



**ROORKEE UTTRAKHAND**

**PROJECT TITLE:** Blinkit sale dashboard

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## Executive Summary

The Blinkit Power BI dashboard provides a comprehensive view of the company's sales performance, customer behavior, and outlet efficiency. This interactive platform aggregates critical KPIs such as total sales of \$1.20M, an average customer rating of 3.9, and an average sale value of \$141 per transaction. Key insights include the dominance of medium-sized outlets and Tier 3 locations in revenue generation, with fruits, vegetables, and snacks emerging as the top-performing product categories. The dashboard also uncovers areas requiring improvement, such as customer satisfaction and regional optimization. This report outlines the objectives, methodology, findings, and outcomes, delivering a clear framework for data-driven decision-making. The insights derived from this analysis will guide Blinkit in refining its operational strategy, improving customer satisfaction, and enhancing overall business performance.

## Project Objectives

The primary goals of the project are:

### **Performance Evaluation:**

Quantify overall sales, customer satisfaction, and outlet contributions.

### **Consumer Behavior Analysis:**

Understand purchasing patterns to determine high-demand product categories and their profitability

### **Outlet Efficiency Assessment:**

Examine the performance of outlets based on size, type, and location to optimize operations

### **Trend Analysis:**

Evaluate the historical growth of outlet establishments and predict future expansion opportunities.

### **Data-Driven Strategy Development:**

Use insights from the dashboard to identify opportunities for growth, refine marketing strategies, and improve customer experience.

# Methodology

## 1 Data Collection:

The project sourced data from Blinkit's internal databases, including:

Sales Transactions: Detailing revenue, items sold, and transaction frequency.

Customer Feedback: Ratings and reviews to gauge satisfaction.

Outlet Information: Size, location, and type of outlet to understand revenue segmentation.

## 2. Data Preparation:

Cleaned and validated the data to remove duplicates, inconsistencies, and missing values.

Structured datasets to ensure compatibility with Power BI's data modeling framework.

## 3. Data Modeling:

Created relationships between data tables (e.g., sales, outlets, products).

Utilized DAX (Data Analysis Expressions) to create measures for KPIs like total sales, average ratings, and outlet performance.

## 4. Dashboard Development:

Design Principles: Focused on simplicity, clarity, and interactivity.

Visualization Techniques: Chose appropriate charts (e.g., line, bar, and pie charts) to represent data intuitively.

Dynamic Filters: Implemented slicers for item type, outlet size, and location to enhance user experience.

## 5. Data Analysis:

Identified trends, correlations, and patterns using interactive visualizations.

Performed comparative analysis to evaluate outlet types, product categories, and customer preferences.

# Key Findings

### **1. Revenue Performance:**

Total Sales: \$1.20M, with 8,523 items sold and an average sale per customer of \$141.

Top Categories: Fruits & vegetables (\$0.18M), snacks (\$0.16M), and household goods (\$0.14M) are the top-performing product segments.

### **2. Outlet Analysis:**

Tier 3 Locations: Account for the highest revenue (\$472K), indicating strong demand in semi-urban or rural areas

Medium-Sized Outlets: Generate 71% of total revenue, highlighting their efficiency and scalability.

### **3. Customer Insights:**

Customer Satisfaction: An average rating of 3.9 suggests moderate satisfaction, with room for improvement in service quality and delivery experience.

### **4. Historical Growth:**

A steady upward trend in outlet establishment, with a sharp increase in 2020, indicates significant business expansion potential.

### **5. Product Mix:**

Low-fat products dominate sales, reflecting customer preferences for health-conscious choices.

## **Outcome**

The Blinkit dashboard offers actionable insights that can directly influence business strategy:

#### **1. Enhanced Decision-Making:**

The dashboard enables leadership to prioritize investments in high-performing outlet types (medium-sized) and regions (Tier 3).

#### **2. Optimized Product Strategy:**

Focus on top-selling categories like fruits, vegetables, and snacks to maximize profitability.

### 3. Customer-Centric Improvements:

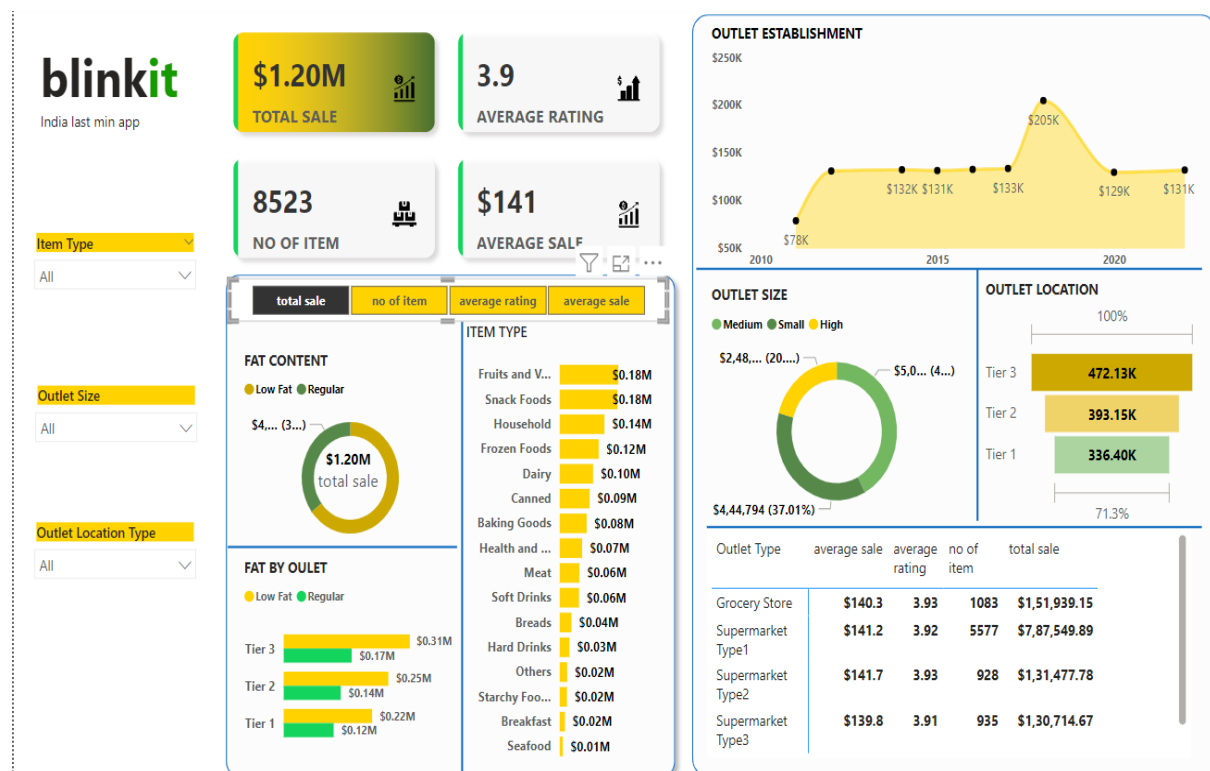
Address gaps in customer satisfaction by improving delivery time, service quality, and product variety.

### 4. Strategic Growth Opportunities

The analysis of outlet establishment trends highlights areas for future expansion, especially in underserved Tier 3 regions.

### 5 Operational Efficiency:

Insights into outlet size and type performance allow for the streamlining of operations and cost optimization.



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## Introduction

Blinkit is a leading last-minute delivery service platform in India, specializing in providing a wide range of consumer goods, from groceries and household items to snacks and beverages, delivered swiftly to customers' doorsteps. As the company expands its operations and customer base, data-driven decision-making becomes essential to optimize performance, understand consumer behavior, and identify growth opportunities.

To address these needs, the Blinkit dashboard was developed in Power BI, providing an interactive and comprehensive visualization of sales performance, outlet efficiency, and customer satisfaction metrics. This dashboard integrates various datasets, enabling stakeholders to monitor key performance indicators (KPIs), identify trends, and make informed business decisions.

The dashboard includes critical data points, such as total revenue, outlet types, sales trends, product category performance, and customer ratings, offering actionable insights for improving operational efficiency, enhancing customer satisfaction, and driving overall growth.

## Objectives

The detailed objectives of this project are outlined below:

### 1. Evaluate Business Performance

Analyze total sales, average sales, and the number of items sold to measure overall business health and profitability.

Monitor historical revenue growth to assess the effectiveness of past strategies.

### 2. Understand Customer Preferences

Identify top-performing product categories and analyze customer behavior based on purchase patterns.

Assess customer satisfaction through average ratings to understand service quality.



### **3. Assess Outlet Efficiency**

Determine the contribution of different outlet sizes (small, medium, large) to overall revenue.

Evaluate the performance of outlets in Tier 1, Tier 2, and Tier 3 locations to optimize resource allocation.

### **4. Identify Growth Opportunities**

Analyze trends in outlet establishments to pinpoint high-potential regions and outlet types for future expansion.

Evaluate the demand for low-fat and regular products to align the product mix with consumer preferences.

### **5. Provide Strategic Insights**

Use data-driven insights to develop actionable recommendations for improving customer experience, optimizing operations, and increasing market share.

Focus on high-demand regions and product categories to enhance profitability.

### **6. Enhance Decision-Making**

Leverage interactive visualizations to empower decision-makers with real-time data insights.

Provide a user-friendly interface for analyzing performance metrics and exploring scenarios using dynamic slicers.

## Data Overview

The Blinkit dashboard is built on a robust data foundation that captures multiple aspects of the company's operations, including sales performance, customer preferences, outlet efficiency, and product categories. This data-driven approach provides actionable insights to guide business decisions and improve overall performance.

The dataset is divided into key categories, ensuring comprehensive coverage of all critical metrics:

- Sales Data: Revenue, item sales, and average transaction value.
- Customer Data: Ratings and satisfaction indicators.
- Outlet Data: Size, location, type, and historical growth of outlets.
- Product Data: Performance of product categories, including fruits, vegetables, snacks, and household goods.

## Data Source

The data used to create the Blinkit dashboard was sourced from the company's internal systems, ensuring accuracy and reliability. The key data sources include:

1. Transaction Databases: For revenue, sales volume, and customer purchase details.
2. Customer Feedback Systems: For average ratings and satisfaction analysis.
3. Outlet Management Systems: For outlet types, sizes, and location details
4. Inventory Systems: For product category sales performance.
5. Historical Records: To track outlet establishment trends over time.

## Data Description

The dataset is structured into the following components:

### 1. Sales Data:

- Total Sales: Aggregate revenue generated across all outlets.
- Average Sale Value: Per transaction revenue, providing insight into customer spending habits.
- Number of Items Sold: Total quantity of products sold.

### 2. Customer Data:

Average Rating: A measure of customer satisfaction, ranging from 1 (poor) to 5 (excellent).

### 3. Outlet Data:

- Outlet Size: Categorized as small, medium, and large, with revenue contribution percentages.
- Outlet Location: Segmented by Tier 1, Tier 2, and Tier 3 cities
- Outlet Type: Includes grocery stores, supermarkets, and specialized retail locations.
- Historical Growth: Year-wise trends in outlet establishment.

### 4. Product Data:

- Item Categories: Fruits, vegetables, snacks, household goods, dairy, etc.
- Fat Content: Divided into low-fat and regular categories, showing consumer preferences.

## Data Presentation

The dashboard was designed to present the data in a clear, intuitive, and interactive manner. Each visual element was carefully chosen to maximize clarity and insight:

### 1. Key Metrics:

- Displayed as cards for quick access to KPIs such as:
- Total Sales: \$1.20M
- Average Rating: 3.9
- Average Sale: \$141

### 2. Graphs and Charts:

- Donut Chart: Visualizes revenue contribution by outlet size.
- Line Chart: Tracks historical growth in outlet establishment.
- Bar Chart: Compares revenue across item categories and outlet types.
- Pie Chart: Shows sales contribution by outlet location (Tier 1, 2, 3).

### **3. Dynamic Filters (Slicers):**

- Item Type: Filters data by product categories (e.g., fruits, snacks).
- Outlet Size: Enables users to view sales trends by small, medium, or large outlets.
- Outlet Location: Allows filtering data by Tier 1, Tier 2, or Tier 3 cities.

### **4. Interactive Features:**

The dashboard supports interactive filtering, allowing users to drill down into specific regions, outlets, or product categories to explore detailed insights.

The combination of these elements ensures that the dashboard is both user-friendly and highly informative, enabling stakeholders to derive meaningful insights from the data efficiently.

This detailed structure facilitates not only comprehensive analysis but also provides the foundation for actionable recommendations to drive Blinkit's business objectives.

## Power BI Process

The creation of the Blinkit dashboard in Power BI followed a structured and systematic approach to ensure accurate data representation and user-friendly design:

### 1. Data Collection:

Data was gathered from transaction systems, customer feedback platforms, inventory systems, and outlet management databases.

### 2. Data Cleaning and Transformation:

The raw data was cleaned using Power Query to remove errors, duplicates, and inconsistencies.

Data was formatted into tables to ensure compatibility with Power BI's tools and features.

### 3. Data Import:

The cleaned and structured dataset was imported into Power BI for further processing and visualization.

### 4. Data Modelling:

Relationships between tables (e.g., sales, customers, outlets, and products) were created to build a relational data model.

This model enabled seamless aggregation and filtering of data across multiple dimensions.

## Dashboard Design

The Blinkit dashboard is designed to provide a user-friendly interface for stakeholders to access and interpret critical business metrics easily. The design includes the following:

### 1. KPI Cards:

Key metrics such as Total Sales, Average Rating, and Average Sale Value are displayed prominently to provide a quick overview of business performance.

## 2. Dynamic Slicers and Filters:

- Slicers: Allow filtering by:
- Item Type: Fruits, snacks, household goods, etc.
- Outlet Size: Small, medium, and large outlets.
- Outlet Location Type: Tier 1, Tier 2, and Tier 3 cities.
- Filters enable users to view data specific to their requirements, enhancing interactivity and customization.

## 3. Color Coding and Icons:

Bright colors (green, yellow) highlight key metrics, while graphs and charts are color-coded for easy differentiation of data categories.

## 4. Layout:

The dashboard is divided into sections, with graphs on one side and KPIs and slicers on the other, ensuring clarity and easy navigation.

# Data Modelling

The relational data model was built in Power BI to connect different data tables. The relationships were designed as:

One-to-Many: Outlet size and outlet location to sales data.

One-to-One: Product category to item type.

This model ensures that changes in one dataset (e.g., filtering by a specific product category) dynamically update related datasets and visualizations.

## Visualization: Graphs and Usage

The Blinkit dashboard uses six primary types of graphs to represent data. Below is a detailed explanation of each graph and why it was used:

### 1. Donut Chart (Outlet Size Contribution):

Purpose: Visualizes the revenue contribution by outlet sizes (small, medium, large).

Why Used: Provides an easy-to-understand breakdown of the financial performance of each outlet size category.

## **2. Line Chart (Outlet Establishment Trends):**

Purpose: Tracks the historical growth of outlet establishments.

Why Used: Identifies trends over time, helping decision-makers plan future outlet openings.

## **3. Stacked Bar Chart (Item Type Sales):**

Purpose: Compares total sales across different product categories (e.g., fruits, snacks, household goods).

Why Used: Highlights high-performing and low-performing categories for product mix optimization.

## **4. Pie Chart (Sales by Location):**

Purpose: Shows revenue contribution by location type (Tier 1, Tier 2, Tier 3).

Why Used: Helps identify which regions generate the most revenue and require more focus.

## **5. Clustered Bar Chart (Fat Content by Outlet):**

Purpose: Displays sales by outlet type, segregated into low-fat and regular product categories.

Why Used: Analyzes consumer preferences for health-conscious versus regular products.

## **6. KPI Cards:**

Purpose: Displays key metrics like Total Sales, Average Rating, and Average Sale Value.

Why Used: Provides a quick snapshot of overall performance.

## Insight and Analysis

The Blinkit dashboard reveals several critical insights into the company's sales, customer preferences, and operational efficiency:

### 1. Sales Distribution:

Tier 3 cities contribute the highest revenue (₹472.13K), followed by Tier 2 cities, indicating strong growth potential in smaller cities.

Grocery stores and supermarkets are the primary revenue generators, with an average sale value of ₹140.3 and ₹141.2, respectively.

### 2. Customer Preferences:

Fruits and vegetables lead in sales (₹0.18M), followed by snacks and household goods, indicating high demand for essential and fast-moving products.

Regular-fat content products outperform low-fat ones, reflecting consumer inclination toward taste over health.

### 3. Outlet Performance:

Medium-sized outlets contribute the majority of sales (71%), showcasing their importance in revenue generation.

The historical trend of outlet establishment indicates a steady increase in investments, peaking in recent years.

### 4. Operational Efficiency:

Total sales are robust at ₹1.20M; however, the average sale per transaction is ₹141, indicating an opportunity to increase the basket size through marketing strategies like combo offers.

## Key Insights

1. Top Categories: Fruits, snacks, and household goods drive the majority of revenue.



2. **Regional Potential:** Tier 3 cities are emerging as strong revenue contributors, requiring focused strategies for market penetration.
3. **Consumer Preference:** Regular-fat content products dominate sales, suggesting targeted marketing for health-conscious items could create new opportunities.
4. **Outlet Size Impact:** Medium-sized outlets are the backbone of operations, warranting further investments and optimization.

## **Business Recommendations**

### **1. Expand in Tier 3 Cities:**

Invest in opening more outlets and marketing campaigns to capitalize on growing demand in smaller cities.

### **2. Promote Healthier Alternatives:**

Introduce and market low-fat and health-conscious products to cater to emerging health trends among urban customers.

### **3. Increase Basket Size:**

Offer combo discounts, loyalty programs, or free delivery for customers purchasing above a certain amount to boost average sales per transaction.

### **4. Optimize Inventory:**

Ensure adequate stock for high-demand items like fruits and vegetables to prevent stockouts.

### **5. Leverage Data Analytics:**

Use insights to plan inventory, product placements, and promotional strategies for underperforming categories like beverages and frozen foods.

## **Limitations**

#### 1. Data Granularity:

Limited data on customer demographics, repeat purchase behavior, and brand preferences restricts deeper consumer analysis.

#### 2. Regional Bias:

The data focuses heavily on outlet locations and sizes, with limited insights into e-commerce performance.

#### 3. Lack of Real-Time Updates:

The dashboard does not account for live data, making it less useful for real-time decision-making.

#### 4. Uncaptured External Factors:

External factors such as competition, economic conditions, and seasonal demand patterns are not included.

## Conclusion

The Blinkit dashboard provides an in-depth understanding of the company's operations, sales, and customer preferences. It highlights strengths, such as robust performance in Tier 3 cities and high sales from essential products, while also identifying improvement areas, such as promoting healthier alternatives and increasing the basket size. By leveraging these insights, Blinkit can make data-driven decisions to enhance operational efficiency and profitability.

## Key Takeaways

1. Tier 3 cities and medium-sized outlets are critical growth drivers.
2. Fruits and vegetables are high-demand categories, ensuring steady revenue.

3. Health-conscious products have growth potential but require strategic marketing.
4. Inventory optimization and customer loyalty programs can enhance sales efficiency.

## **Business Impact**

### **1. Revenue Growth:**

Implementing targeted strategies for Tier 3 cities can significantly increase sales.

### **2. Market Penetration:**

Expanding health-conscious product offerings can capture a new customer base.

### **3. Operational Efficiency:**

Improved inventory management and promotional campaigns can streamline operations and boost profitability.

## **Future Improvements and Extensions**

### **1. Real-Time Data Integration:**

Incorporate real-time sales and inventory data for instant decision-making.

### **2. Customer Analytics:**

Add demographic and purchase behavior data to personalize marketing strategies

### **3. E-commerce Insights:**

Include performance metrics from online sales channels for a comprehensive view of business performance.

### **4. Seasonal Trends Analysis:**

Identify and leverage seasonal patterns to optimize stock and promotions.

5. Predictive Analytics:

Use machine learning models to forecast demand and recommend dynamic pricing strategies.

6. Employee Performance Tracking:

Extend the dashboard to include metrics on employee performance, such as sales per employee, for improved accountability and incentives.