Project: Sales Analysis and Forecasting Proposal

Introduction

Businesses generate large volumes of sales data every day, but without proper analysis, much of its value is lost. This project focuses on analyzing and forecasting sales data to better understand customer behavior, product performance, and overall sales trends.

Using historical sales records that include customer types, product lines, payment methods, locations, ratings, and time-based data, this project turns raw data into meaningful insights. The analysis combines data cleaning, exploration, visualization, and forecasting to help businesses make smarter decisions around marketing, inventory, customer experience, and revenue growth.

Purpose of the Project

The main purpose of this project is to help businesses understand what is driving their sales today and what to expect in the future. Specifically, the project aims to:

- Identify sales trends across months, quarters, and locations.
- Understand customer purchasing behavior by customer type, gender, and payment method.
- Determine high-performing and low-performing product lines.
- Analyze customer satisfaction using product ratings and branch performance.
- Forecast future sales using time-series analysis to support planning and decision-making.

The final outcome provides practical insights that businesses can use to improve sales strategies, optimize inventory, enhance customer satisfaction, and plan for future demand.

Tools and Technologies Used

SQL: Used for data extraction, cleaning, transformation, and exploratory analysis to ensure the dataset is accurate and well-structured.

Python: Used for deeper behavioral analysis and sales forecasting using time-series models (Prophet), helping predict future sales trends.

Tableau: Used for advanced data visualization to explore sales trends, product performance, customer demographics, and seasonal patterns.