Business Sales Analysis

Report

1. Introduction

This project focuses on analyzing business sales data to identify sales trends, customer behavior, and product performance. The insights derived can help businesses improve decision-making, optimize product strategy, and increase revenue.

2. Dataset Description

The dataset contains transactional sales data with attributes such as Order ID, Order Date, Customer ID, Product Name, Category, Quantity, and Price. Additional features like Total Sales, Year, Month, and Month Name were created during data preprocessing.

3. Data Cleaning & Preparation

Data cleaning steps included removing duplicate records, converting the order date to datetime format, and creating derived features such as Total Sales, Year, Month, and Month Name. The cleaned dataset was saved as clean_sales_data.csv.

4. Sales Trend Analysis

Monthly sales trends were analyzed to identify peak and low-performing periods. The analysis revealed noticeable variation in sales across different months, indicating possible seasonal trends.

Summary

This project analyzes business sales data to understand sales trends, customer behavior, and product performance using Python. The dataset was cleaned and processed by removing duplicates, converting date formats, and creating new features such as Total Sales, Year, and Month. Exploratory data analysis helped uncover meaningful patterns in sales performance. Key analyses included monthly sales trend analysis, customer behavior analysis to identify high-value customers, and product performance analysis to determine top revenue-generating products. Visualizations such as line charts and bar charts supported the findings. These insights can help businesses improve marketing strategies, optimize product offerings, and enhance customer retention. The project demonstrates the practical application of business sales analysis using Python.