

Initial Task: Data Preprocessing

Tasks:

1. Data Cleaning:

- Identify and handle missing values.
- Remove duplicates.
- Correct data types.

2. Data Encoding:

- Convert categorical variables into numerical format using appropriate encoding techniques (e.g., One-Hot Encoding, Label Encoding).

3. Data Labeling:

- Ensure that the dataset is properly labeled for subsequent analysis.

Task Second- Dashboard Building:

This dashboard provides insights into loan delinquency trends, focusing on how delinquency rates vary over time and by credit score range. It includes key metrics such as the average delinquency rate and the percentage of loans ever delinquent.

Key Visualizations:

- Line Chart: Visualizes delinquency rates over time, helping identify trends.
- Donut Chart: Displays the percentage of loans ever delinquent, categorized by Credit Score range.
- KPI Indicators: Highlight the average months delinquent and the percentage of loans ever delinquent.

Here the variable Credit Score is classified as Credit Score Range Poor (0-650), Fair (650-700), Good (700-750), Excellent (750-900).

RESULTS:

- Total Number of Loans are 210k and the prepayment rate is 0.15
- Delinquency Rate is 19.48 and it varies over time
- The month of July has higher delinquent loans.
- Used line chart to analyze the trends delinquency over a time period and line chart
- Loans classified as Credit Range [Poor] have the highest delinquency rate, 44.5%