

Grocery Store Sales Dashboard – FreshMart Analytics

Objective:

Develop a data-driven dashboard for **FreshMart Analytics** to analyze sales trends, track key performance indicators (KPIs), and uncover insights to enhance business performance for a grocery store.

Requirements:

1. Advanced Metrics & Calculations

- **Total Revenue & Profit:** Compute total revenue and add a column for profit (Revenue - Cost).
 - **Average Basket Size:** Calculate the average number of items per transaction.
 - **Sales Growth Rate:** Determine month-over-month (MoM) and year-over-year (YoY) sales growth.
 - **Sales by Product Category:** Analyze sales performance by different grocery categories (e.g., Dairy, Bakery, Fruits & Vegetables).
 - **Peak Sales Periods:** Categorize sales data into time slots (Morning, Afternoon, Evening, Night).
 - **Customer Purchase Frequency:** Identify repeat customers and their purchasing behavior.
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2. Dashboard Elements

KPIs Summary Section:

- **Total Sales Revenue**
- **Total Items Sold**
- **Total Profit**
- **Average Basket Size**
- **Sales Growth Rate (MoM & YoY)**
- **Return Rate (if applicable)**

Top Products, Regions, and Customers:

- **Top 2 product categories by total sales**
- **Top 2 best-selling products**
- **Top 2 regions by sales performance**
- **Top 2 most frequent customers**

Time-Based Sales Analysis:

- Sales trends by day of the week (to determine peak shopping days).
- Sales distribution by time of day (Morning, Afternoon, Evening, Night).

Employee Performance:

- Ranked sales performance by cashiers or store staff (if applicable).
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3. Interactive Filtering & Slicers

- Product Category
- Region (if multiple locations exist)
- Customer Type (New vs. Returning Customers)
- Date Range (Year/Month/Day)
- Time of Day (Morning, Afternoon, Evening, Night)

The dashboard should dynamically update based on slicer selections.

4. Data Visualization

- **Sales Trends:** Line chart showing monthly and yearly sales trends.
 - **Hourly Sales Heatmap:** A heatmap or bar chart displaying sales distribution by hour.
 - **Category Performance:** Pie chart showing the contribution of each product category to total sales.
 - **Sales vs. Returns:** A bar chart comparing total sales and returned items.
 - **Profit Analysis:** Line chart tracking profit margin trends over time.
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5. Dashboard Insights & Analysis

- **Actionable Insights:** Write 3 observations based on the data, such as:
 - Identifying peak shopping hours.
 - Most popular grocery categories.
 - Seasonal sales trends.