

EDA ASSIGNMENT

Problem Statement

This company is the largest online loan marketplace facilitating personal loans, business loans, and the financing of medical procedures. Borrowers can easily access lower interest rate loans through a fast online interface. Like most other lending companies, lending to ‘risky’ applicants is the largest source of financial loss (called credit loss). Credit loss is the amount of money lost by the lender when the borrower refuses to pay or absconds with the money owed. In other words, borrowers who default cause the biggest losses to lenders. In this case, customers labelled as ‘charged-off’ are the ‘defaulters’. the 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.

EDA contains following steps:

1. Data understanding
2. Data cleaning (cleaning missing values, removing redundant columns etc.)
3. Data Analysis
4. Recommendations

Result of Univariate Analysis-

1. Default rate of loan is 14%.
2. Maximum people takes loans for debt consolidation

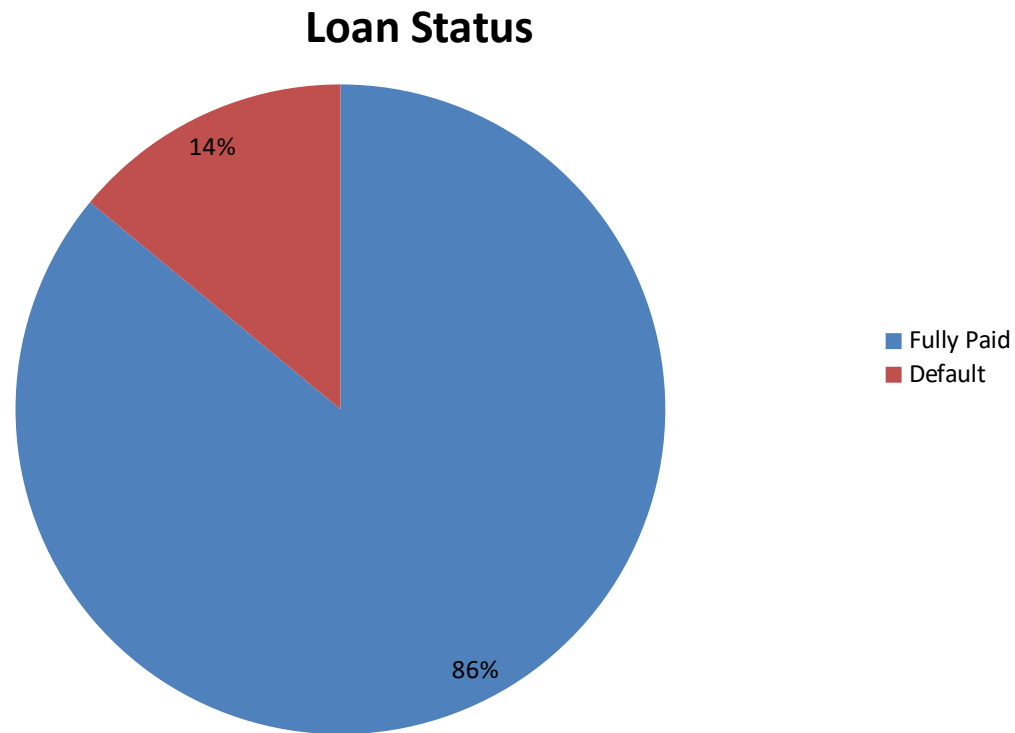
Result of Bivariate Analysis-

1. As annual income increases dti decreases so company should target customers with low dti.
2. Lower grade people have high interest rates
3. People with grade D, E, F, G have greater default rate than average.
4. Loans with interest rates between 21-25 have highest interest rates.
5. Term of 36 months for paying loan have much lesser chance of default than the 60 months plan.
6. Loan taken for small businesses have more chance of default.
7. People with loan greater than 25000 are more likely to default.

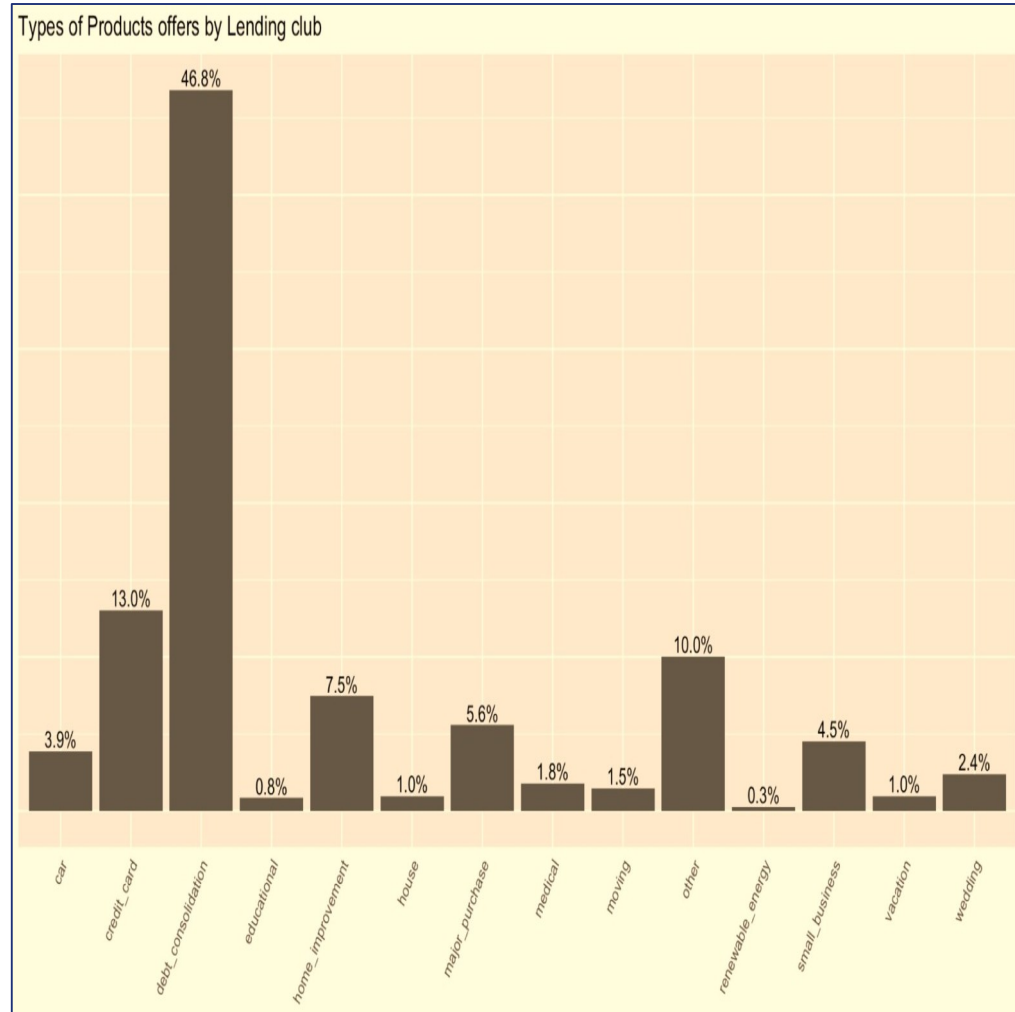
Result of Multivariate Analysis-

1. People with high debt to income ratio and low income are more likely to default.
2. People with less than 10 dti and high annual income are unlikely to default.
3. People with grade 'C' having low dti can be given loans with high interest rate.
4. Wedding loan, vacation loan, car loan, credit card loan can be given to people with high dti.
5. Giving high amount of loan should be avoided to customers with high dti.

Default rate is 14%-



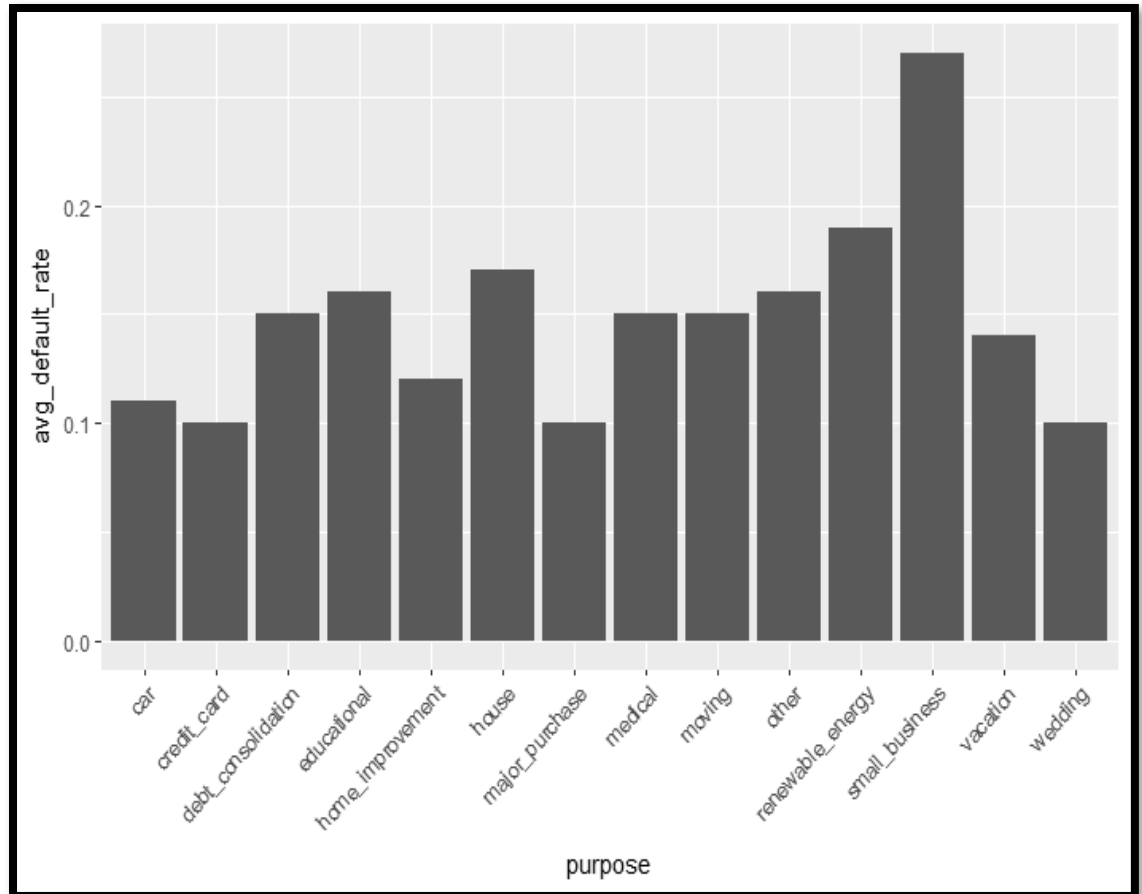
Loan Purpose Distribution : Debt Consolidation Loan is the most popular



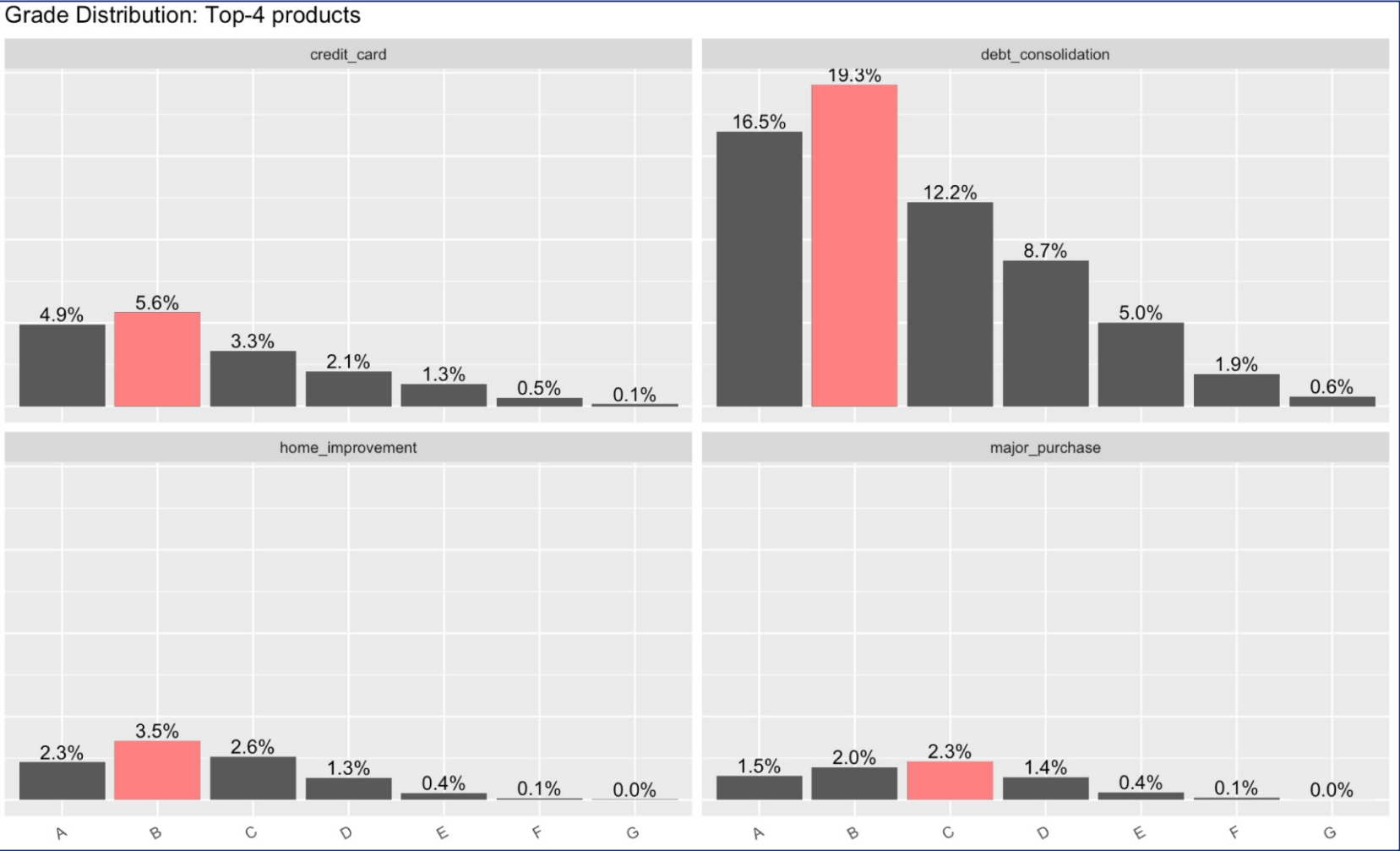
1. 46.8% debt consolidation loans
2. 13% credit card loans
3. 7.5% home improvement loans
4. 5.6% major purchase loans

Default Rates By Loan Purpose

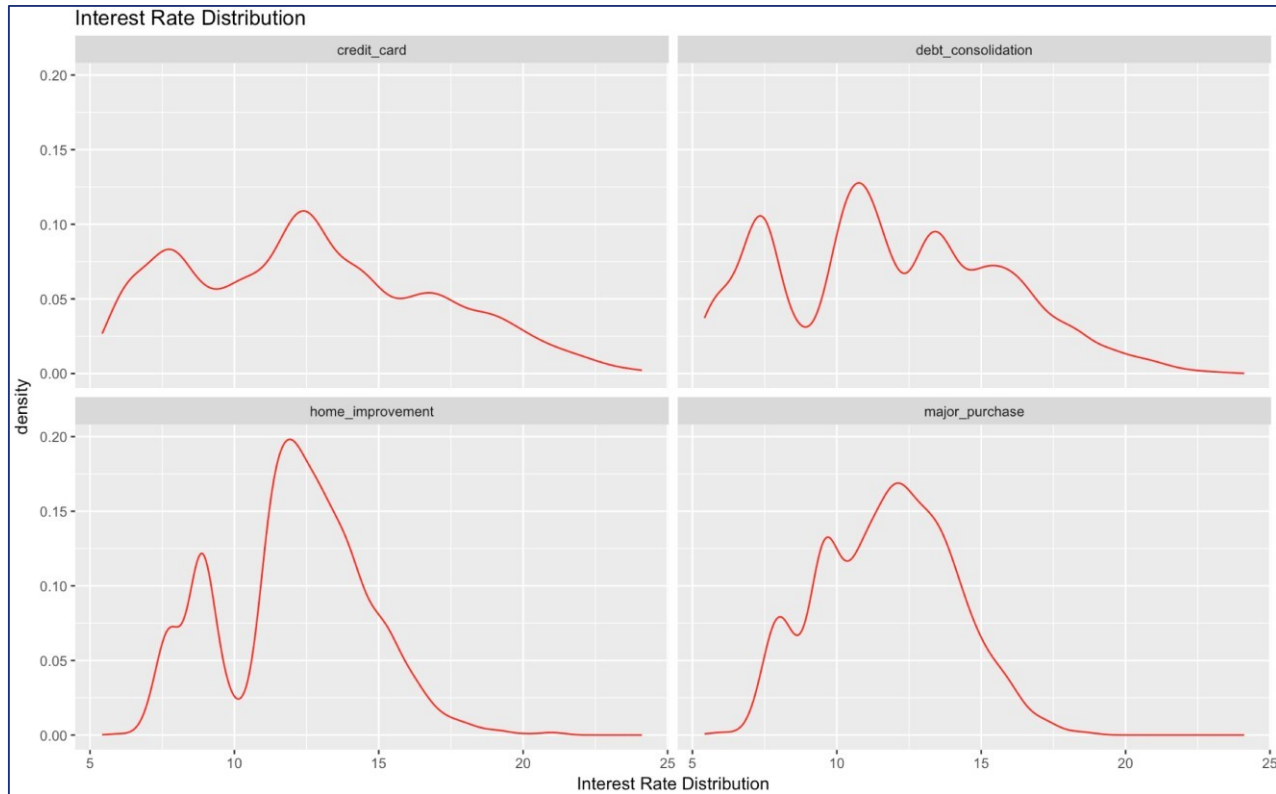
1. Small business: 27%
2. House: 17%
3. Educational: 16%
4. Debt consolidation: 15%
5. Credit card: 10%
6. Major purchase: 10%



Grade Distribution in top-4 products



Average Interest Rate in top-4 products



Credit Card	Debt Consolidation	Home improvement	Major purchase
11.62%	12.40%	11.29%	10.80%