

Summary

Blinkit Sales Analysis Project

Platform: Google Colab

Libraries Used: Pandas, NumPy, Matplotlib, Seaborn

Dataset: blinkit_data.csv (8,523 rows × 12 columns)

Project Objective

To analyze Blinkit's sales data and uncover patterns across item types, outlet characteristics, and customer preferences. The goal is to identify what drives higher sales and better ratings, and to clean and prepare the data for reliable insights.

Key Questions and Insights

1. What is the overall performance of Blinkit in terms of sales and ratings?

- Total Sales: ₹1,201,681
- Average Sales per Item: ₹141
- Average Rating: 4.0

Insight: Blinkit maintains strong average ratings while generating substantial revenue.

2. Does item fat content influence sales?

- Fat Content Categories:
- Low Fat: 64.6%
- Regular: 35.4%
- Sales Distribution:
- Low Fat items dominate sales across all outlet tiers.

Insight: Health-conscious choices like Low Fat items are more popular and profitable.

3. Which item types generate the most revenue?

- Top 3 Item Types by Sales:
- Fruits & Vegetables: ₹178,1
- Snack Foods: ₹175,434
- Household Items: ₹135,977

Insight: Essential and frequently purchased categories lead in revenue.

4. Do outlet characteristics (size, tier, year) affect sales?

- Outlet Size:
- Medium-sized outlets had the highest sales.
- Outlet Tier:
- Tier 3 outlets outperformed Tier 1 and Tier 2.
- Establishment Year:
- Outlets established around 2010–2012 showed peak performance.

Insight: Outlet maturity and size correlate with better sales outcomes.

5. Are there data quality issues that needed fixing?

- Problem: Inconsistent values in Item Fat Content column (e.g., 'low fat', 'LF', 'reg').
- Solution: Standardized values to 'Low Fat' and 'Regular' using Pandas string operations.

Insight: Data cleaning improved consistency and enabled accurate grouping and analysis.

Visualizations Used

- Bar plots for sales by item type, fat content, outlet tier, and outlet size
- Pie charts for fat content distribution
- Line plots for sales trends over establishment years

Final Takeaways

- Blinkit's success is driven by health-focused products and medium-sized, mature outlets.
- Data cleaning is essential for reliable insights.
- Strategic focus on high-performing categories and outlet types can boost future growth.