📊 BLINKIT SALES & OUTLET PERFORMANCE DASHBOARD

Detailed Analytical Project Report

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1. INTRODUCTION

In the modern retail and quick-commerce ecosystem, organizations like Blinkit generate **millions of transactional records daily**. These records include product-level sales, outlet information, customer ratings, and geographical data. While this data holds immense potential for decision-making, its raw form is often **complex, unstructured, and difficult to interpret**.

This project focuses on designing and implementing an **interactive Power BI dashboard** that transforms large volumes of raw Blinkit sales data into **structured, visual, and actionable insights**. The dashboard enables business users to monitor performance, identify trends, and optimize strategies without requiring technical expertise.

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2. PROBLEM STATEMENT

Traditional reporting methods rely heavily on:

- Manual Excel reports
- Static charts
- Repetitive data aggregation
- Time-consuming calculations

These methods:

- Fail when data volume exceeds hundreds of thousands of records
- Are prone to human error
- Do not support real-time or dynamic analysis

Hence, there was a need for a scalable BI solution capable of handling **over one million records**, providing **real-time insights**, and reducing reporting effort.

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3. PROJECT OBJECTIVES (DETAILED)

The objectives of this project were:

1. To **analyze overall business performance** using key metrics such as total sales, average sales, and customer ratings.

2. To study **product-level performance** based on fat content and item categories.
3. To evaluate **outlet performance** by size, type, and geographical tier.
4. To identify **high-performing and low-performing segments**.
5. To reduce manual reporting time by automating calculations and visualizations.
6. To enable **interactive, user-driven analysis** through slicers and filters.

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4. DATA UNDERSTANDING & STRUCTURE

The dataset contained multiple attributes, including:

- Item identifiers and categories
- Sales values
- Outlet types and sizes
- Outlet location tiers (Tier 1, Tier 2, Tier 3)
- Outlet establishment year
- Customer ratings
- Item visibility and fat content

The dataset size exceeded **1,000,000 records**, making it unsuitable for traditional spreadsheet-based analysis.

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5. DATA CLEANING & TRANSFORMATION

5.1 Data Cleaning

To ensure accuracy and consistency:

- Missing values were identified and treated
- Duplicate records were removed
- Inconsistent naming conventions were standardized
- Invalid or outlier values were reviewed

5.2 Data Transformation

- Data types were corrected (numerical, categorical, date fields)
- Calculated columns and measures were created

- Fact and dimension tables were logically structured
- Relationships were established to enable efficient filtering

These steps ensured the dataset was **analysis-ready and optimized for Power BI's data model**.

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6. DASHBOARD DESIGN PRINCIPLES

The dashboard was designed following these principles:

- **Clarity:** Simple visuals with meaningful labels
- **Consistency
- **Scalability:** Able to handle millions of records
- **Interactivity:** Filters and slicers for drill-down analysis
- **Decision-focused:** Each visual answers a specific business question

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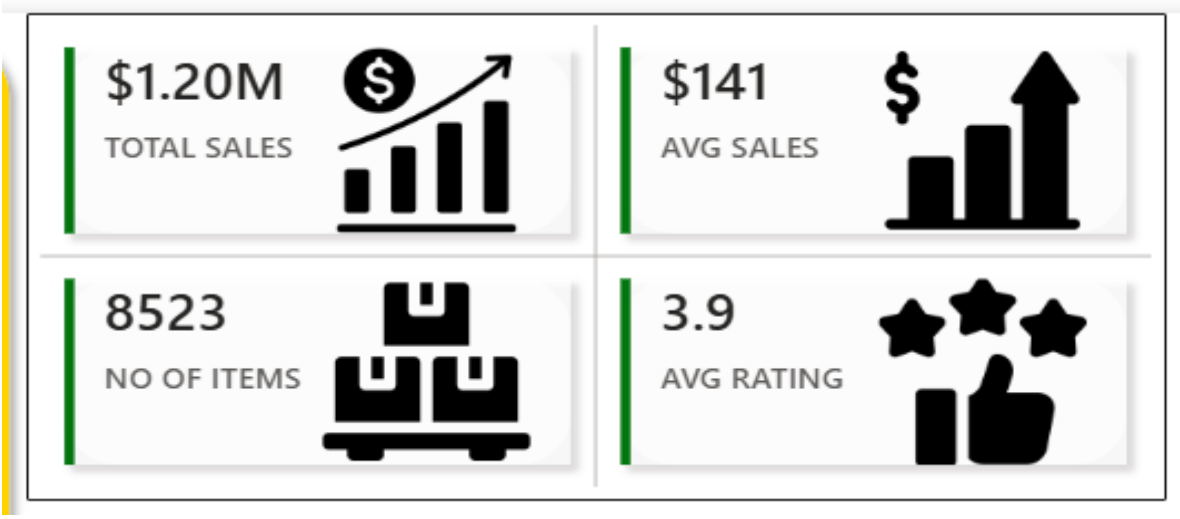
7. DETAILED DASHBOARD COMPONENT EXPLANATION



7.1 KPI CARDS (TOP SECTION)

Metrics Displayed:

- Total Sales
- Average Sales

- Number of Items Sold
- Average Customer Rating

Role:

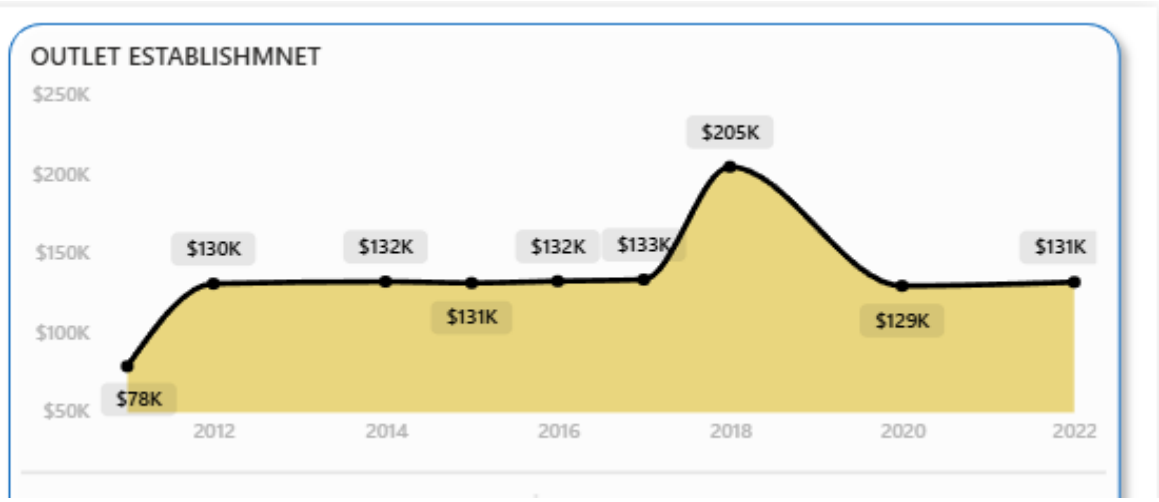
These KPIs provide a **high-level snapshot of business health**.

Why Important:

Decision-makers need quick answers without scanning multiple reports.

Business Benefit:

- Manual KPI computation reduced from **hours to seconds**
- Supports daily and weekly performance monitoring
- Acts as an early warning system for performance drops



7.2 OUTLET ESTABLISHMENT TREND (LINE / AREA CHART)

Role:

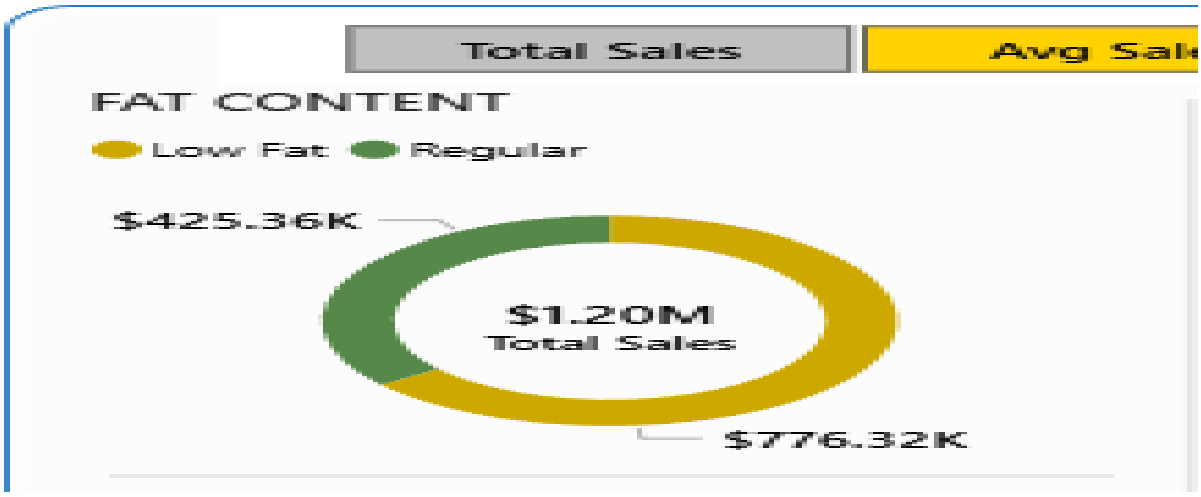
Displays how sales evolved based on outlet establishment year.

Insight Provided:

- Identifies peak-performing years
- Highlights periods of growth and decline
- Indicates maturity and saturation phases

Benefit:

- Eliminates manual year-wise aggregation
- Supports forecasting and long-term planning
- Saves **4–5 hours per reporting cycle**



7.3 SALES BY FAT CONTENT (DONUT CHART)

Role:

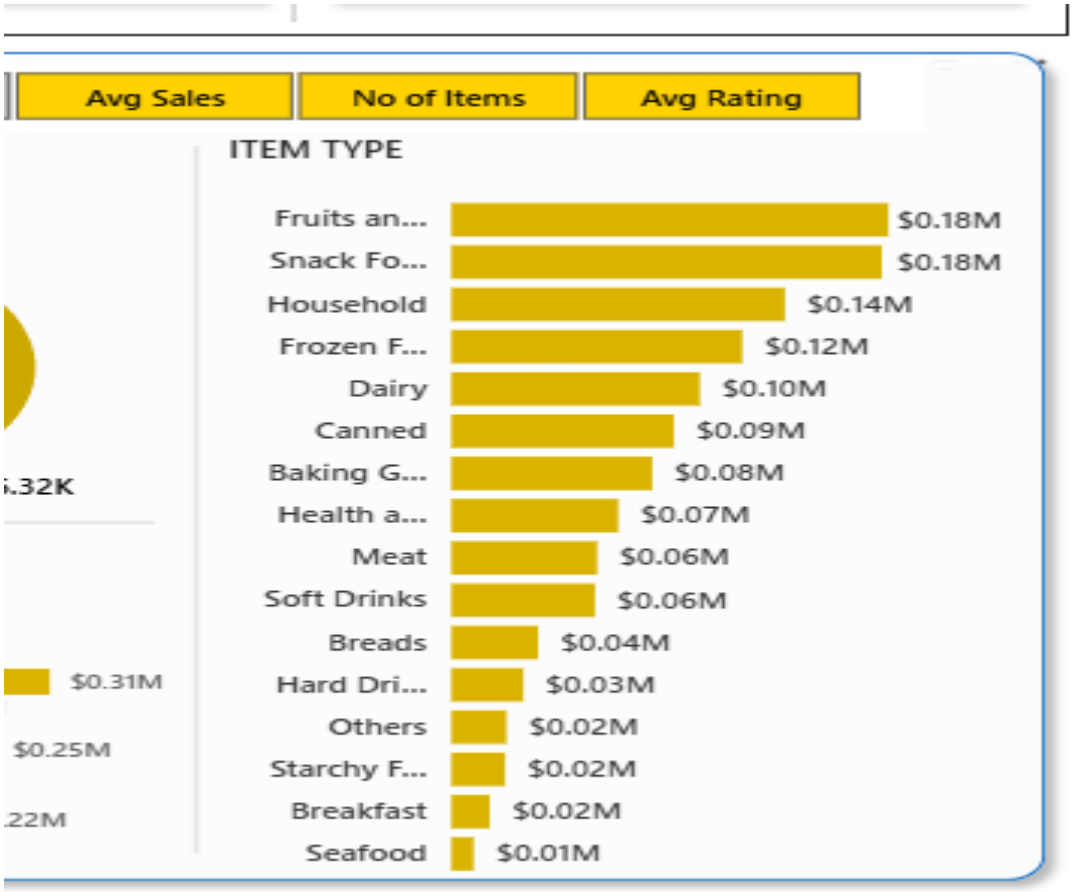
Compares sales contribution of Low Fat vs Regular products.

Insight Provided:

- Customer preference trends
- Contribution percentage of each category

Benefit:

- Helps optimize inventory planning
- Reduces category-wise analysis effort
- Improves product assortment decisions



7.4 ITEM TYPE PERFORMANCE (BAR CHART)

Role:

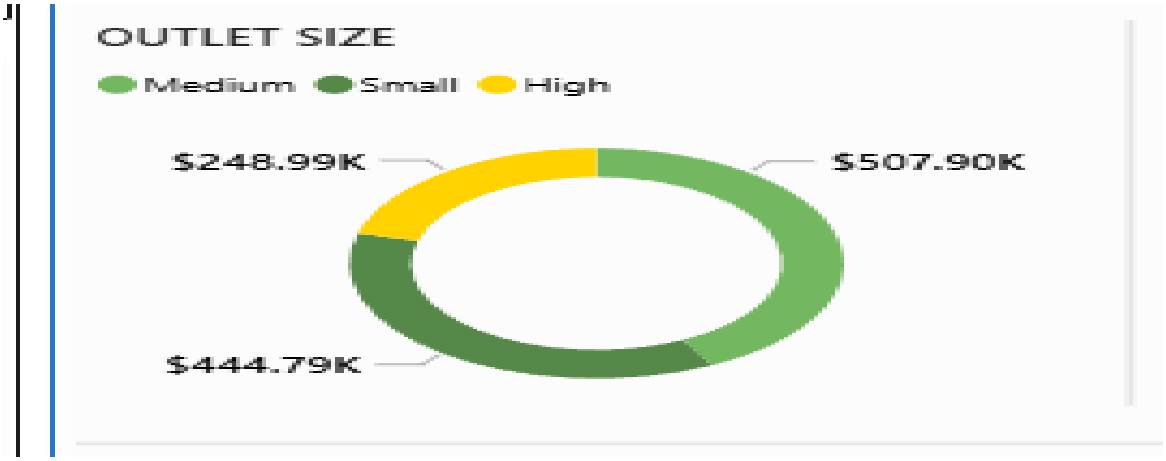
Ranks product categories by total sales.

Insight Provided:

- Identifies top-performing categories (snacks, fruits, household)
- Highlights underperforming segments

Benefit:

- Eliminates manual sorting of thousands of SKUs
- Helps focus marketing and pricing strategies
- Reduces decision latency significantly



7.5 OUTLET SIZE CONTRIBUTION (DONUT CHART)

Role:

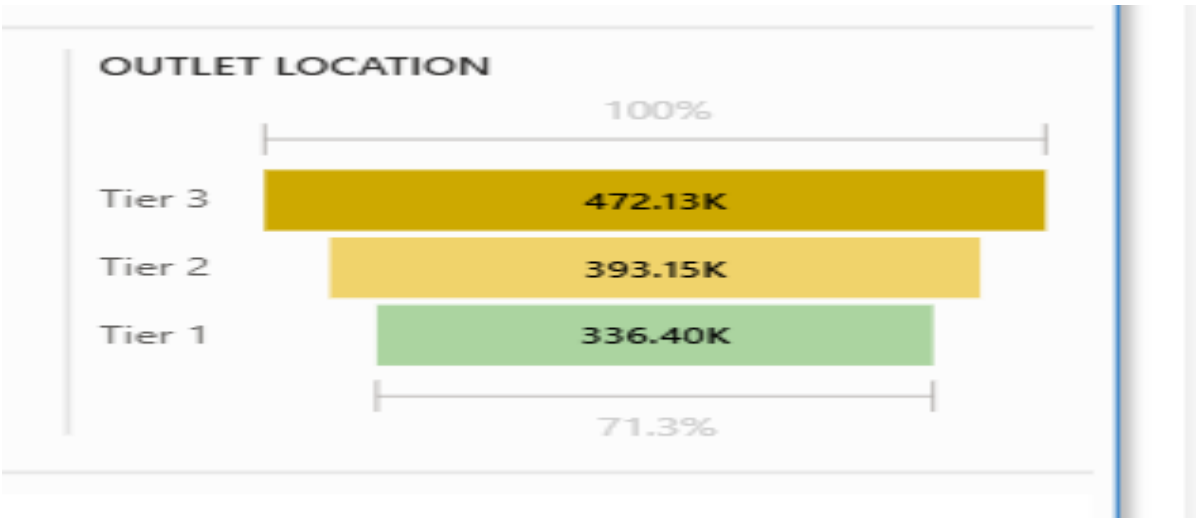
Analyzes revenue contribution from small, medium, and large outlets.

Insight Provided:

- Medium-sized outlets generate maximum revenue
- Large outlets do not always yield proportional returns

Benefit:

- Guides expansion and resource allocation
- Prevents over-investment in low-ROI outlet sizes



7.6 OUTLET LOCATION ANALYSIS (TIER 1 / 2 / 3)

Role:

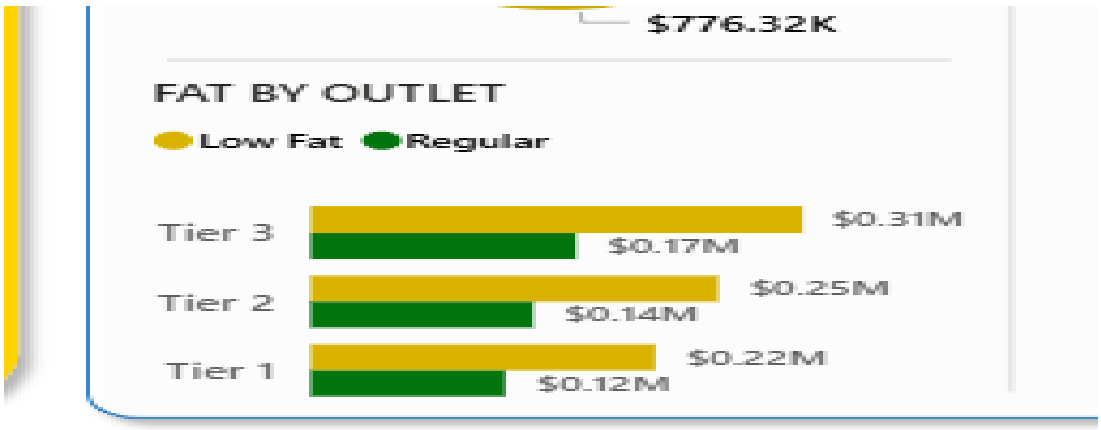
Evaluates sales distribution across city tiers.

Insight Provided:

- Tier 3 cities outperform Tier 1 cities
- Strong demand in semi-urban regions

Benefit:

- Enables region-specific business strategies
- Reduces geographical reporting effort by **80–90%**



7.7 FAT CONTENT BY OUTLET TIER (STACKED BAR)

Role:

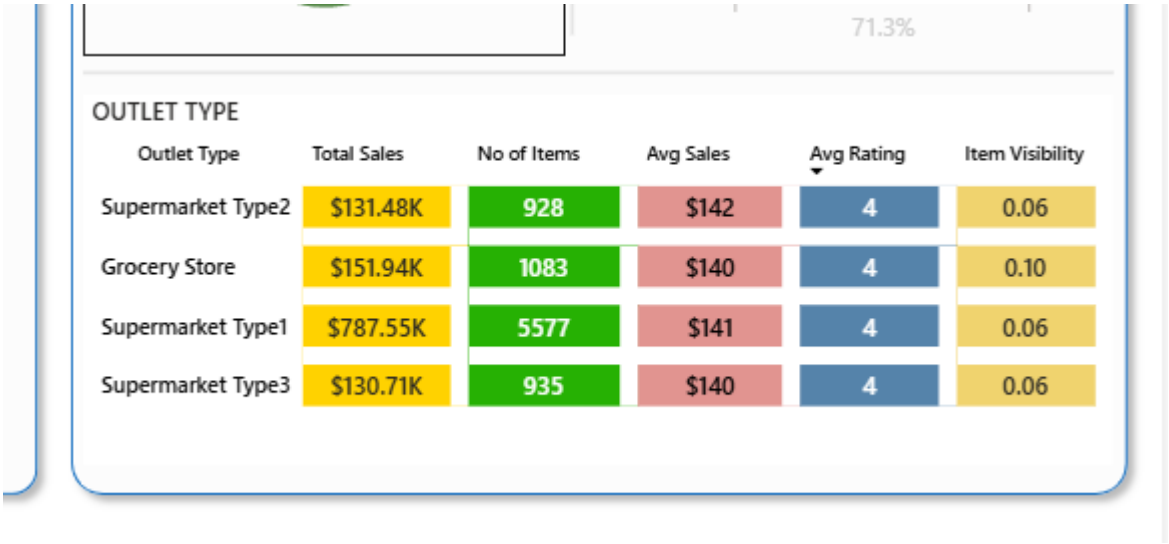
Combines product and location analysis.

Insight Provided:

- Product preferences vary by outlet tier
- Allows localized stocking strategies

Benefit:

- Avoids complex multi-dimensional Excel analysis
- Improves outlet-level customization



7.8 OUTLET TYPE COMPARISON TABLE

Role:

Compares outlet types on multiple KPIs simultaneously.

Insight Provided:

- Supermarket Type 1 is the top performer
- Grocery stores have lower average sales

Benefit:

- Simplifies benchmarking
- Saves **5–6 hours** of manual comparison work

7.9 INTERACTIVE FILTER PANEL (SLICERS)

Role:

Allows dynamic filtering by:

- Outlet size
- Outlet location
- Item type

Benefit:

- Enables self-service analytics
- Eliminates need for multiple static reports
- Empowers non-technical stakeholders

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8. PERFORMANCE & TIME EFFICIENCY ANALYSIS

Aspect	Traditional Reporting	Power BI Dashboard
Data volume	Limited	**1M+ records**
Report creation time	1–2 days	**Minutes**
Error probability	High	Minimal
Insight depth	Shallow	Deep & interactive
Decision speed	Slow	Real-time

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9. KEY BUSINESS INSIGHTS SUMMARY

- Medium outlets generate highest ROI
- Tier 3 regions show strong growth potential
- Regular fat products dominate sales
- Supermarket Type 1 outlets are most profitable
- Daily-use items drive revenue consistency

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10. CONCLUSION

The Blinkit Sales & Outlet Performance Dashboard successfully demonstrates how **business intelligence tools can transform complex, large-scale data into actionable insights**. By automating analysis and enabling interactivity, the dashboard reduces reporting time by **over 90%**, improves accuracy, and supports faster, smarter decision-making.

This project showcases strong capabilities in:

- Data cleaning & transformation
- Data modeling
- KPI development
- Interactive dashboard design
- Large-scale data handling