

Retail Analysis Summary Report

Introduction

Retail businesses face constant pressure to optimize sales, improve customer engagement, and reduce operational inefficiencies. This project analyzes sales, campaign effectiveness, customer behavior, and operational metrics to extract data-driven insights and strategic recommendations.

Abstract

The Retail Analysis project uses SQL-based data aggregation and business intelligence techniques to evaluate sales performance, campaign ROI, store effectiveness, and customer segmentation. The insights derived from the analysis help identify high-performing stores and campaigns, optimize budgets, and understand customer behavior. Strategic recommendations are made based on findings from both top and bottom performers across metrics.

Tools Used

- SQL: Data querying and aggregation across tables such as sales, customers, products, and campaigns
- Power BI / Excel: Visual dashboards and report generation
- Python (optional): For additional data transformation or visualization

Steps Involved in Building the Project

1. Data Preparation

- Extracted and joined tables: fact_sales, customers, products, campaigns, stores, dates.
- Cleaned missing or anomalous data (e.g., negative sales, null values).

2. Sales and Campaign Analysis

- Monthly and yearly sales growth trends calculated.
- ROI computed for all campaigns to rank top performers.

3. Customer and Store Insights

- Segmented customers by revenue and identified top 5% spenders.
- Identified best/worst-selling products and store performance by percentile.

4. Strategic Recommendations

- Budget reallocation, store optimization, and loyalty program suggestions were made based on insights.

Conclusion

The analysis uncovered key insights such as seasonal sales peaks, campaign ROI trends, and high-value customer behavior. Based on the data, recommendations were provided to improve campaign efficiency, optimize store formats, and enhance customer engagement. This type of holistic retail analytics enables smarter decision-making and improved profitability across the organization.