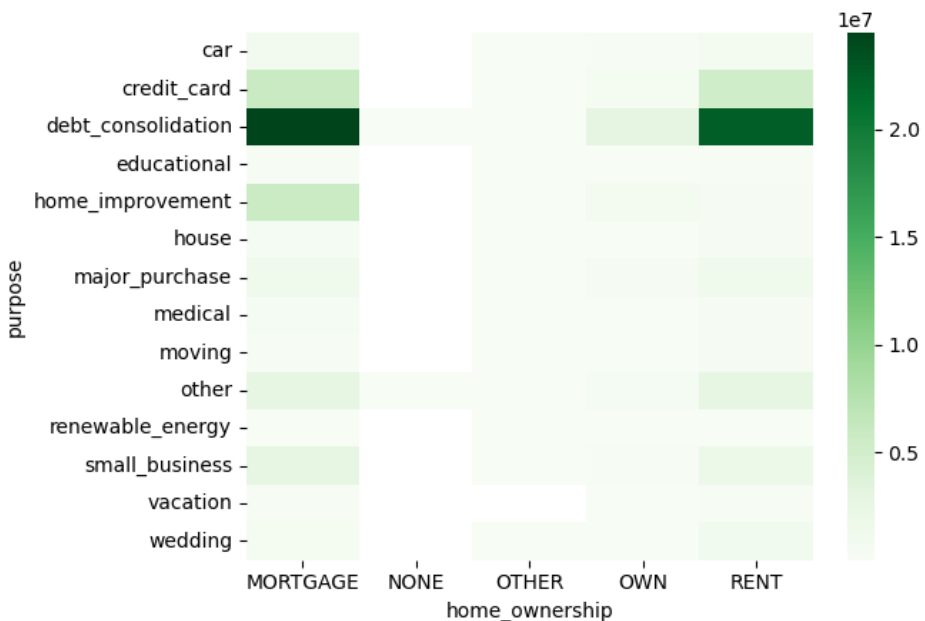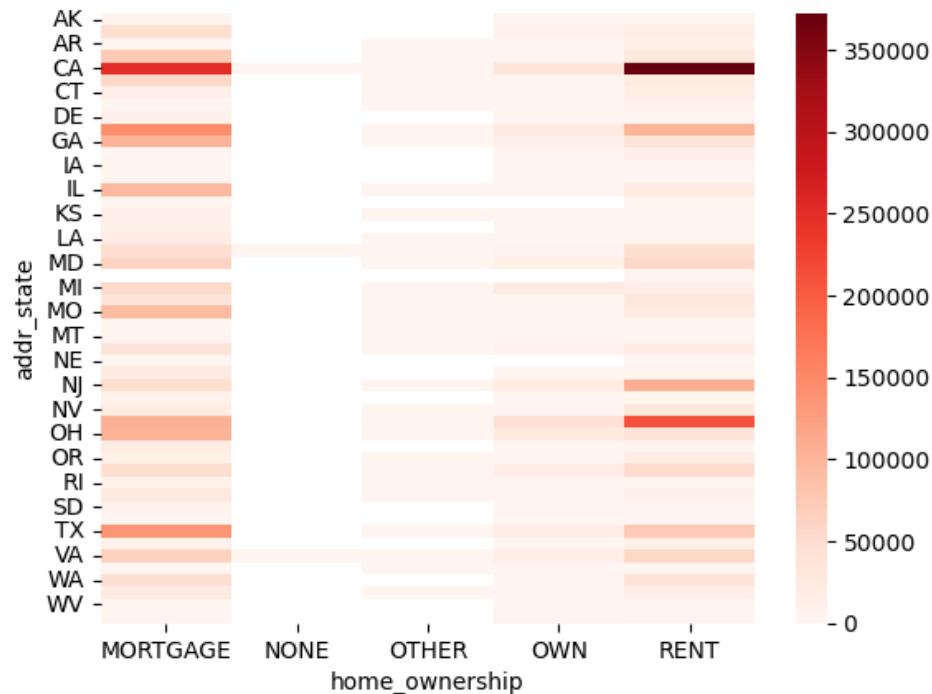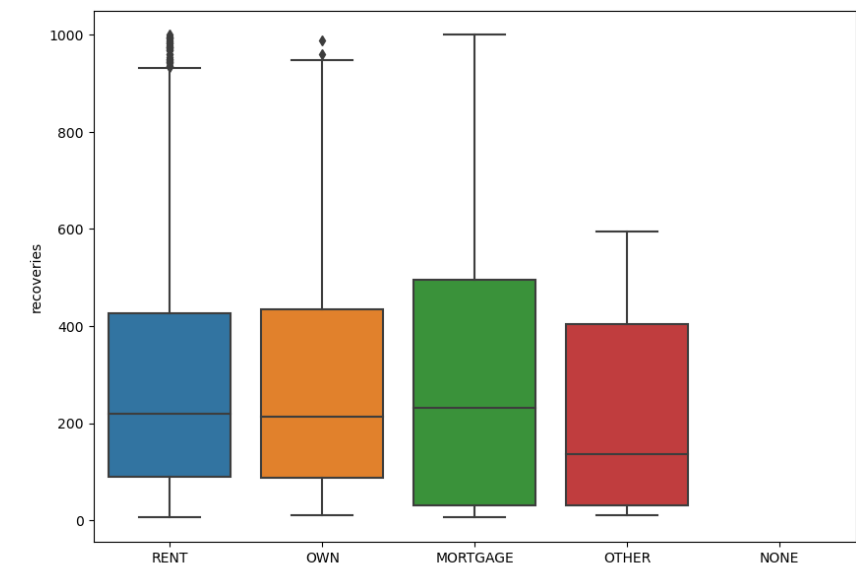

Emp Length wise Loan Status
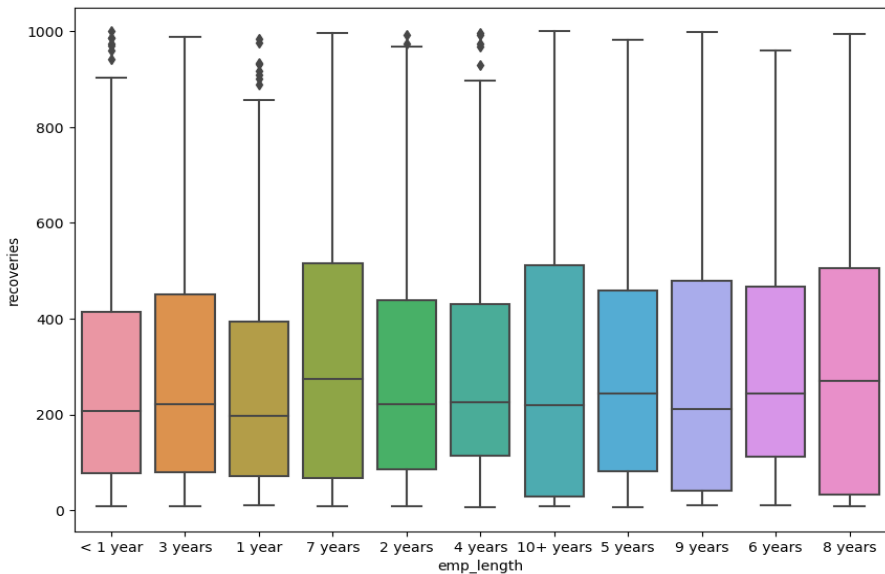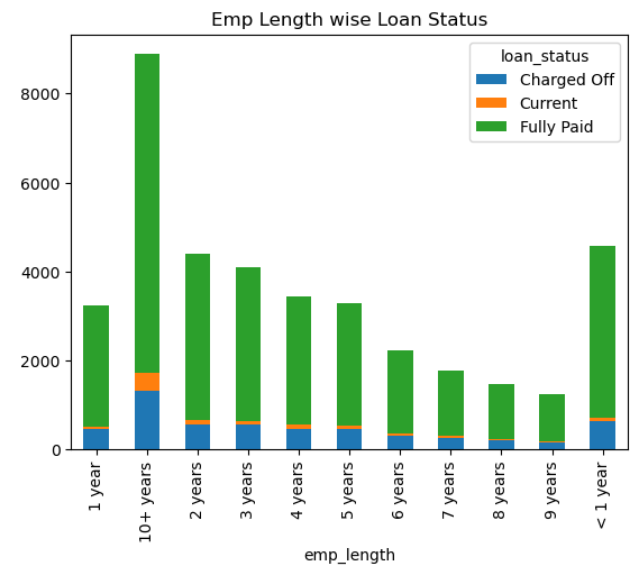
Learning's

- Denoting those with 10+ years of experience have higher share of charged of cases among themselves
- Denotes people with higher empl exp have higher fund amount invested
- Applicants with 10+years of Employee work experience have relatively higher proportion of loans turning out to be charged off
- The Median value of Loan amount turning out to be categorized as recoveries are higher in applicants with Employee Work experience 6 years and above
- We can also see that the median value of Loan amount funded is also higher for applicants with Employee work experience greater than 6 years

Loan type vs Home ownership

Learning's

- The Median values of applicants loan turning into recoveries is higher in cases of applicants with Mortgage than the applicant's who have rented homes
- Applicants especially form states like CA,GA,MO,OH and TX have higher chances of turning into Recoveries especially under the category people owning houses under Mortgage
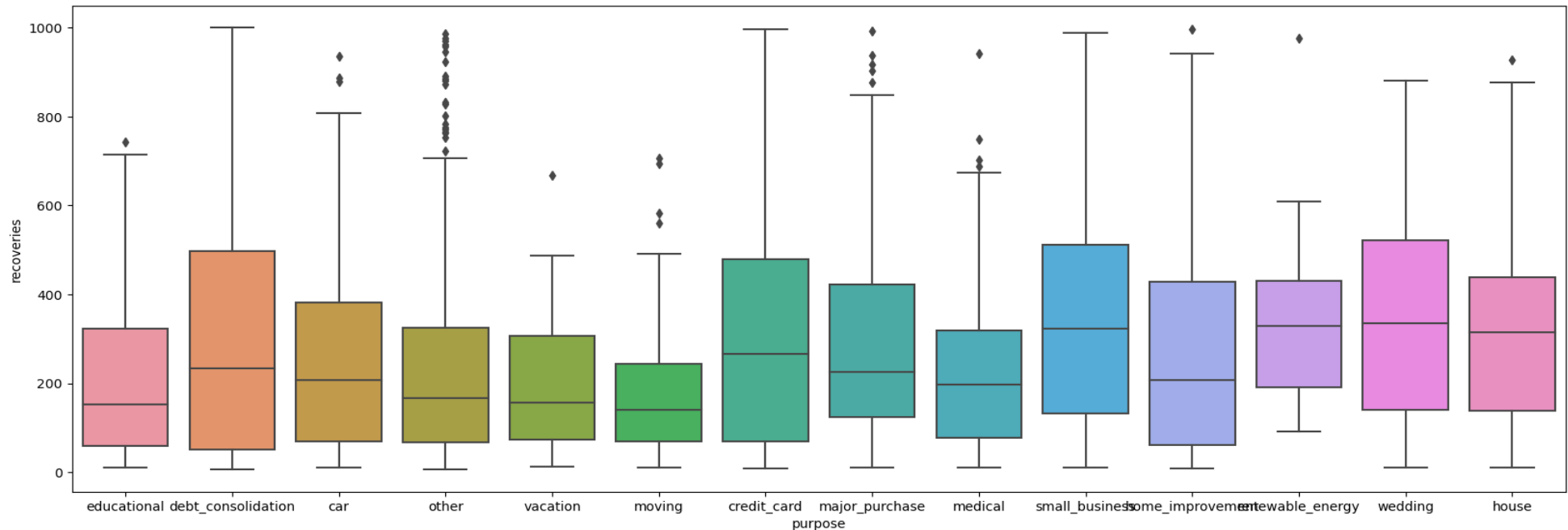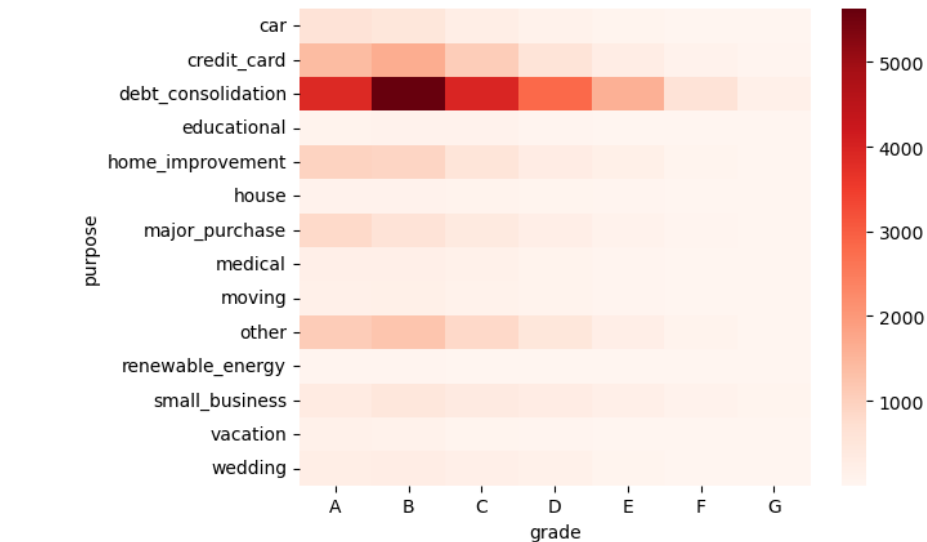
Annual Income wise Recoveries
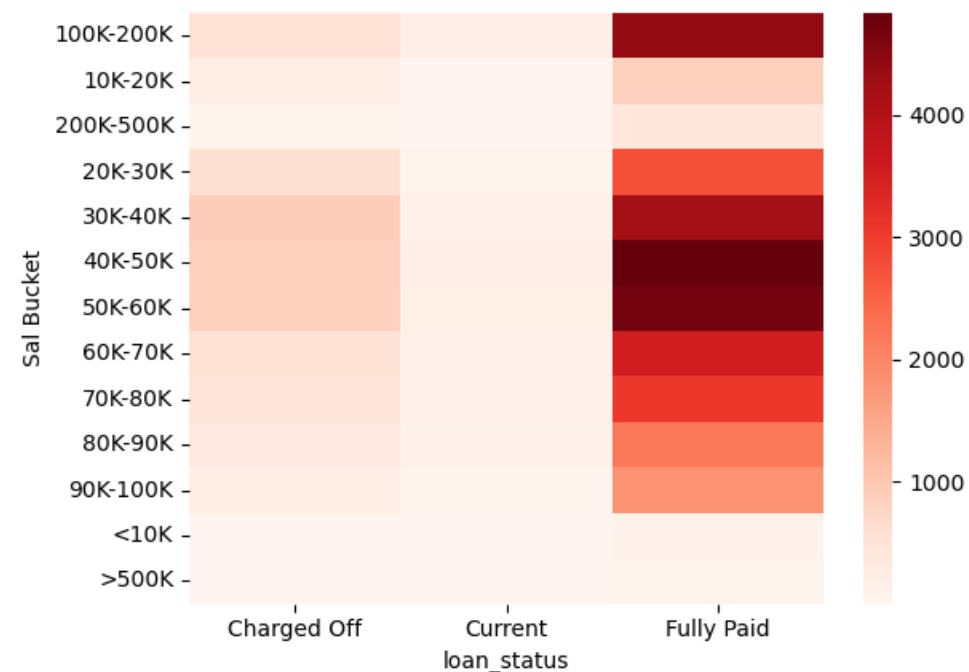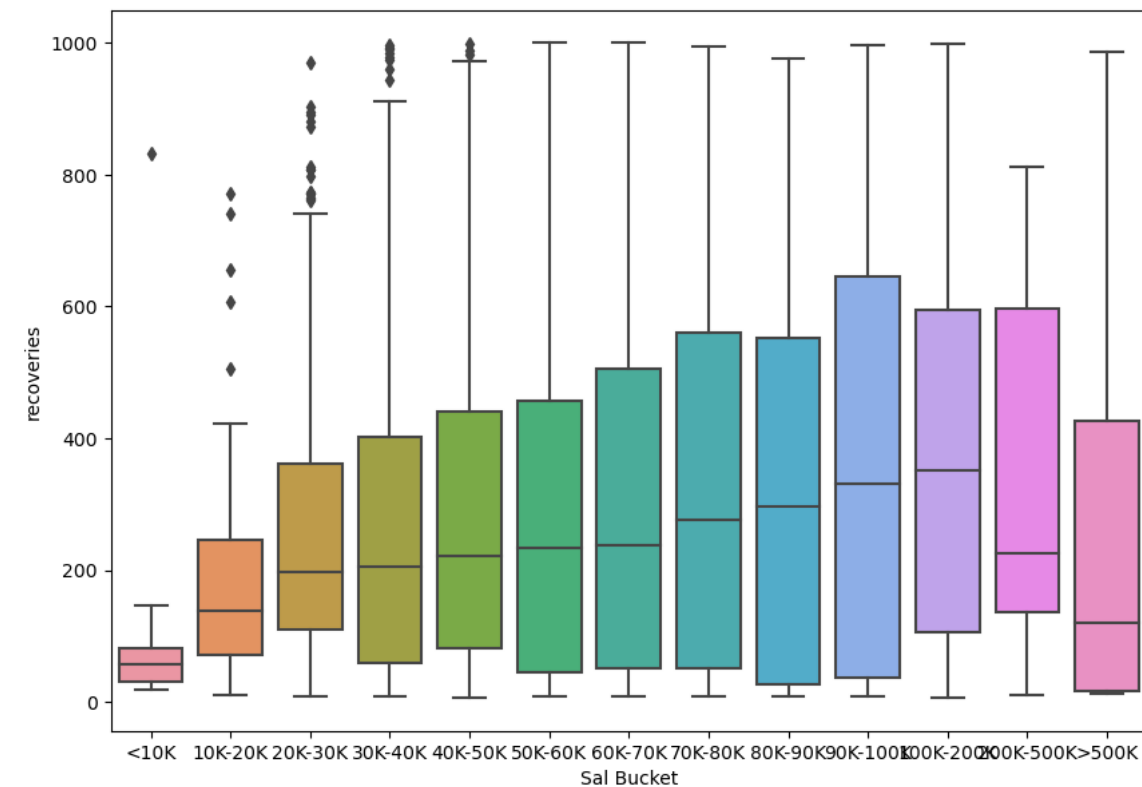
Learning's

- Applicants under the salary range of 30K to 60K have higher proportion of Loans turning into recoveries
- The Median value of Applicants Loan amount turning into recoveries increases for those with annual salary greater than $30K and comes down only for those with $300K and above

Loan purpose profile

a

Learning's

- The Median value of Loans turning into Debt is higher in applicants with Loan purpose as Credit Card, Small Business, Wedding and house
- Loans irrespective of any Grades (A-G) have higher amount of loan turning into recovery under the loan purpose of "Debt consolidation
- Loans with purpose of "Vacation and Moving have lower median value of loan amount turning into recoveries

Loan Verified status
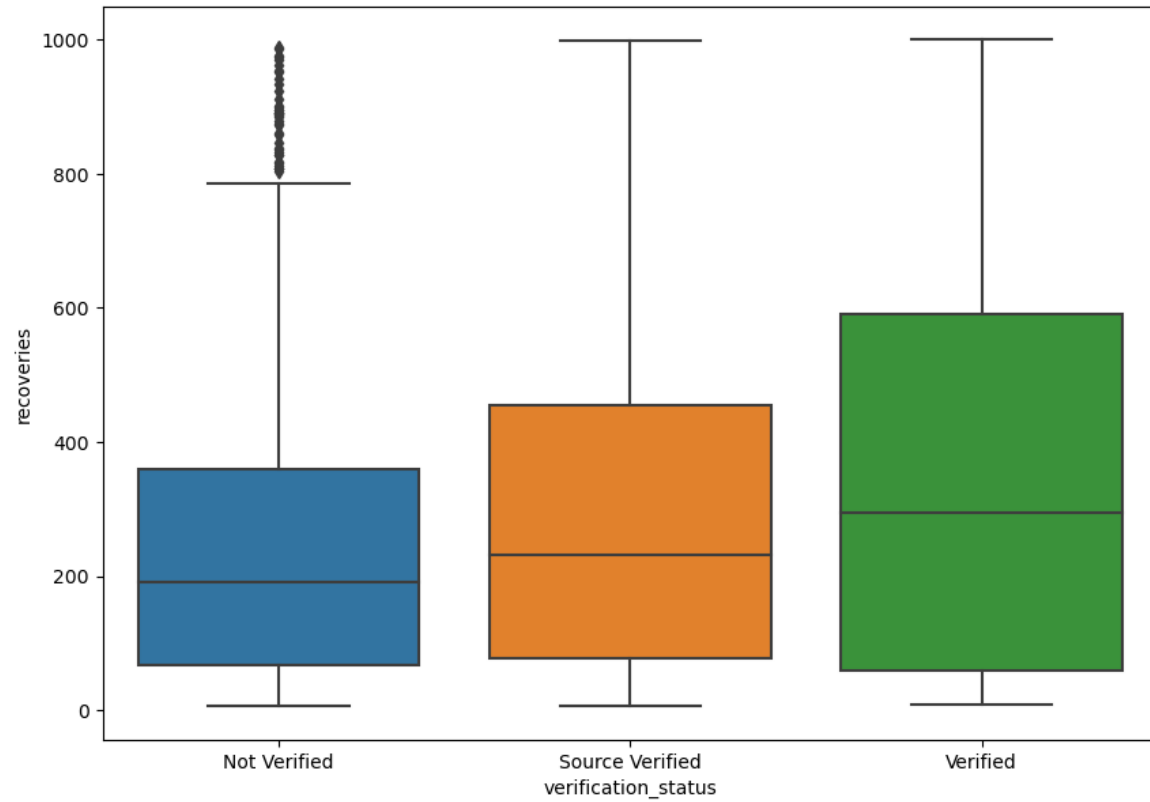
- The Median values of applicants loan amount turning into recovery is higher in cases of loans that are "Verified" than those which are not verified
  - Indicating the verification process is not that effective

Thank You!