

Shopeasy: Retail Sales & Inventory Optimization

Comprehensive analysis of 2024 sales and inventory data to address fluctuating sales and inventory management challenges across India's retail chain.



The Business Challenge

Fluctuating Sales

Inconsistent revenue patterns across stores and seasons impacting profitability.

Inventory Overstocking

Excess inventory tying up capital and warehouse space inefficiently.

Seasonal Demand

Lost revenue opportunities due to misaligned inventory during peak periods.



Three-Stage Analysis Approach



Data Processing

Cleaned 36,600 rows using Python and pandas. Created inventory_used categories and seasonal mappings for deeper analysis.



Database Analysis

Loaded data into MySQL. Calculated Inventory-to-Sales Ratios and identified top performers by store and product category.



Visualization

Built interactive Power BI dashboard connected to MySQL for real-time performance monitoring and insights.

2024 Performance at a Glance



768M

Total Sales
Revenue generated
across all stores in
2024

38.4M

Units
Established
Inventory capacity
across the retail
network

732K

Units Sold
Total products moved
through retail channels

Power BI dashboard revealed critical insight: sales peak at **medium inventory levels** and drop significantly when stock is low, proving stock-outs directly cause revenue loss.



Strategic Recommendations

01

Maintain Medium Stock Levels

Prioritize medium inventory for high-performers. Use low inventory as critical alert to trigger immediate re-ordering.

02

Align with External Factors

Plan promotions and stock levels in advance of seasonal peaks, holidays, and high-demand periods.

03

Automate Inventory Reports

Create "Top 10 Overstocked" and "Top 10 At-Risk" reports using Inventory-to-Sales Ratio for proactive management.

04

Localize Inventory Strategy

Abandon chain-wide policies. Use city and store filters in dashboard for location-specific stocking decisions.