

# Financial Loan

## Problem Statements

### Financial Loan Dashboard 1: Summary

To monitor and assess our bank's lending activities and performance, we present a comprehensive Bank Loan Report. This report provides insights into key loan-related metrics and their changes over time, enabling data-driven decisions, tracking loan portfolio health, and identifying trends to inform lending strategies.

#### Key Performance Indicators (KPIs):

- **Total Loan Applications:** Count of all loan applications received during a specified period. Includes Month-to-Date (MTD) applications and Month-over-Month (MoM) changes.
- **Total Funded Amount:** Total disbursed loan funds. Includes MTD funded amount and MoM analysis.
- **Total Amount Received:** Total repayments received from borrowers. Includes MTD received amount and MoM changes.
- **Average Interest Rate:** Average rate across all loans, including MTD and MoM variations.
- **Average Debt-to-Income Ratio (DTI):** Average borrower DTI, tracked across all loans, MTD, and MoM fluctuations.

### Financial Loan Dashboard 2: Overview

This dashboard visually represents critical loan metrics and trends using various chart types to support strategic planning and decision-making.

#### Chart Types and Objectives:

1. **Monthly Trends by Issue Date (Line Chart):** Tracks 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received' over time to identify seasonality and long-term lending trends.
2. **Regional Analysis by State (Filled Map):** Displays lending metrics by state to highlight regional activity and disparities.

3. **Loan Term Analysis (Donut Chart):** Shows distribution of loans across term lengths (e.g., 36 months, 60 months) for applications, funded amounts, and received payments.
4. **Employee Length Analysis (Bar Chart):** Illustrates lending metrics by borrower employment duration (e.g., 1 year, 5 years, 10+ years).
5. **Loan Purpose Breakdown (Bar Chart):** Breaks down loan metrics by purpose (e.g., debt consolidation, credit card refinancing).
6. **Home Ownership Analysis (Tree Map):** Categorizes loan metrics by home ownership status (e.g., own, rent, mortgage) to assess impact on lending.

### **Financial Loan Dashboard 3: Details**

The Details Dashboard provides a consolidated view of essential loan data, offering a user-friendly interface for accessing borrower profiles, loan performance, and portfolio insights.

#### **Objective:**

To serve as a one-stop solution for users seeking detailed information on loan metrics, including application counts, funded amounts, received payments, interest rates, and borrower financial health. This dashboard supports efficient data access and comprehensive portfolio analysis.