Introduction

This report presents a detailed analysis of a retail business's performance and profitability. The aim is to provide data-driven insights to optimize inventory turnover, detect profit-draining categories, and uncover seasonal product trends.

Abstract

Retail businesses collect vast amounts of transactional data, yet much of it remains underutilized. This project uses data analytics techniques to convert raw sales data into actionable business intelligence. The focus is on discovering patterns in product profitability, sales seasonality, and customer buying behavior.

Tools Used

1. Microsoft Power BI: For data visualization and dashboard creation.
2. Microsoft Excel: For initial data cleaning and formatting.
3. DAX (Data Analysis Expressions): For calculated measures and KPIs.
4. SQL (optional): For advanced querying if using large databases.

Steps Involved in Building the Project

1. Data Collection: Collected retail transaction data including sales, profit, discount, and order details.
2. Data Cleaning: Handled missing values, removed duplicates, and ensured consistent formatting in Excel.
3. Data Modeling: Imported clean data into Power BI, created relationships among tables.
4. Measure Creation: Built DAX measures such as Total Sales, Total Profit, Profit Margin, and Monthly Trends.
5. Dashboard Development: Designed interactive visuals like KPI cards, stacked bar charts, and trend lines.
6. Analysis: Identified top-performing and underperforming categories, seasonal trends, and key profit drivers.

Conclusion

The retail performance and profitability analysis revealed key insights to help decision-makers improve business outcomes. By focusing on underperforming areas and leveraging seasonal trends, the business can enhance profitability and operational efficiency.