Loan Risk & Status Visualization Project Documentation

Objective

To analyze borrower data and identify patterns that contribute to loan defaults. This analysis will assist financial institutions in:

- Reducing non-performing loans (NPL)

- Targeting low-risk borrowers

- Adjusting loan conditions based on borrower profiles

Context

Loan defaults pose a significant threat to financial institutions, affecting liquidity and profitability. Understanding the behavior and characteristics of borrowers who default enables better risk assessment and mitigation.

Key Questions Addressed

1. What is the overall loan default rate?

2. Which borrower segments are most likely to default?

3. How does home ownership impact loan default risk?

4. Is there a correlation between income level and loan default?

5. How does loan intent (e.g., education, debt consolidation) influence risk?

6. What role does credit history length play in default probability?

7. How does loan grade relate to risk exposure?

Key Metrics Analyzed

- Loan Default Rate

- Borrower Income Groups

- Credit History Length

- Loan Grade Distribution

- Loan Intent Categories

- Home Ownership Types

Business Impact

This project allows institutions to:

- Improve their credit risk assessment models

- Develop targeted lending strategies

- Personalize loan offers based on risk

- Reduce future loan defaults and financial losses