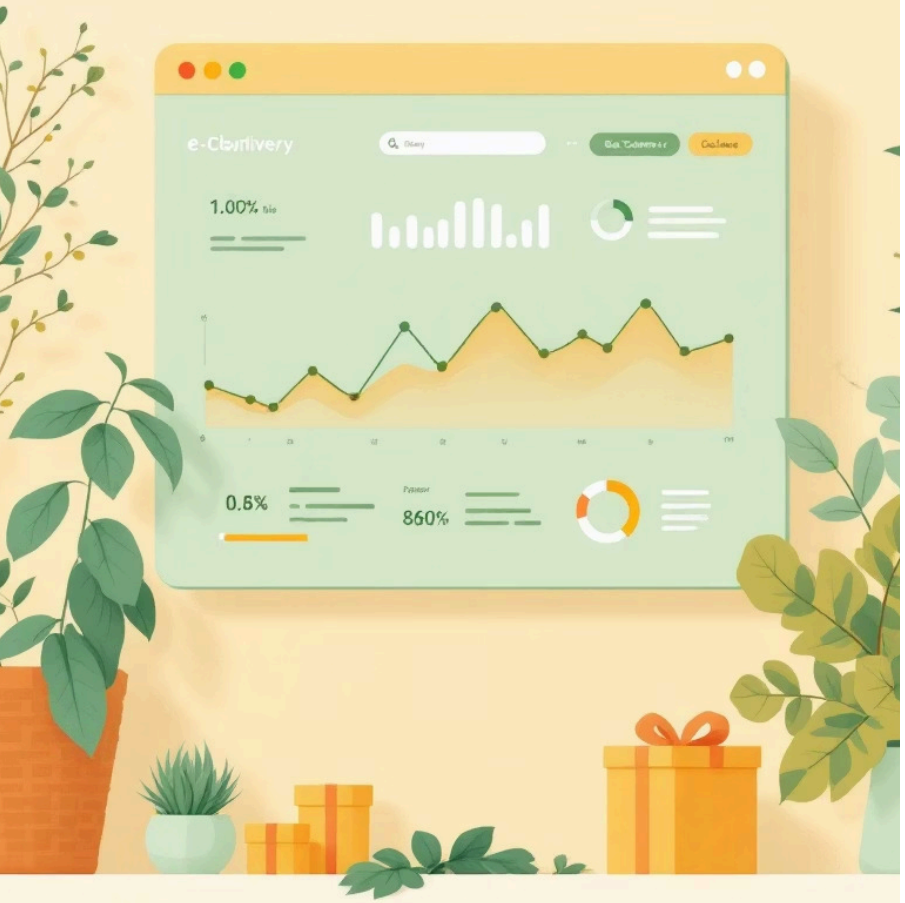


Quick E-Commerce Delivery Performance & Customer Satisfaction

End-to-End Data Analytics Project analyzing 99,000+ orders across Blinkit, JioMart, and Swiggy Instamart using Python, MySQL, and Power BI.

Project Overview

Objective

Develop an interactive Power BI dashboard providing insights into delivery performance, customer satisfaction, and service quality across the full data lifecycle.

Data Scope

99,000+ orders with GMV of 53M INR across three major quick-commerce platforms in India.

Tools & Methods

Python (Pandas) for cleaning, MySQL for storage, Power BI for visualization and insights.

Market Landscape

Total Market Scale

Order volume reached 99K with a Gross Merchandise Value of 53M INR. Market share is evenly distributed across platforms.

99K

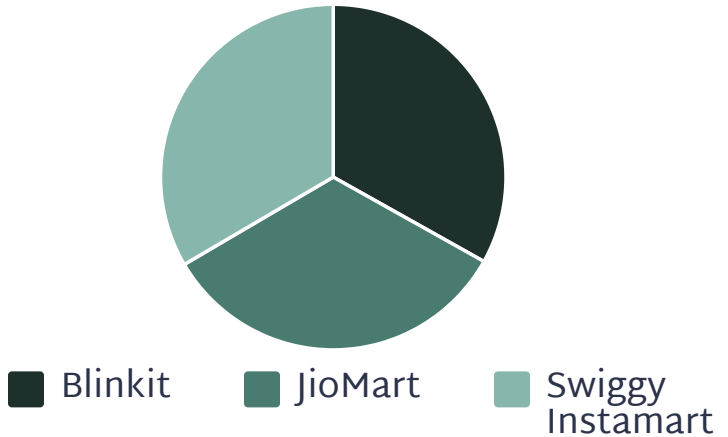
Total Orders

53M

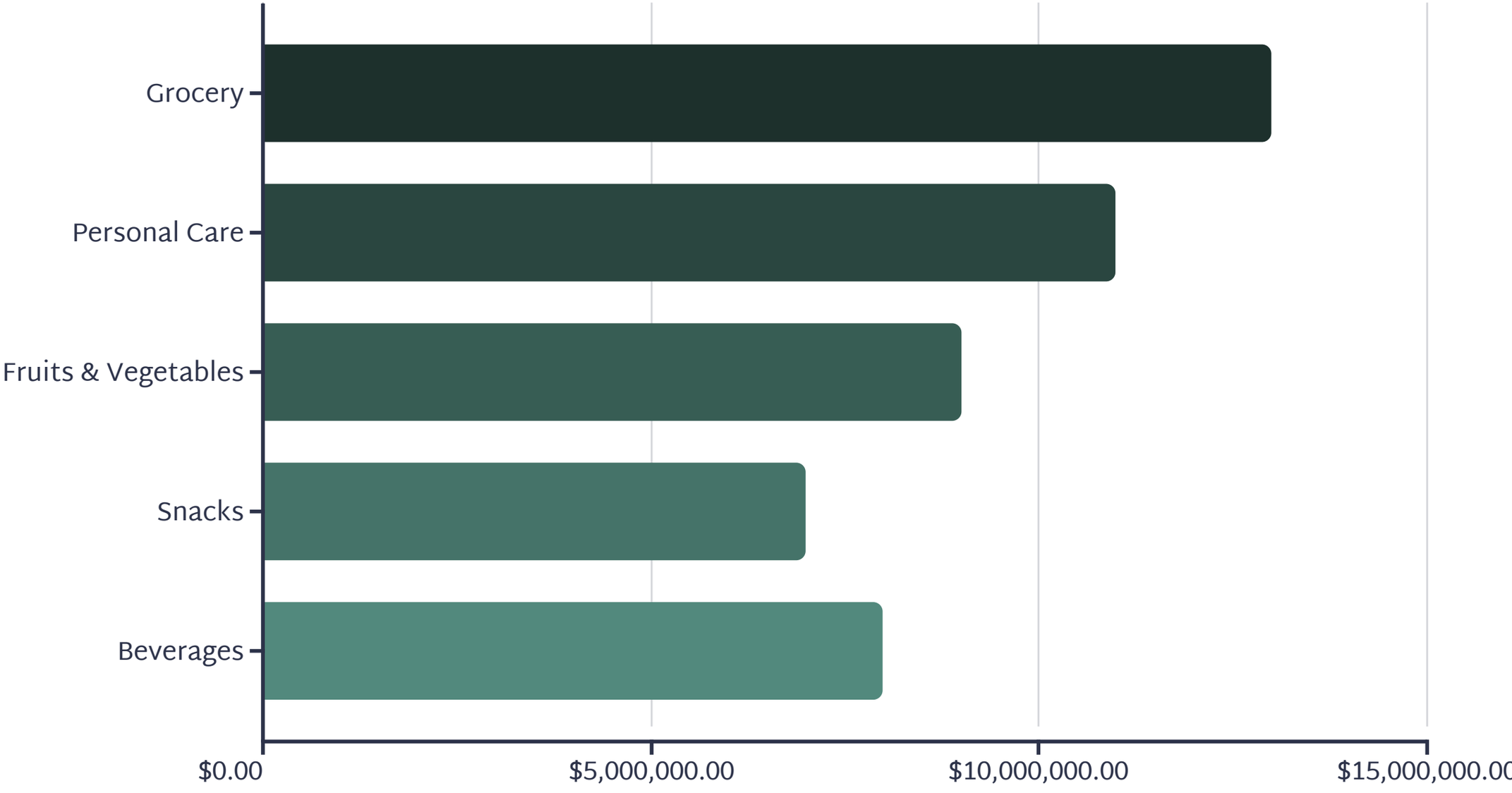
GMV (INR)

3.22

Avg Rating



Product Category Performance



Grocery dominates at 13M INR, followed by Personal Care at 11M INR. Snacks category shows potential for growth through targeted promotions.

Critical Pain Points

Delivery Delays

Deliveries exceeding 40 minutes correlate directly with low ratings. Customer satisfaction drops by nearly 40% after the 40-minute mark.

Wrong Items Delivered

Over 7,000 instances of incorrect items being delivered, representing a major source of customer dissatisfaction.

Missing Items

More than 7,000 cases of missing items from orders, contributing to the overall complaint volume of 14,000+ instances.

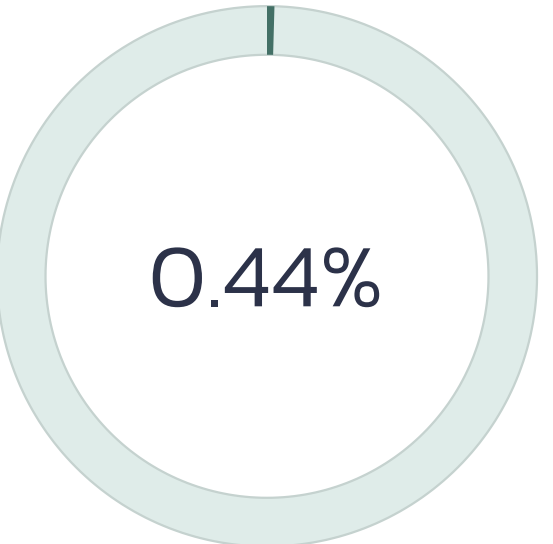
Platform Performance Analysis

Overall Refund Rate

Remarkably low across all platforms

Swiggy Instamart

Highest refund rate indicates need for improvement



Blinkit & JioMart

Below-average refund rates

Swiggy Instamart exhibits the highest refund rate at 0.50%, indicating a need for localized operational improvements, specifically targeting "Missing Items" in their fulfillment process.

Data Methodology

Data Acquisition

~101,000 records from messy_ecommerce_delivery_data.csv with missing values and inconsistencies.

ETL Process

Python/Pandas: standardization, imputation, type conversion, and deduplication to 99K final records.

MySQL Storage

Migrated cleaned data to relational database for structured querying and analysis.

Power BI Dashboard

Live connection with DAX measures for interactive visualization.

Dashboard Insights

Data Modeling

- Live MySQL connection via Import method
- DAX calculated measures for Total Order Value and Refund Rate %
- Interactive filters for platform, category, and time period

Key Visualizations

- Rating correlation with delivery time
- Feedback mining from 1-star and 2-star reviews
- Outlier detection for 50+ minute deliveries

Strategic Recommendations

01

Reduce Perishable Latency

Prioritize Fruits & Vegetables for "Fast Track" delivery to ensure freshness and boost ratings.

02

Quality Control Overhaul

Focus on Swiggy Instamart's fulfillment process to address 0.50% refund rate, targeting "Missing Items."

03

Marketing Focus

Launch targeted promotions for underperforming "Snacks" category to increase Average Order Value.

04

Logistics Optimization

Cap delivery windows at 30 minutes where possible—satisfaction drops 40% after 40 minutes.

Key Takeaways

Scalable Framework

End-to-end pipeline transforms raw data into actionable business intelligence for Quick-Commerce operations.

Speed Matters

30-minute delivery window is critical—delays beyond 40 minutes cause 40% drop in satisfaction.

Focus Areas

Address wrong/missing items (14,000+ cases) and optimize Swiggy Instamart's fulfillment process.