Blinkit Sales Analysis Report

# 1. Introduction

This report presents a comprehensive analysis of Blinkit's sales dataset using Python. The aim is to evaluate sales performance, customer satisfaction, and inventory distribution to derive key insights and business opportunities. Exploratory Data Analysis (EDA) was performed to understand the structure, trends, and hidden patterns in the data before visualizing KPIs in Power BI.

# 2. Exploratory Data Analysis (EDA)

EDA involved inspecting the data types, cleaning inconsistent categorical values (e.g., 'low fat', 'LF' to 'Low Fat'), and understanding the data distribution. The dataset consisted of 8,523 rows and 12 columns, with attributes like item type, fat content, outlet type, sales, and ratings.

# 3. KPI Requirements & Computations

The key KPIs derived using Python are:

- Total Sales: Sum of all sales values.  
- Average Sales: Mean of the sales column.  
- Number of Items Sold: Count of all rows in the sales column.  
- Average Rating: Mean of customer ratings.

Code Used:

total\_sales = df['Sales'].sum()  
avg\_sales = df['Sales'].mean()  
no\_of\_items\_sold = df['Sales'].count()  
avg\_ratings = df['Rating'].mean()

Results:

- Total Sales: $1,201,681  
- Average Sales: $141  
- Number of Items Sold: 8,523  
- Average Rating: 4

# 4. Chart Requirements & Analysis

Various visualizations were created using Matplotlib and Seaborn to analyze sales trends:

1. Total Sales by Fat Content – Donut Chart: Regular vs. Low Fat sales.  
2. Total Sales by Item Type – Bar Chart: Performance across product categories.  
3. Fat Content by Outlet for Total Sales – Stacked Column Chart: Comparison by outlet tier.  
4. Total Sales by Outlet Establishment Year – Line Chart: Trends over outlet opening years.  
5. Sales by Outlet Size – Donut Chart: Distribution by outlet sizes.  
6. Sales by Outlet Location – Funnel Map: Geographic sales distribution.

# 5. Insights & Recommendations

- Items with 'Low Fat' labels generate a higher share of sales, suggesting growing health-conscious demand.  
- Fruits and Vegetables and Household categories dominate in total revenue.  
- Outlets located in Tier 3 areas have a substantial share, indicating wide rural/urban penetration.  
- Newer outlets (established post-2015) contribute more to total sales, highlighting the importance of recent expansion.  
- Medium-sized outlets outperform others, suggesting an optimal store size for operations.

Recommendations:

- Expand inventory and marketing for high-performing categories (Fruits, Household, Health).  
- Prioritize opening medium-sized outlets in Tier 3 locations.  
- Leverage high customer ratings as a competitive edge by promoting positive customer experiences.  
- Maintain focus on health-centric products like 'Low Fat' items to align with market trends.

# 6. Supporting Visuals

Below are the screenshots of the necessary graphs which I have generated using Matplotlib-Python :-











