



Lending Club Case Study

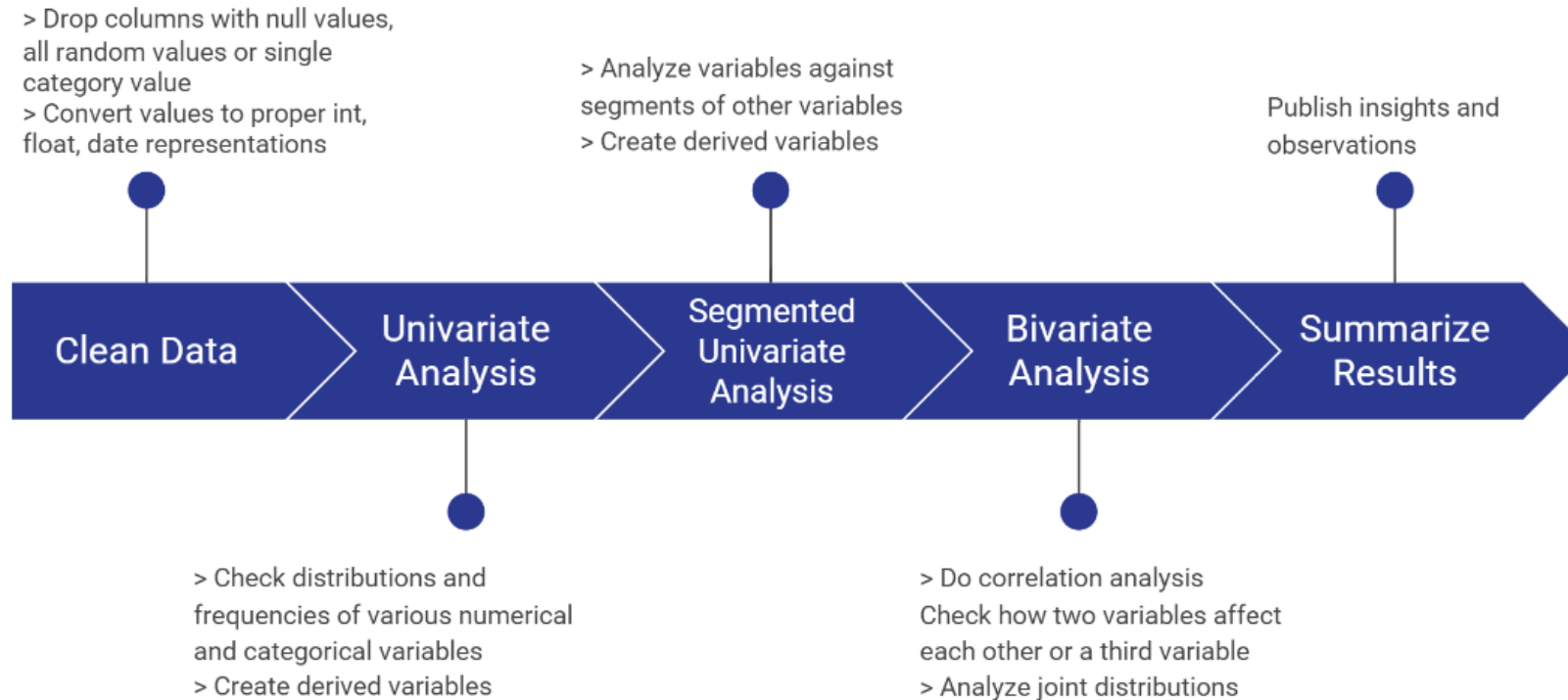
GROUP MEMBERS:

LEELA GUNA KRISHNA KOMPALLI &
VINAY V.

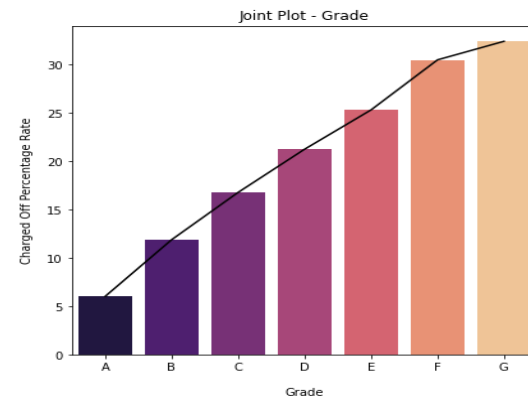
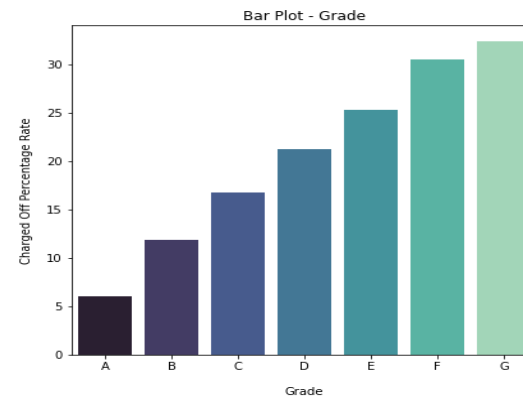
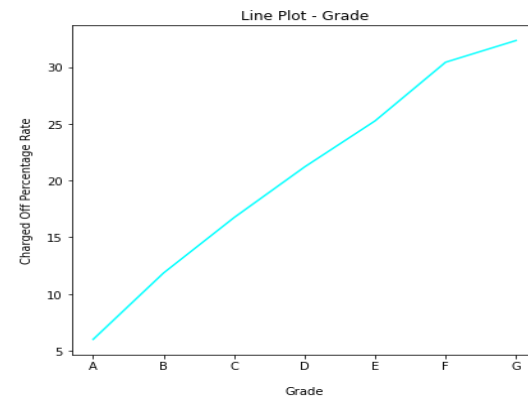
Problem Statement

1. Identifying Loan applicant traits that tend to 'default' paying back.
2. Understanding and observing the factors behind this phenomenon.
3. Analyze the dataset using EDA to understand how consumer attributes and Loan attributes influence the tendency of default

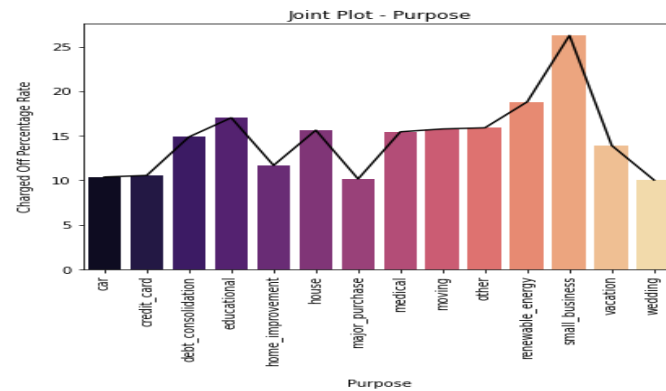
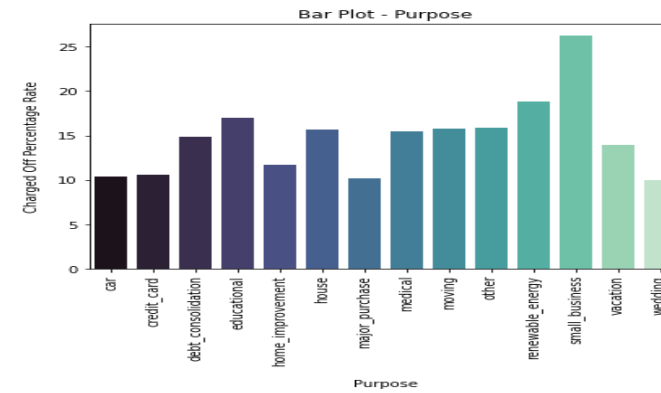
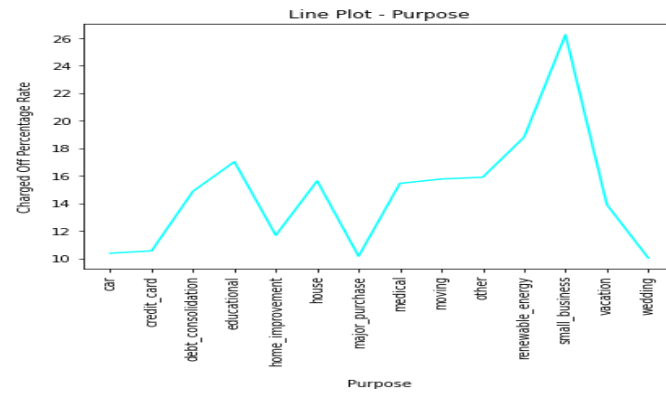
Methodology



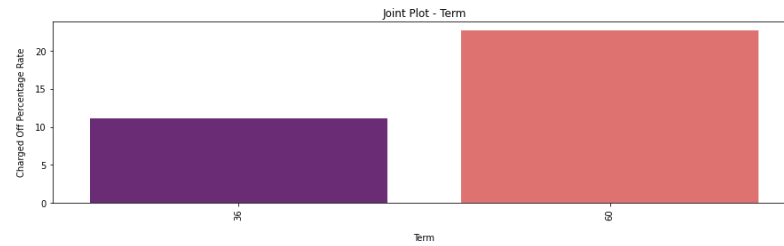
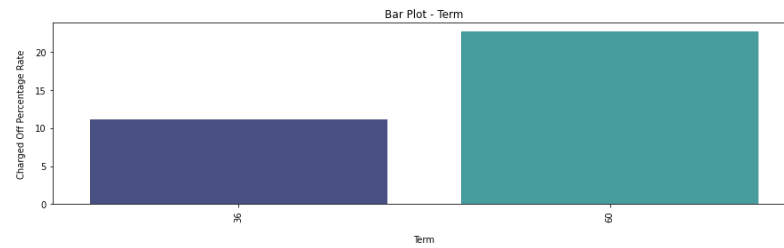
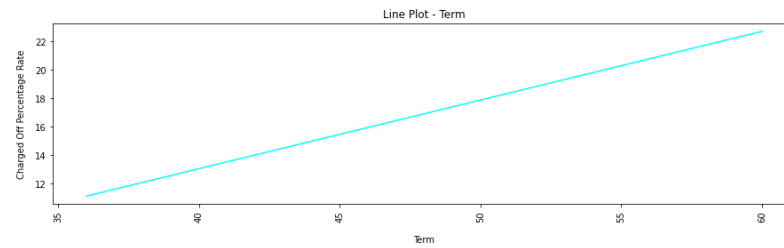
Loan Grade Analysis



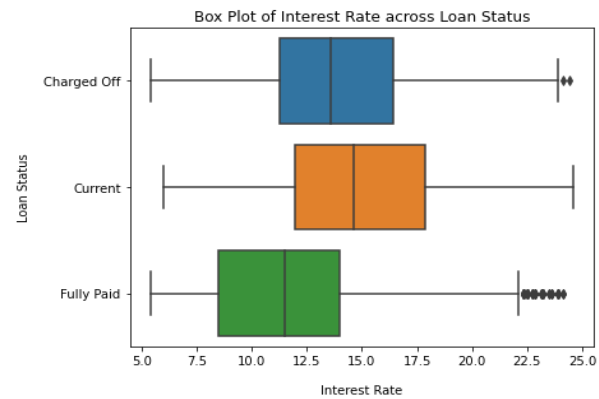
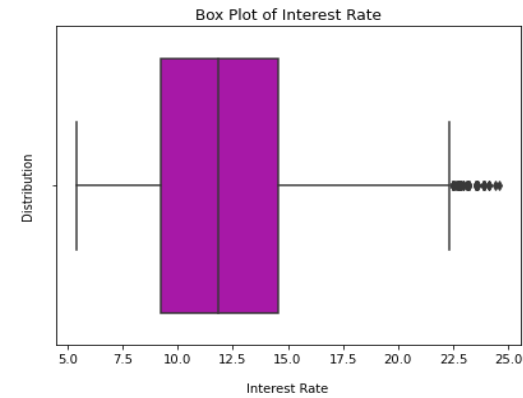
Loan Purpose Analysis



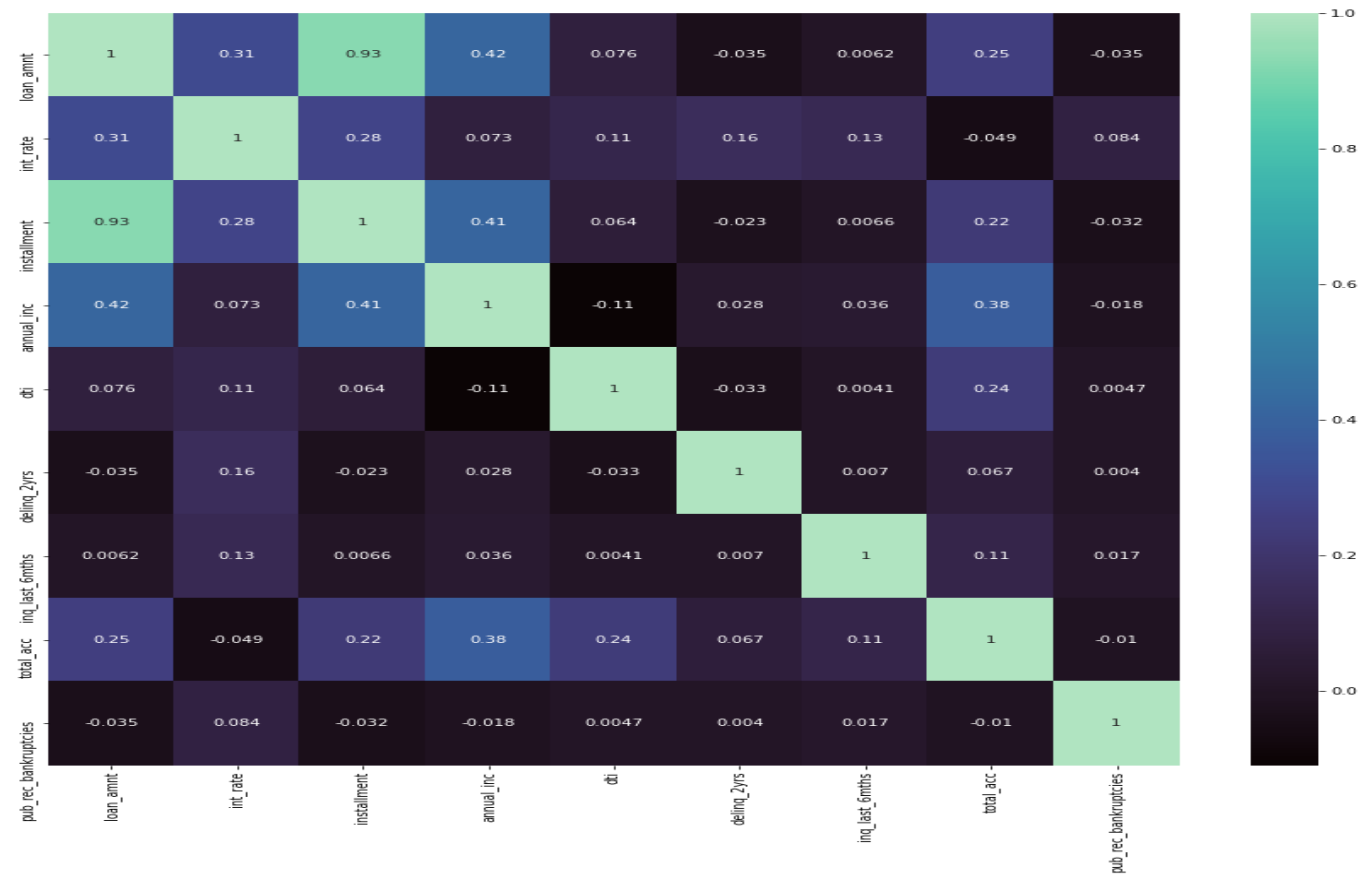
Loan Term Analysis



Interest Rate Analysis



Heat Map Analysis



Observations

1. Interest Rate:

Charged Off Rate is high for interest rate: 1. 20-25 = 34.44% 2. 15-20 = 23.51% As the Interest Rate increases, Charge Off Rate Increases.

2. Annual Income:

Charged Off Rate is high for Annual Income: 1. 0-20000 = 19.93% 2. 20000-40000 = 17.43% 3. 40000-60000 = 14.90% So, as the Annual Income decreases, Charge Off Rate Increases.

3. Sub Grade:

Most of the Charged off applicants belong to Grade B, C and D.

1. Grade B => B3, B5, B4 2. Grade C => C3, C4, C5 3. Grade D => D3, D4, D5

4. Term:

Charge Off Rate increases as the Term increases.

5. Loan Purpose:

Charged Off Rate is high for loan purpose: 1. small_business = 26.27% 2. renewable_energy = 18.81% 3. educational = 17.03%

6. Employment Length

Charged Off Rate is high for employment length: 1. <1 year 2. 1 year