LENDING CLUB CASE STUDY

GROUP MEMBERS:

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INTRODUCTION

- Lending club is the largest peer-to-peer marketplace connecting borrowers with lenders. Borrowers apply through an online platform where they are assigned an internal score.

- Lenders decide:

✓ 1) whether to lend and

✓ 2) the terms of loan such as interest rate, monthly instalment, tenure etc.

PROBLEM STATEMENT & OBJECTIVE

PROBLEM STATEMENT:

- 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

OBJECTIVE:

- finding the features/characteristics of a Barrower who are likely to default

- To identify variables which are strong indicators of default and potentially use the insights in approval / rejection decision making.

DATA UNDERSTANDING

Types of Features/Variables:

• **Loan Barrower Demographics:**

 Description, ZIP code, employment title, employment length & Annual income

• **Loan information and characteristics:**

 Loan amount, funded amount, funded amount investment, interest rate, loan status & Loan grade

• **Customer behaviour variables:**

 Delinquency year, earliest credit line, revolving balance, recoveries, application type & Loan purpose
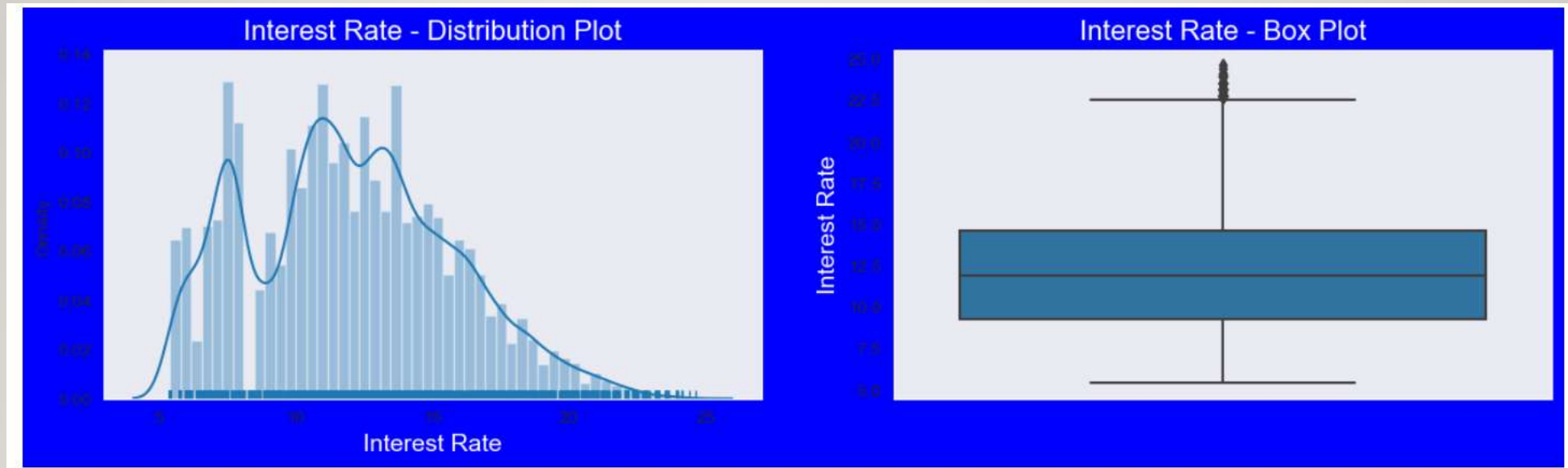
ANALYSIS AND OBSERVATION
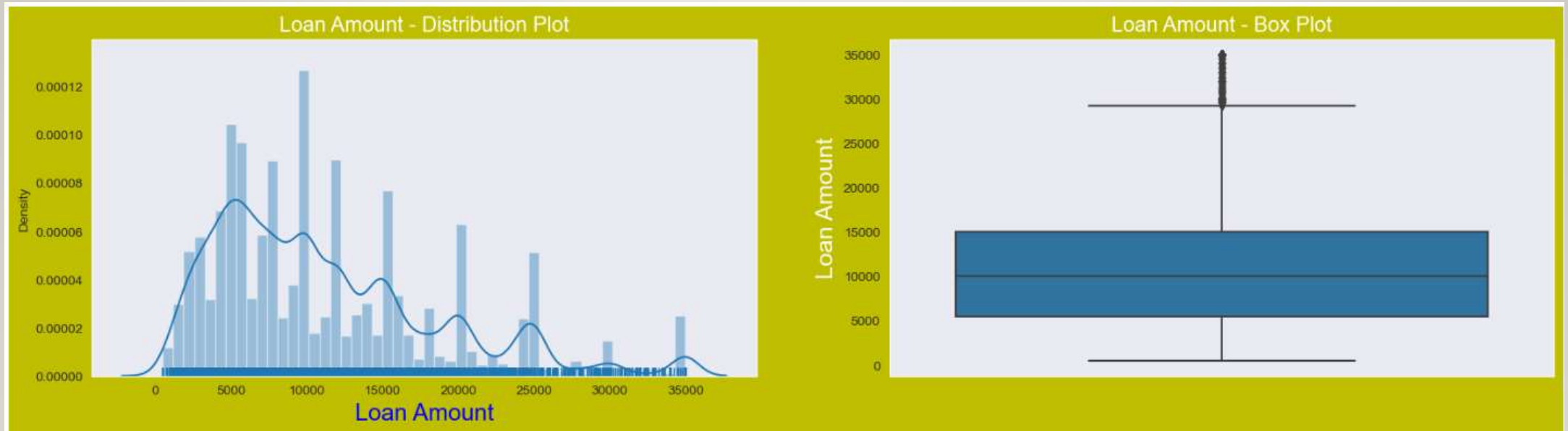
Here the mode is 10000 and we can see that the loan given is more in the multiple of 5000
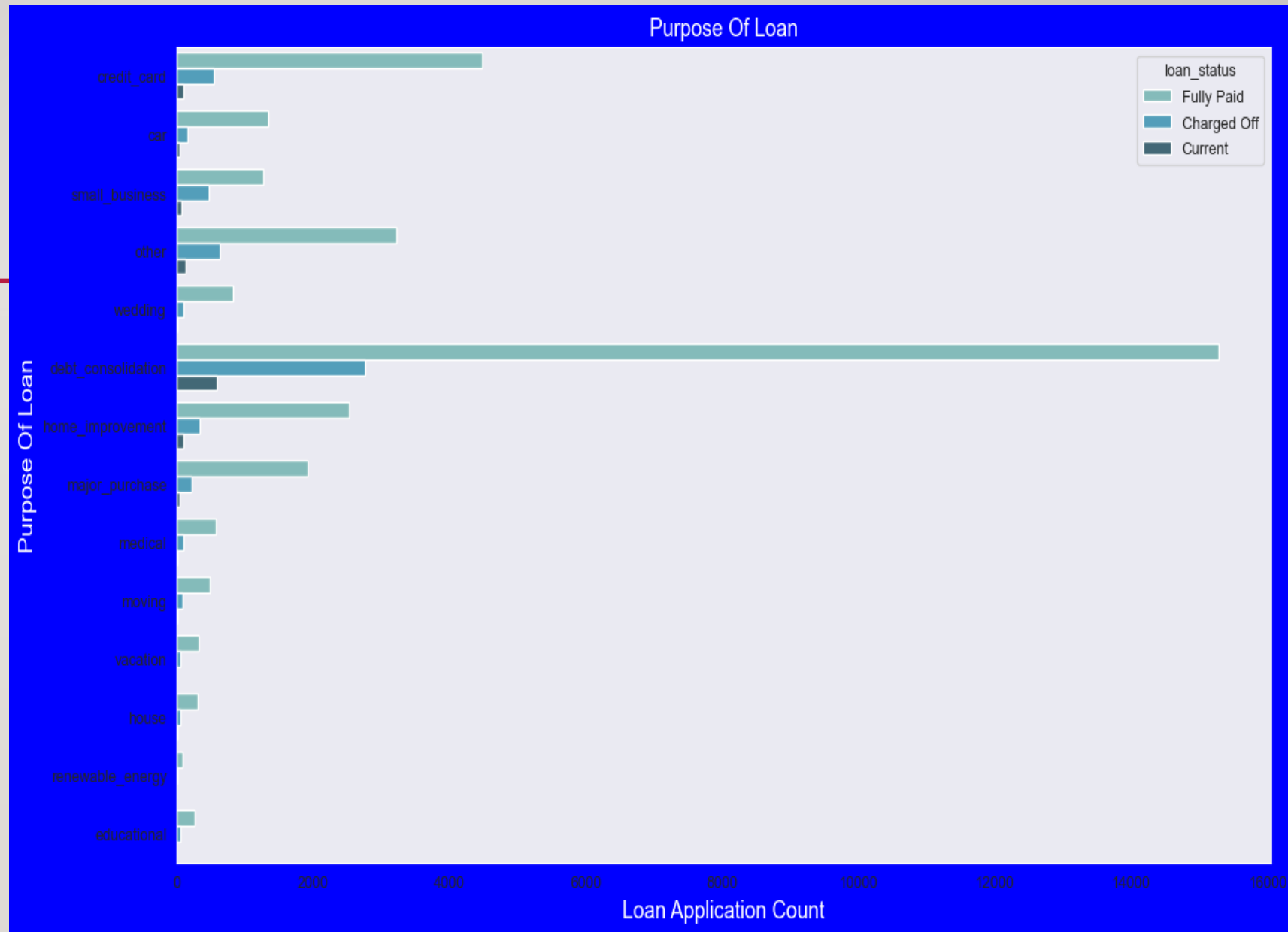
ANALYSIS AND OBSERVATION

The median from the box plot can be seen as 12 i.e the interest rate majorly b/w 12% to 15 %
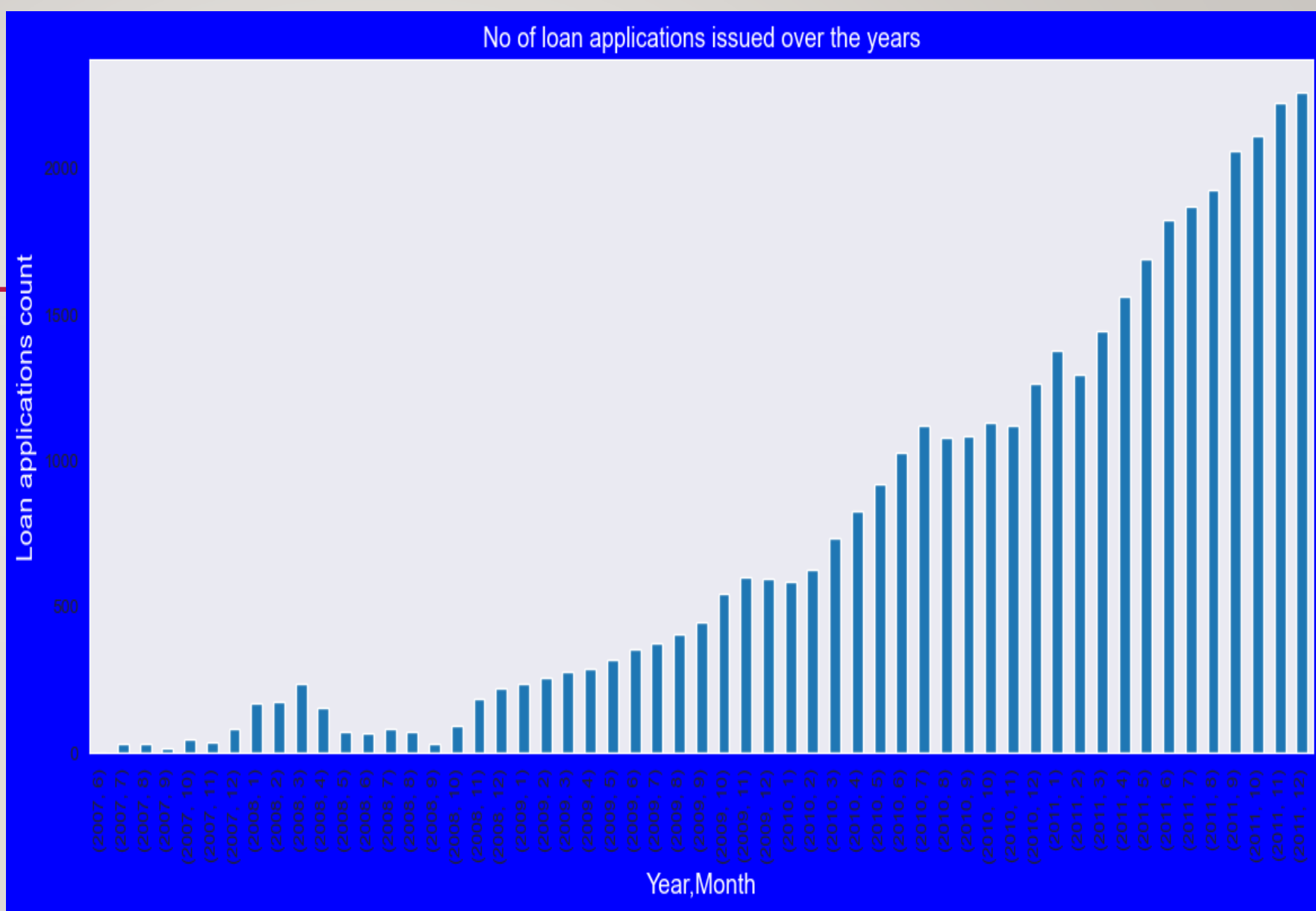
ANALYSIS AND OBSERVATION

- Number of loan application is more for debt_consolidation followed by credit_card, home_improvement, major_purchase and so on

- The correlation b/w number of loan application and becoming default(charged off) is **positive** i.e. if the number of loan application increases then becoming default also inceases
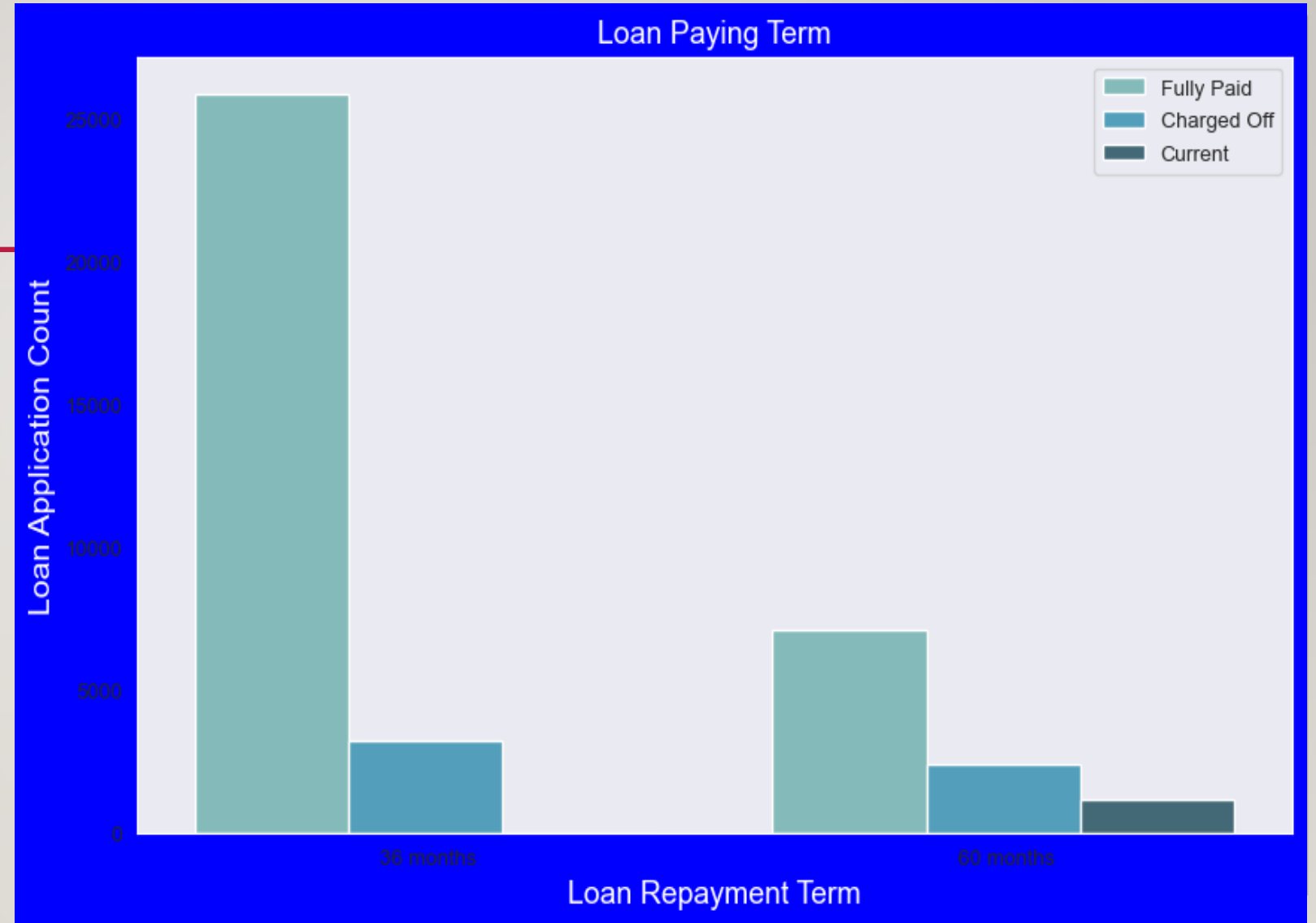
ANALYSIS AND OBSERVATION

- Between 2007 and 2008 the number of loan application were very few

- From 2009 to 2011 there is huge increase in number of loan application

- The increase was from around 200 to 2500 so the loan application percentage is more than 120%
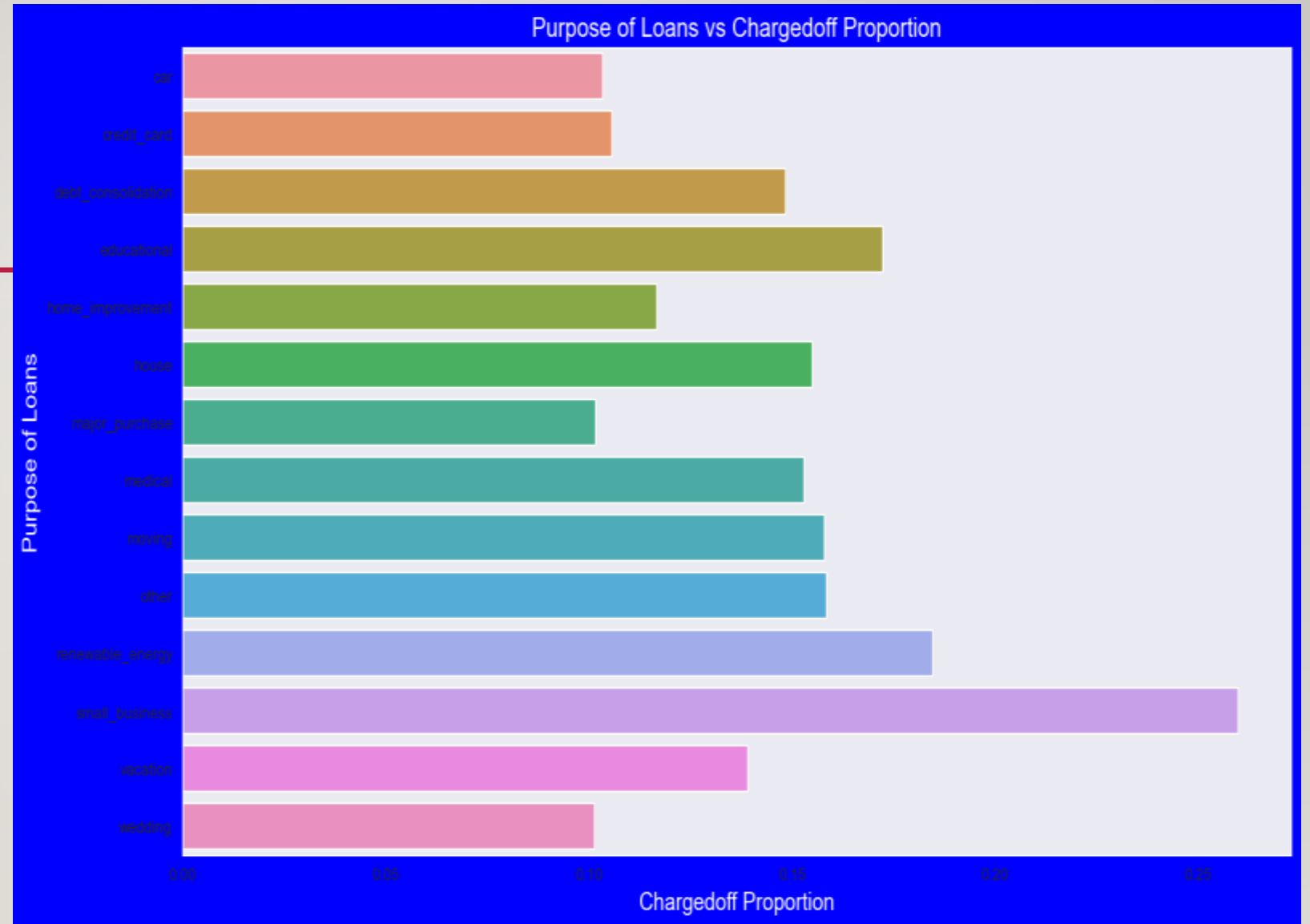

No of loan applications issued over the years

ANALYSIS AND OBSERVATION

- The loan application count is very much high for 36 months loan repayment term is very much higher compared to 60 months loan repayment term

- And there is no much difference in charged off b/w 36 months tern and 60 months term

- **The customers taken loan for 60 months or more likely to become default**
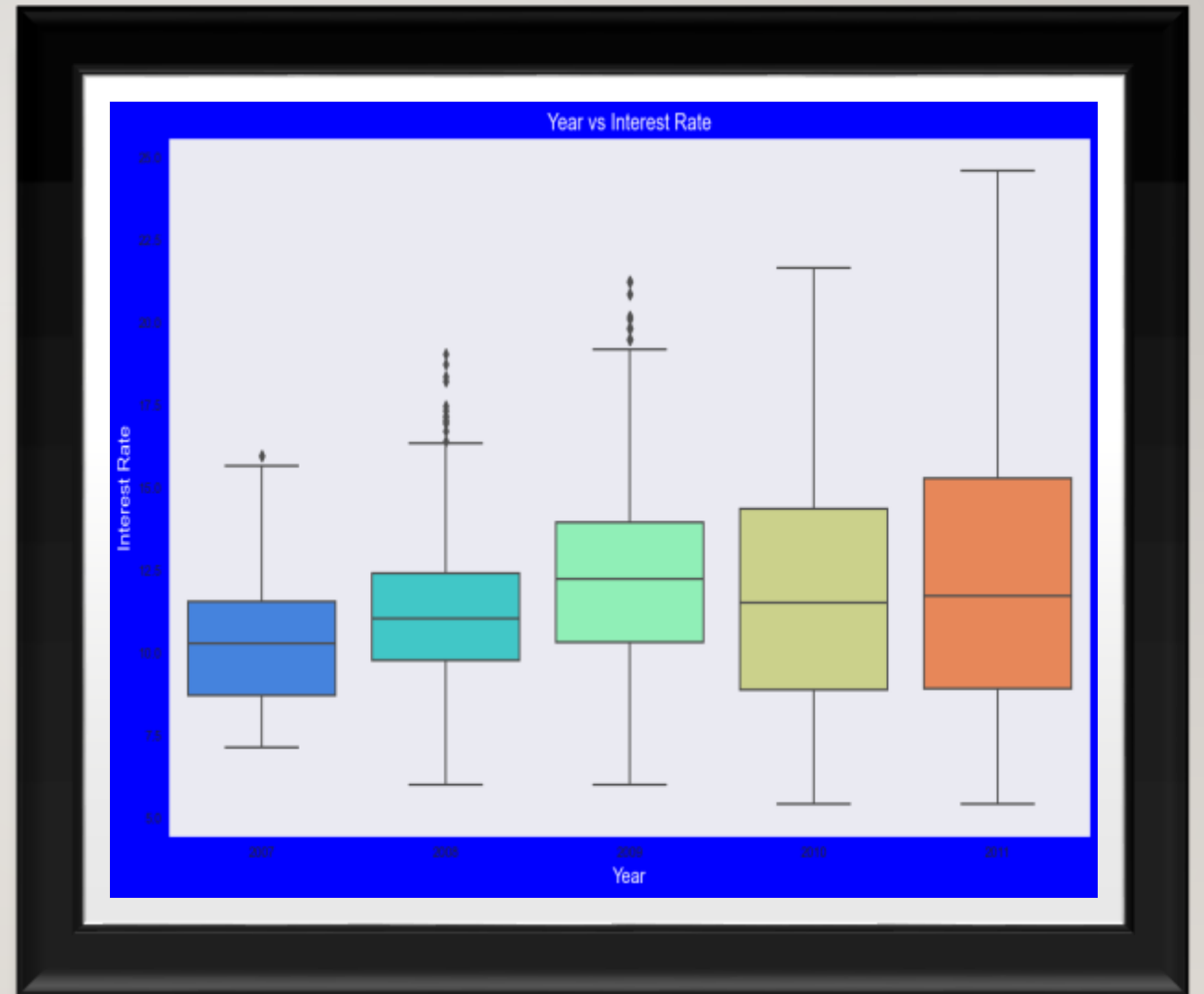
ANALYSIS AND OBSERVATION

- The loan taken for the purpose of small business are more likely to be become default followed by renewable energy, educational and so on

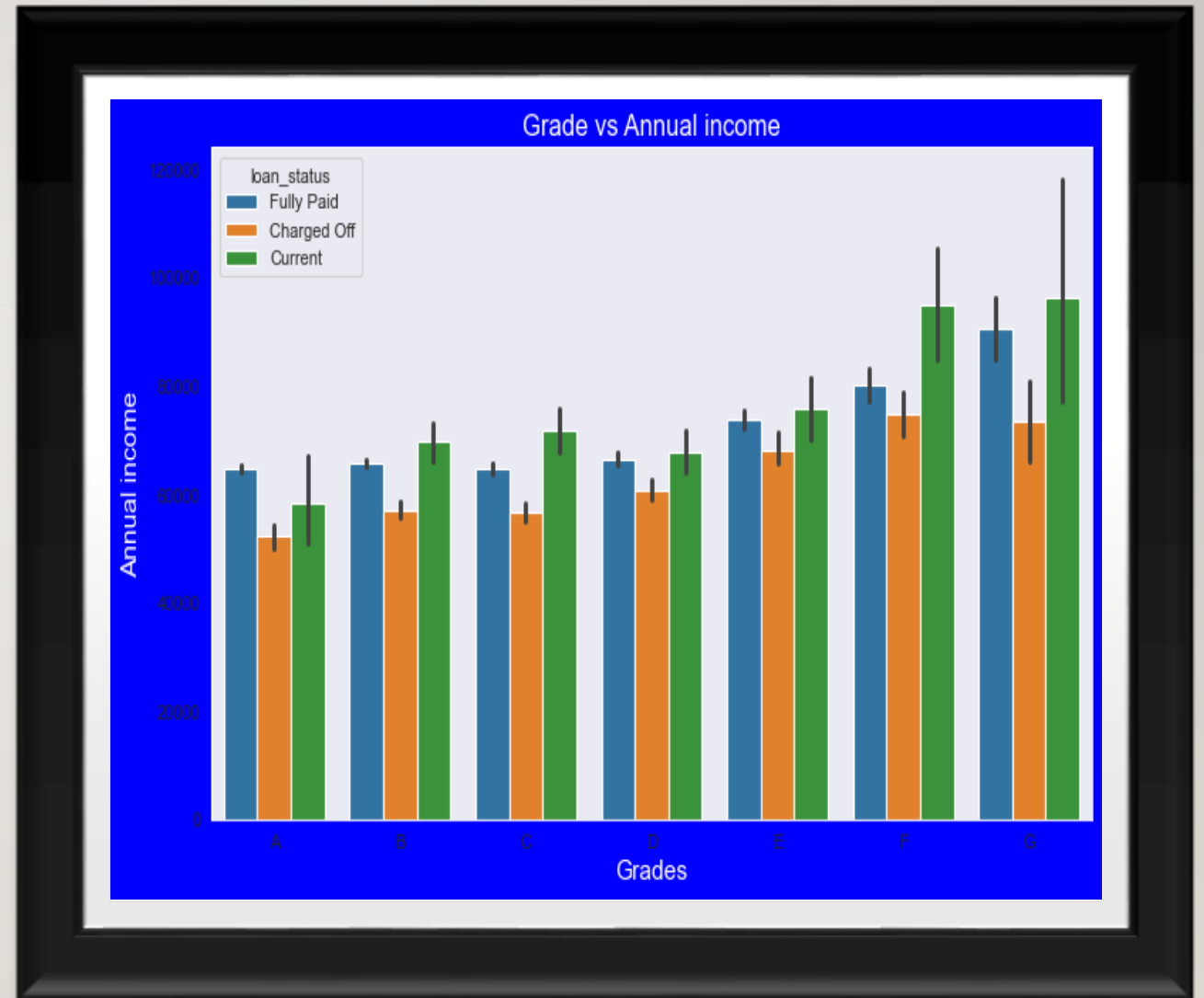Purpose of Loans vs Chargedoff Proportion

ANALYSIS AND OBSERVATION

- The interest rate kept increasing gradually over the years as loan application count also increased

ANALYSIS AND OBSERVATION

- The customer who have lower income are more likely getting charged off compared to customers having high annual income

ANALYSIS AND OBSERVATION

- For small business the amount of loan application as well as loan amount is higher compared to others

- And loan taken for small business are also more likely to become default compared to others.

- After small business the amount of loan taken is higher for house and debt consolidation

ANALYSIS AND OBSERVATION

- The interest rate charged for small business in higher

- As loan amount and interest increases for small business, they are more likely to become default.
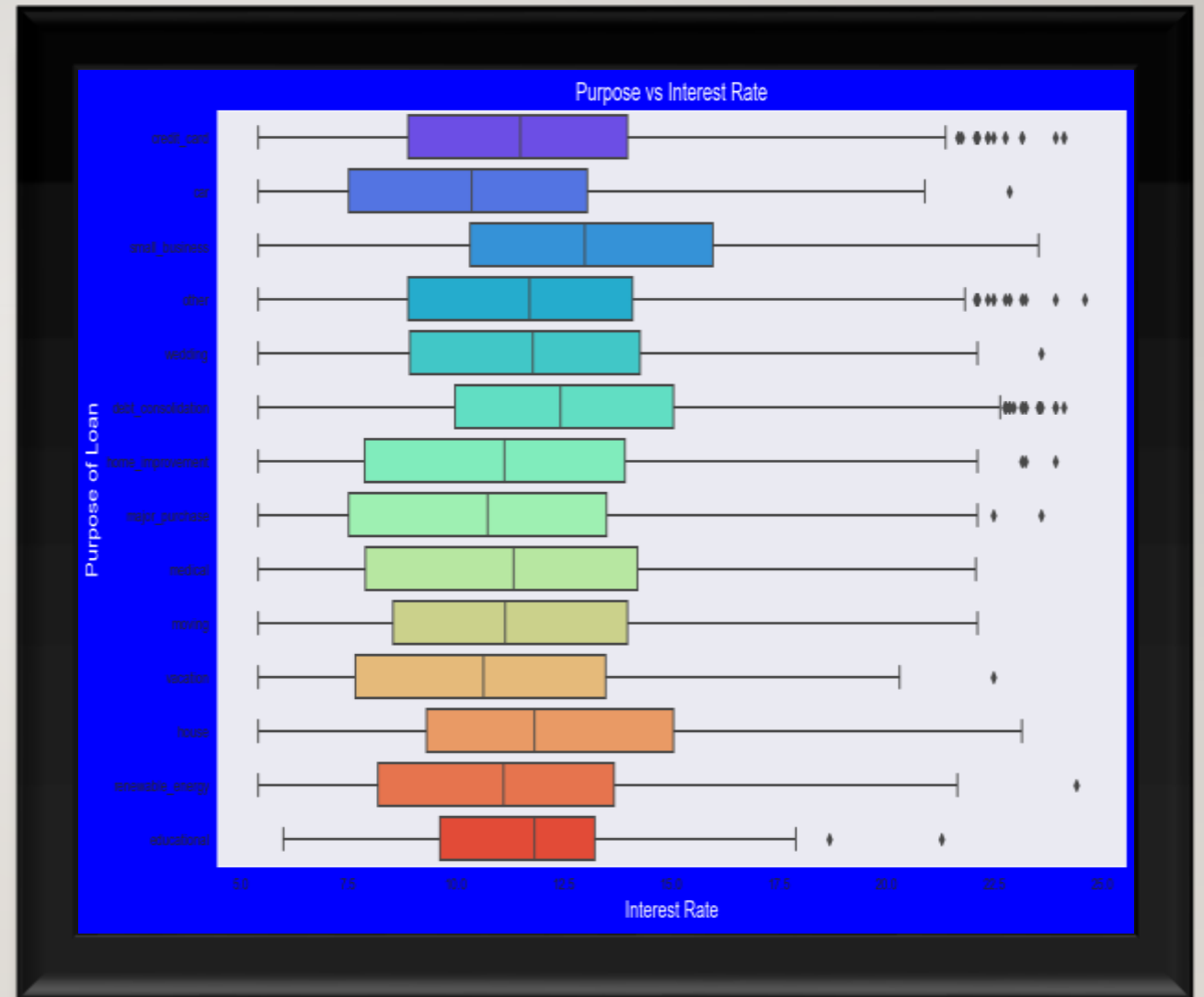
OBSERVATIONS

Higher the interest rate higher the charged off ratio

Higher the annual income higher the loan amount

Increase in number of default with increase in year.

Interest rate is increasing with loan amount increase

THANK YOU