

Blinkit Data Analysis Case Study Report

Project Title: Blinkit Operations and Consumer Analytics

Tools Used: SQL (MySQL Workbench), Microsoft Power BI

Kaggle Dataset Link: **Blinkit Dataset**

Objective

The primary goal of this case study is to extract actionable insights from Blinkit's operational, marketing, and customer data using SQL and visualize those insights using Power BI. The study aims to:

- Understand customer behavior and purchasing patterns
 - Evaluate delivery partner performance
 - Monitor stock and inventory health
 - Analyze marketing campaign ROAS
 - Assess customer satisfaction through feedback
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Dataset Overview

The project utilizes the following datasets:

1. **Customers.csv** – Contains customer demographics and order behavior
 2. **Orders.csv** – Contains order details and delivery information
 3. **Order_items.csv** – Contains item-level order details
 4. **Products.csv** – Contains product catalog and pricing
 5. **Inventory.csv** – Tracks stock received and damaged stock
 6. **Delivery_performance.csv** – Evaluates delivery punctuality and performance
 7. **Marketing_performance.csv** – Tracks marketing campaigns and outcomes
 8. **Customer_feedback.csv** – Includes ratings, feedback, and sentiment analysis
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Analysis Sections & Business Questions

1. Customers Analysis

- Which customer segments place the highest number of orders?

- What is the average order value by customer segment and area?
- Which areas have the most active customers (by order volume)?
- How many new customers joined month-over-month?
- Which customer segments show high frequency but low order value?

2. Orders Analysis

- What is the monthly trend of total orders and total order value?
- What is the distribution of orders by payment method?
- How many orders were delivered on time vs. delayed?
- What is the average order value per store and delivery partner?
- What are the busiest days/hours in terms of order volume?

3. Order Items & Products Analysis

- Which product categories and brands are the most purchased?
- What is the average quantity ordered per category?
- What's the actual revenue vs. MRP by product category?
- Are discounts influencing order quantity?
- Which products have the highest margin (MRP - price)?

4. Inventory Performance

- What is the monthly stock received vs. damaged ratio?
- Which products frequently hit minimum stock levels?
- Are any brands facing recurring stock issues?
- How does stock availability vary across categories?

5. Delivery Performance

- What is the average delivery time by delivery partner?
- What % of deliveries are delayed, and what are the top reasons?
- How does delivery time vary with distance?
- What's the on-time delivery rate by store?
- Which partners consistently miss promised time?

6. Marketing Performance

- Which campaigns had the highest ROAS?
- Which marketing channels are most effective in terms of conversions?
- What is the month-over-month marketing spend vs. revenue trend?

- Which campaigns targeted which audience segment, and how successful were they?

7. Customer Feedback & Sentiment

- What is the average customer rating across all orders?
 - Which areas or segments give the most negative feedback?
 - What are the top recurring issues based on feedback categories?
 - Which delivery partners or products are linked to negative sentiment?
 - How does customer sentiment evolve over time?
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SQL Tasks

- Use SQL for joining datasets, aggregation, and filtering
 - Create views for Power BI use
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Power BI Visualizations

Dashboards to include: - Customer Insights - Order Trends - Product Performance Dashboard - Inventory Insights – Marketing Performance Dashboard - Feedback & Sentiment Analysis

Cards:

- Total Orders
 - Total Revenue
 - Average Order Value
 - On-time Delivery Rate
 - Average Customer Rating
 - Top Campaign ROAS
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Conclusion

This project delivers a comprehensive view of Blinkit's data-driven operations. By analyzing customer behavior, product sales, inventory trends, delivery efficiency, marketing impact, and customer sentiment, the case study supports informed strategic decisions for enhancing Blinkit's performance.