Blinkit Analytical Dashboard

Project Overview

This project presents an end-to-end **business analytics dashboard inspired by Blinkit**, focused on delivering actionable insights across **sales, orders, customers, and products**. The solution combines **interactive Power BI reporting** with **predictive analysis in Python**, enabling stakeholders to explore historical performance and evaluate future trends in a clear, data-driven manner.

The dashboard is designed with a **dynamic and automated view**, allowing users to switch seamlessly between **Sales, Product, and Customer analysis on the same page**, improving usability and decision-making efficiency.

Objectives

- Analyze overall **sales and order performance** over time
- Understand **customer behavior and segmentation**, including premium customers
- Evaluate **product performance** based on sales, margin, and category
- Assess **customer satisfaction patterns** and purchasing behavior
- Predict future **sales trends** using a machine learning model

---

Data Source

- Public dataset sourced from **Kaggle**
- Used for analytical and portfolio demonstration purposes

Key Analysis Performed

- **Sales and Order Trend Analysis**: Order volume and sales distribution over time
- **Customer Analysis**: Monthly customer growth and customer segmentation insights
- **Product Analysis**: Product trends based on **sales, margin, and category performance**
- **Customer Satisfaction Analysis**: Rating trends and **payment method usage patterns**
- **Top Performance Identification**: Top customers and products using **rank-based DAX logic**
- **Scenario Evaluation**: **What-If analysis** to simulate changes in key business metrics

---

Dashboard Features (Power BI)

- Monthly Customer Trend (Line Chart)
- Order Volume and Sales Trends Over Time

- Product Performance by Margin and Category
- New Premium Customers by Segment (Donut Chart)
- Top Customers by Number of Orders (Bar Chart)
- Top Products by Sales using Rank-based Filtering
- Dynamic automated views for **Sales, Product, and Customer reports** on a single page

All visuals are interactive and support filtering to enable deeper analysis and exploration.

Predictive Analysis (Python)

- Built a **Linear Regression model** to analyze historical patterns and predict future sales trends
- Focused on understanding trend behavior and supporting planning decisions

---

Business Value

- Helps identify high-performing products and customer segments
- Supports better demand planning through trend and scenario analysis
- Enables data-driven decisions using interactive and automated reporting
- Demonstrates how descriptive and predictive analytics can be combined for business insights

---

Tools & Technologies

- **Power BI** (DAX, Power Query, Interactive Dashboards)
- **Python** (Pandas, NumPy, Scikit-learn)
- Data Cleaning & Exploratory Data Analysis
- What-If Analysis

Skills Demonstrated

- Data Analysis & EDA
- Data Visualization (Power BI)
- DAX & Ranking Logic
- Python for Analytics
- Machine Learning (Linear Regression)
- Business Insight Generation

Conclusion

This project showcases a practical approach to building **scalable, business-focused analytics dashboards** with predictive capabilities. It highlights strong analytical thinking, effective data storytelling, and the ability to translate raw data into meaningful business insights.