

Bank Loan Analysis

Self-Learning Project
(December 2024)

Introduction

In December 2024, I completed a self-learning project focused on Bank Loan Analysis, where I analyzed extensive loan records to gain insights into lending patterns and performance metrics. This project involved leveraging data analysis tools like Power BI and SQL to create dashboards and perform in-depth KPI analysis. The objective was to uncover trends and identify areas for improvement in loan portfolio performance.

Dataset

The dataset analyzed during this project comprised over 50,000 loan records. This large dataset provided a comprehensive view of the bank's lending activities, enabling the identification of key trends and patterns within the data.

Methodology

The project methodology consisted of the following major steps:

- **Data Visualization:** Using Power BI, I created a dashboard that visualized five key trends in loan lending patterns. This included visual representations of loan approval rates, default rates, customer demographics, loan amounts, and repayment periods.
- **KPI Analysis:** I examined over 10 critical Key Performance Indicators (KPIs) related to the bank's lending process using SQL. This analysis revealed a significant opportunity to improve portfolio performance by 15
- **Workflow Optimization:** Through a streamlined analysis workflow, I was able to reduce the time required for data analysis by 20

Results

The analysis provided valuable insights into the bank's lending patterns and performance. The Power BI dashboard offered a clear visualization of trends, aiding in decision-making. The KPI analysis, performed using SQL, uncovered actionable opportunities for enhancing portfolio performance. Additionally, the streamlined workflows contributed to faster and more efficient data processing.

Conclusion

This project reinforced my skills in data analysis, particularly in the use of Power BI for visualization and SQL for detailed KPI analysis. The experience of analyzing a large dataset and optimizing workflows provided practical insights into real-world financial data analysis and portfolio management. The successful identification of improvement opportunities demonstrated the value of data-driven decision-making in the banking sector.