Blinkit Sales Performance Analysis Report

Introduction

Blinkit, a top quick-commerce grocery delivery platform, is leveraging data analytics to drive decisions around sales strategy, inventory planning, and customer engagement. This report focuses on evaluating sales performance, customer satisfaction, and inventory distribution using Power BI dashboards and KPIs.

Abstract

This project explores key metrics such as Total Sales, Average Sales, Number of Items Sold, and Average Rating across various dimensions. Using Python for data preparation and Power BI for visual analytics, the goal is to uncover trends, identify high-performing categories and outlets, and reveal actionable insights for strategic planning.

Tools Used

- Python (NumPy, Pandas) – Data cleaning, preprocessing

- Power BI – Interactive dashboard & visualization

- DAX – Calculated KPIs

- Power Query – Data transformation inside Power BI

Steps Involved in Building the Project

1. Data Cleaning using Python

Used NumPy and Pandas to clean and prepare raw data:
- Handled missing values:
  df['Item_Weight'].fillna(df['Item_Weight'].mean(), inplace=True)
  df['Outlet_Size'].fillna(df['Outlet_Size'].mode()[0], inplace=True)
- Removed duplicates:
  df.drop_duplicates(inplace=True)
- Standardized inconsistent labels:
  df['Item_Fat_Content'].replace({'low fat':'Low Fat', 'LF':'Low Fat', 'reg':'Regular'}, inplace=True)
- Converted datatypes where needed:
  df['Outlet_Establishment_Year'] = pd.to_datetime(df['Outlet_Establishment_Year'],

format='%Y')
- Removed outliers using IQR or z-score methods (if needed)

2. KPI Calculations in Power BI

- Total Sales = SUM(Item_MRP × Item_Outlet_Sales)
- Average Sales = AVERAGE(Item_Outlet_Sales)
- Number of Items = DISTINCTCOUNT(Item_Identifier)
- Average Rating = AVERAGE(Customer_Rating) (if available)

3. Data Modeling

Built relationships between item, outlet, and sales data. Created a calendar table for time-based filtering.

4. Visualization Development

Chart Title	Objective	Chart Type
Total Sales by Fat Content	Assess impact of fat level	Donut Chart
Total Sales by Item Type	Compare item category sales	Bar Chart
Total Sales by Establishment Year	Evaluate outlet maturity	Line Chart
Fat Content by Outlet	Segment sales by fat and outlet	Stacked Column
Sales by Outlet Size	Assess outlet size contribution	Pie Chart
Sales by Outlet Location	Visualize geo-sales spread	Funnel Map
All KPIs by Outlet Type	Compare key metrics by outlet type	Matrix Card

Conclusion

Key business insights from this dashboard:
- Regular-fat products outperform low-fat items, suggesting stronger customer preference.
- Fruits & Vegetables and Snacking items are among top-selling categories.
- Older outlets and medium-sized stores generate higher sales, hinting at maturity and optimized store formats.
- Tier 1 cities drive maximum revenue, showing strong market penetration.
- Matrix visuals show Supermarket Type1 outlets consistently rank high across KPIs.