

Loan Data Analysis and Recommendations

Analyzing Key Factors for Lending
Decisions

BY: Harsha Punati , Dinesh Reddy
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Introduction

- Objective: To analyze loan data and identify key factors influencing lending decisions.
- Data Source: Loan dataset given in website
- Scope: Data understanding, cleaning, analysis, and recommendations.

Data Understanding

- Steps Performed:
 - Data Information
 - Info on Missing Values
 - Summary statistics for numerical columns
 - Check data types and unique values for categorical columns

Data Cleaning and Manipulation

- Steps Performed:
 - Identify Columns with Significant Missing Data
 - Drop columns with significant missing data
 - changing vlaues of columns into required format
 - Converting columns into corresponding correct DTypes
 - Handling rows with missing values
 - OutLier Treatment

Univariate Analysis

- Steps Performed:
 - Univariate analysis of numerical variables
 - Univariate analysis of Categorical variables

Segmented UnivariateAnalysis

- Steps Performed:
 - segmented analysis of numerical variables with loan_status
 - segmented analysis of categorical variables with loan_status

Key Inferences

Bivariate Analysis

- Steps Performed:
 - Numerical vs Numerical
 - Numerical vs Categorical
 - Categorical vs Categorical

Derived Metrics

- Business-driven Metrics
- Type-driven Metrics
- Data-driven Metrics

Recommendations

- Realistic and Actionable Steps:
- Assumptions:
 - Assumed that missing data can be accurately imputed.
 - Assumed that the patterns observed in the data hold true for future datasets.

Conclusion

- Summary of Analysis:
 - Key factors identified for lending decisions.
 - Effective data cleaning and analysis methods.