

blinkit



Power BI

Internship Under:

Classr  m

Phone:

8981838547

Website:

<https://classroomtech.in>

LinkedIn:

<https://www.linkedin.com/company/classroom-tech/>

Duration:

3 months 1st April 2025 to 30th June 2025

Blinkit Sales Data Analysis

Name : Tanima Dhar

Collage : Techno International Batanagar

Department : CSE (6 sem)

Internship Under : Classroom

Contact Us Phone: 8981838547

Website: <https://classroomtech.in>

LinkedIn: <https://www.linkedin.com/company/classroom-tech/>

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Objective

To analyze Blinkit's operational and sales data using Power BI to gain insights that support business decision-making.

Key Questions Answered

- Which products generate the most revenue?
- What is the delivery performance per region?
- How do campaigns perform in terms of ROAS?
- What is the stock status for each product?
- How are customer orders distributed by store?



Dataset Overview

Dataset name : Blinkit Sales Dataset

Source :Kaggle

Tables Used: 11 Tables(columns,rows)

The key tables used:

- orders (order_id, customer_id, store_id, order_date)
- order_items (order_id, product_id, quantity, unit_price)
- inventory & new_inventory (stock_received, damaged_stock, date)
- products (product_id, product_name, category, min_stock_level)
- campaigns (campaign_id, spend, revenue_generated)
- feedback (feedback_type, emoji_rating)
- delivery_performance (promised_time, actual_time, distance_km)
- customers (customer_id, name, email, segment)



Tools Used

Power BI – For interactive dashboards and DAX modeling
GitHub – For storing reports, PBIX, and documentation



Methodology

Data Cleaning:

- Combined tables into one.
- Removed nulls , cleared the missing values and transformed the datatypes.
- Used DAX for calculation .

Visualization Strategy:

- Bar/Column charts used for comparisons (e.g., orders per customer/store)
- Pie charts used for categorical distributions (e.g., feedback types)
- KPI used for business metrics (e.g., Avg Order Value, ROAS)
- Maps and heatmaps used for geo-visualizations
- Matrix/Table visuals used for detailed breakdowns



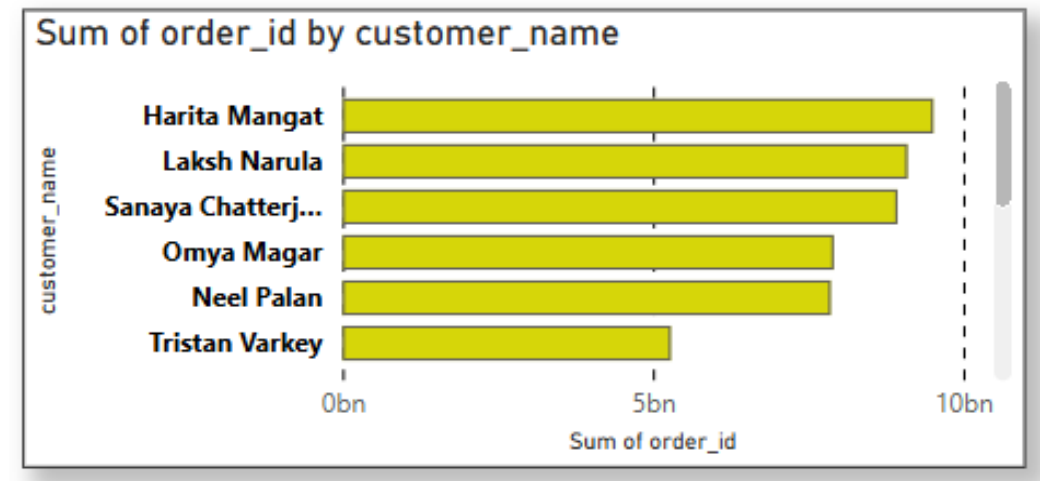
Orders per Customer

Purpose: Show how many orders each customer has placed.

Visual: Clustered Bar Chart

Insights:

- Reveals top customers by order frequency.
- 2–3 customers had significantly higher orders.
- Majority placed between 1–3 orders.



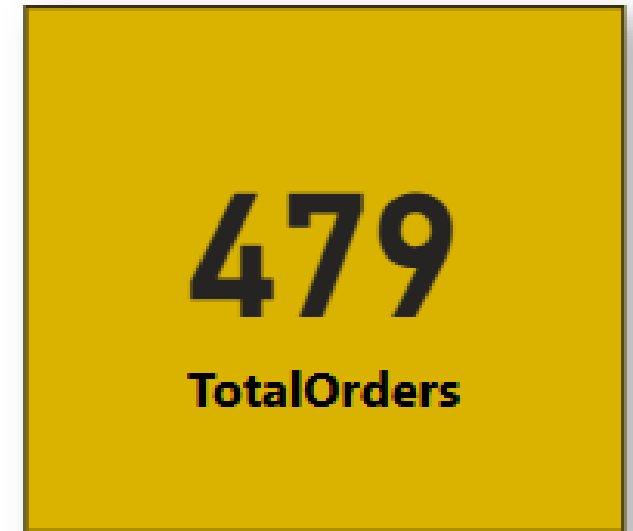
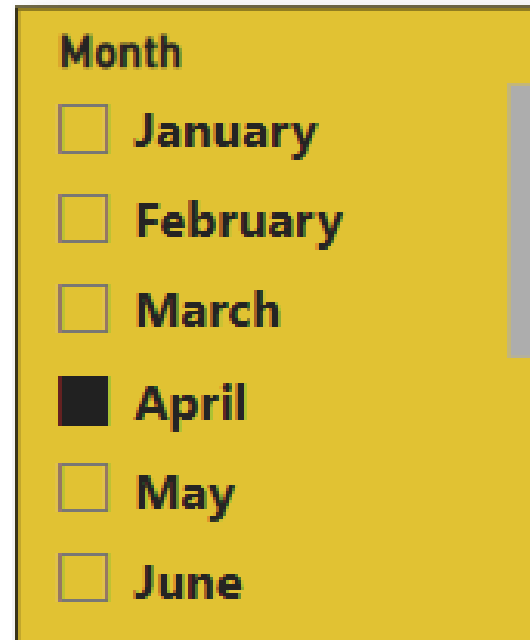
Orders Placed by Month

Purpose: Showing the total number of orders placed in each month.

Visual: slicer(months),card(total order)

Insights:

- Displays which months has highest number of order
- Displays lowest order volumes appeared
- Helpful for planning campaigns and staffing during peak months.



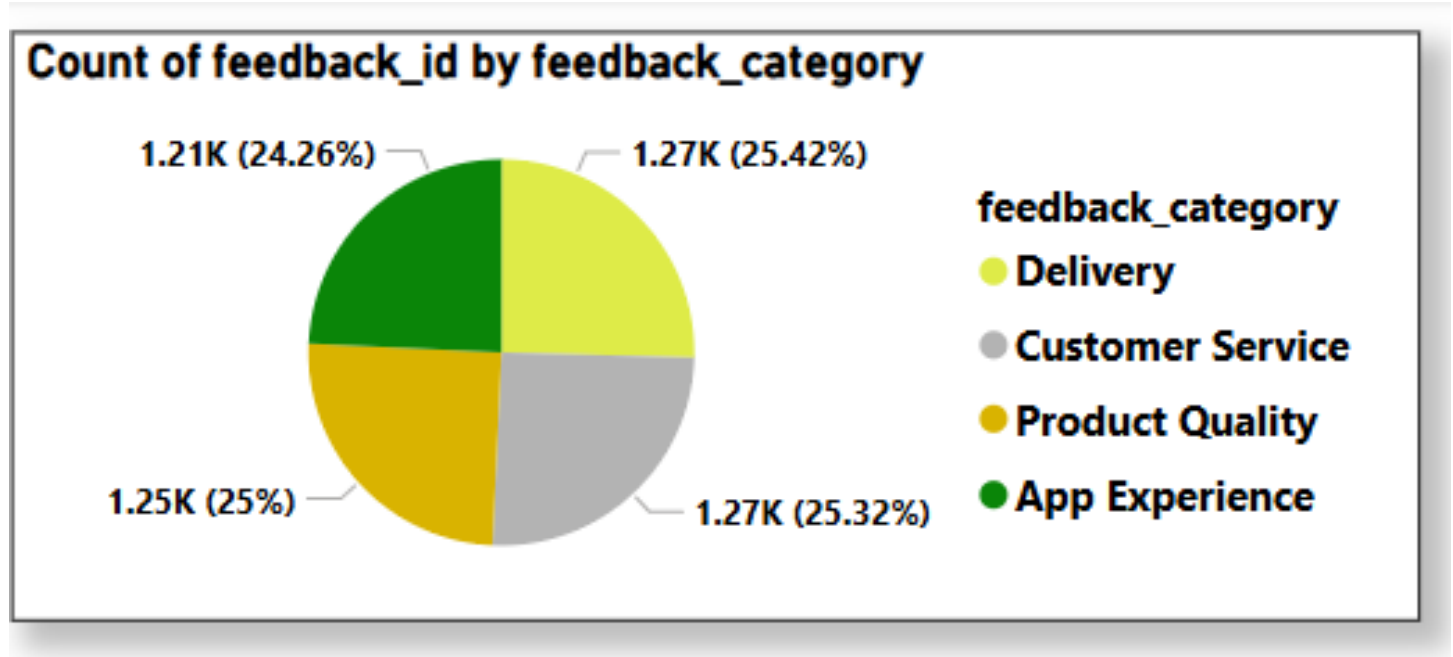
Feedback Category Distribution

Purpose: Analyze how customers feel about service/product.

Visual : Pie chart

Insights:

- This suggests that overall customer sentiment is favorable.
- Useful for tracking changes in customer satisfaction over time.



Customer Details Table

Purpose: Display customer-specific information for communication or marketing.

Visual: Table

Insights:

- The table includes customer_id, name, and email fields from the customers table.
- Enables easy contact or segmentation.
- Can be used for targeted email or feedback collection.
- Helpful for building a customer relationship management list.

customer_name	customer_id	email
Bhavna Gara	95912198	zwagle@example.com
Chaaya Wable	47577193	zvenkatesh@example.net
Manbir Manda	73807097	zroy@example.org
Jyoti Srinivas	77661491	zramesh@example.org
Banjeet Gara	74761384	zpau@example.net
Udarsh Mangal	35049420	zpatil@example.org
Manan Banerjee	22020776	zpal@example.net

Filter Orders by Delivery Status

Purpose: To know the delivery status of the order

Visual: Table(order details),Slicer(delivery status)

Insights:

- Most orders in the table are marked “On Time,” indicating good delivery performance.
- A few entries show “Significantly Delayed” or “Slightly Delayed” — highlighting exceptions where delivery performance dropped.

order_id	customer_id	delivery_status
60465	15808945	On Time
7550508	93127511	On Time
27296314	64562786	Significantly Delayed
42332130	70363568	On Time
114851727	46875863	On Time
120996684	92455970	Slightly Delayed
131013576	48228547	On Time

delivery_status

☐ On Time

☐ Significantly Delayed

☐ Slightly Delayed

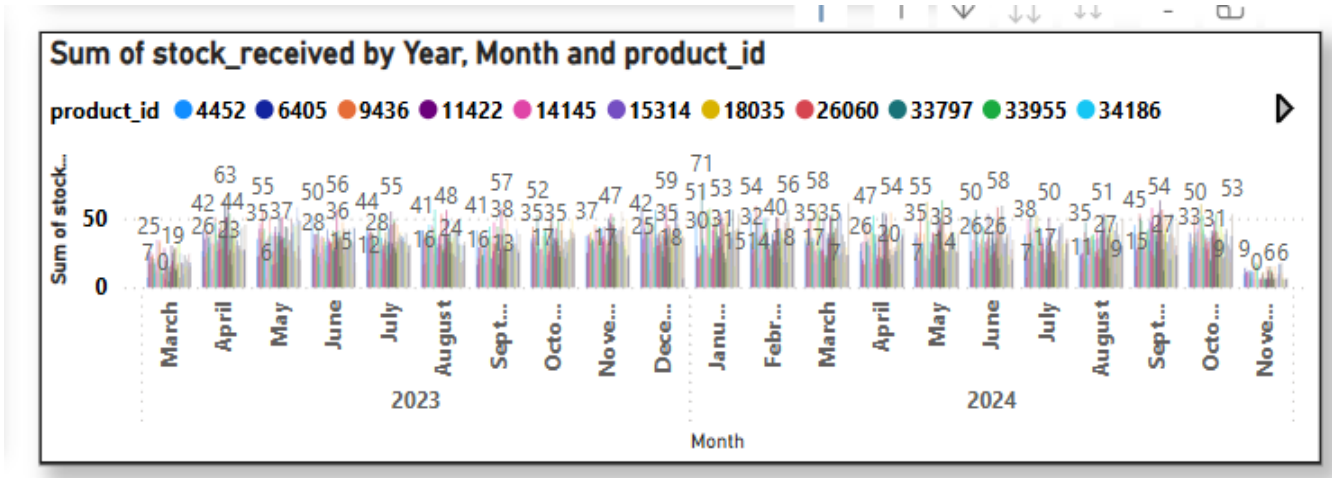
Stock Received Over Time

Purpose: Track how much stock is received over time by product.

Visual: Clustered column chart.

Insights:

- Certain products are restocked more frequently.
- Stock received is higher mid-month compared to the beginning or end.
- Ensures supply chain teams monitor and adjust delivery schedules.



Damaged Stock Percentage per Product

Purpose: Showing the percentage of stock damaged for each product.

Visual: Table

Insights:

- It shows which product have higher percentage.
- Helps quality teams investigate recurring issues with specific items.

%GT Sum of damaged_stock	product_name
2.19%	Baby Food
3.09%	Baby Wipes
1.19%	Bananas
2.61%	Biscuits
2.64%	Bread
1.44%	Butter
1.90%	Carrots
2.64%	Cat Food
0.73%	Cereal
1.76%	Cheese
1.49%	Chips
1.40%	Chocolates
100.00%	

Campaign Performance Table

Purpose: View summary of marketing campaigns.

Visual: Table

Insights:

- ROAS is low for some campaigns, indicating inefficiency.
- Good base for analyzing campaign success before reallocating budget.
- A few campaigns have high spend but low revenue — indicating inefficiencies. These campaigns may need to be optimized to reduce wasted marketing budget.
- Some campaigns have higher revenue compared to their spend.

campaign_name	campaign_id	Sum of spend	Sum of revenue_generated
Referral Program	243	10,923.54	17,911.29
Flash Sale	342	8,701.38	23,133.93
Email Campaign	417	8,112.51	15,606.90
Festival Offer	472	4,627.95	12,949.20
New User Discount	648	14,676.66	6,784.59
New User Discount	788	8,689.32	12,012.63
Membership Drive	1005	3,567.63	27,761.31
Email Campaign	1604	10,568.97	18,946.23
Email Campaign	1676	11,734.32	13,820.34
Total		4,89,59,514.72	9,65,80,222.11

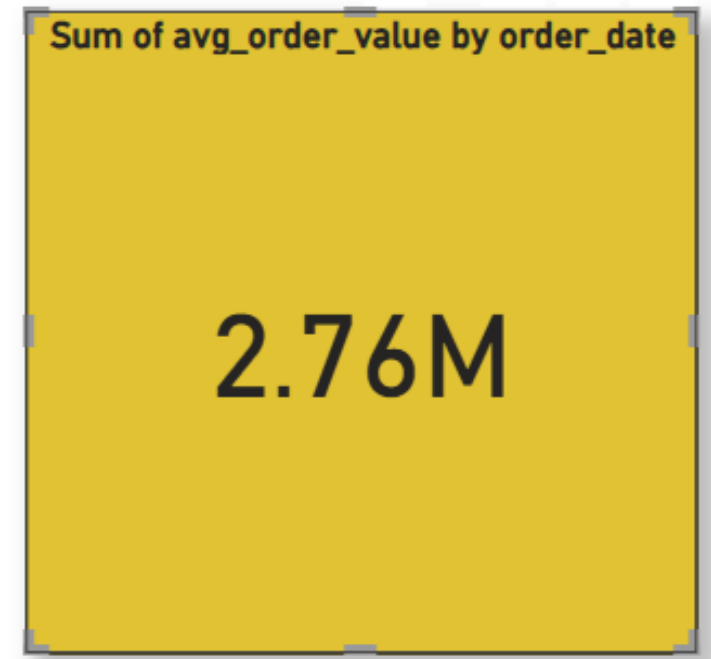
Average Order Value

Purpose: To show the average value of the customer order.

Visual: KPI

Insights:

- The current Average Order Value is moderate indicating stable customer purchasing behavior. This value helps determine customer spending patterns across the platform.
- Monitoring changes in AOV over time can reveal the effectiveness of promotions, discounts, or new product introductions.
- A consistently low AOV might signal a need for product strategy changes — such as promoting premium products or increasing minimum order thresholds.



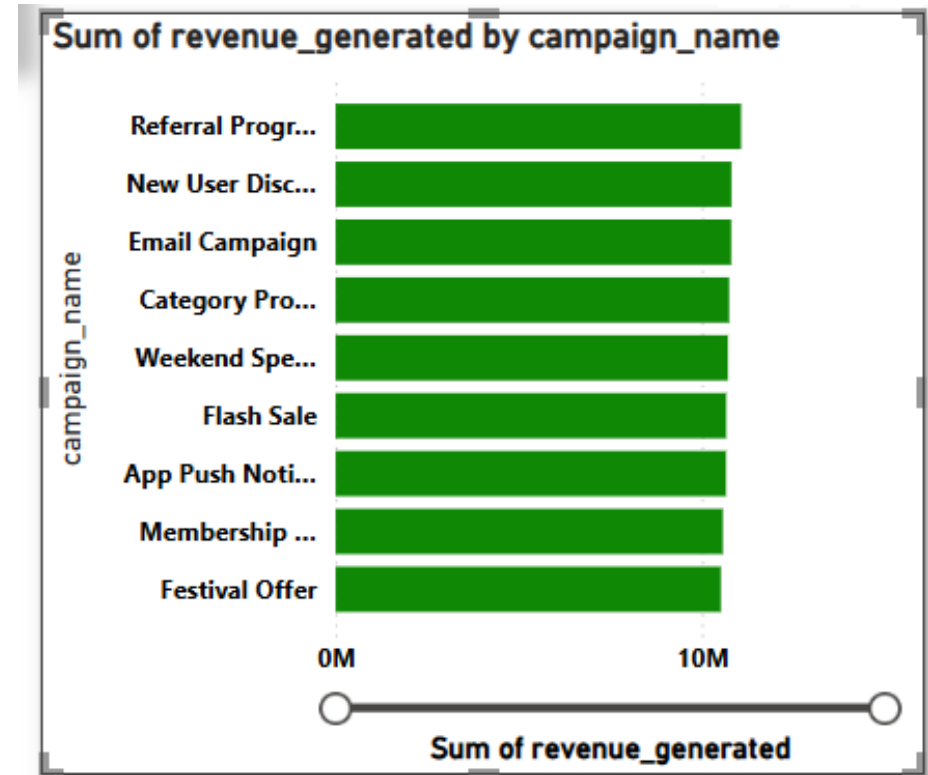
Total Campaign Revenue

Purpose: To display revenue generated from all campaigns.

Visual: Stacked bar chart.

Insights:

- The total revenue generated from all marketing campaigns gives a clear view of how well marketing efforts are contributing to sales.
- Some campaigns are generating significantly higher revenue than others, those strategies should be repeated.
- Campaigns with high revenue but low spending indicate a strong Return on Ad Spend (ROAS).



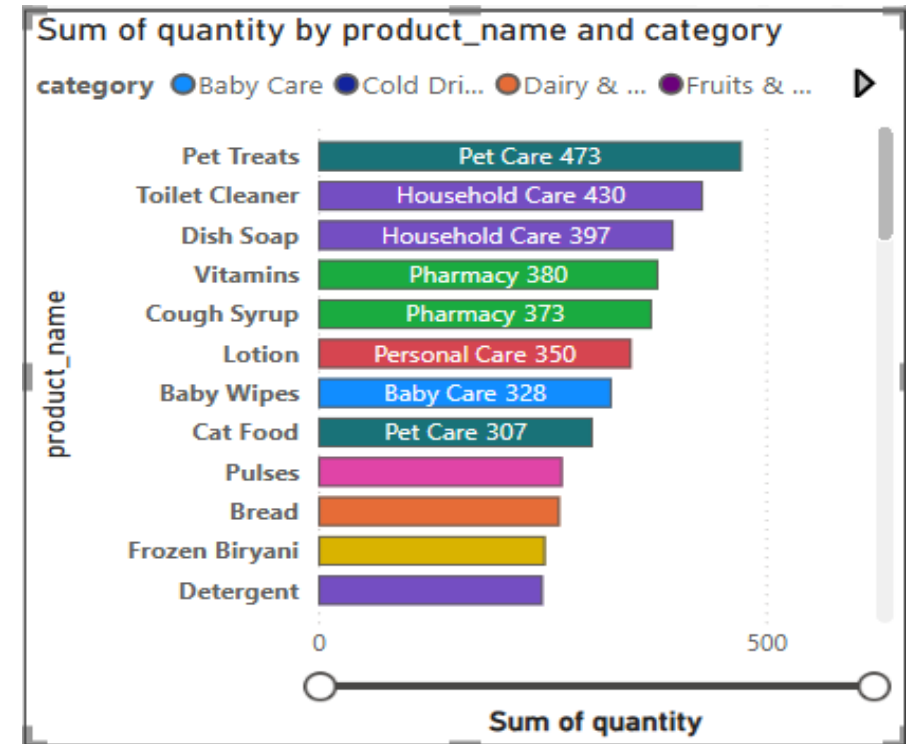
Order Quantity per Product

Purpose: Compare order volumes for different products

Visual: Stacked Bar Chart.

Insights:

- Some products are ordered much more than others — showing which items are most popular.
- A few products have very low order quantity — they may need better promotion or could be removed from inventory.
- This helps Blinkit focus on top-selling products and manage stock better to avoid overstocking or shortages.



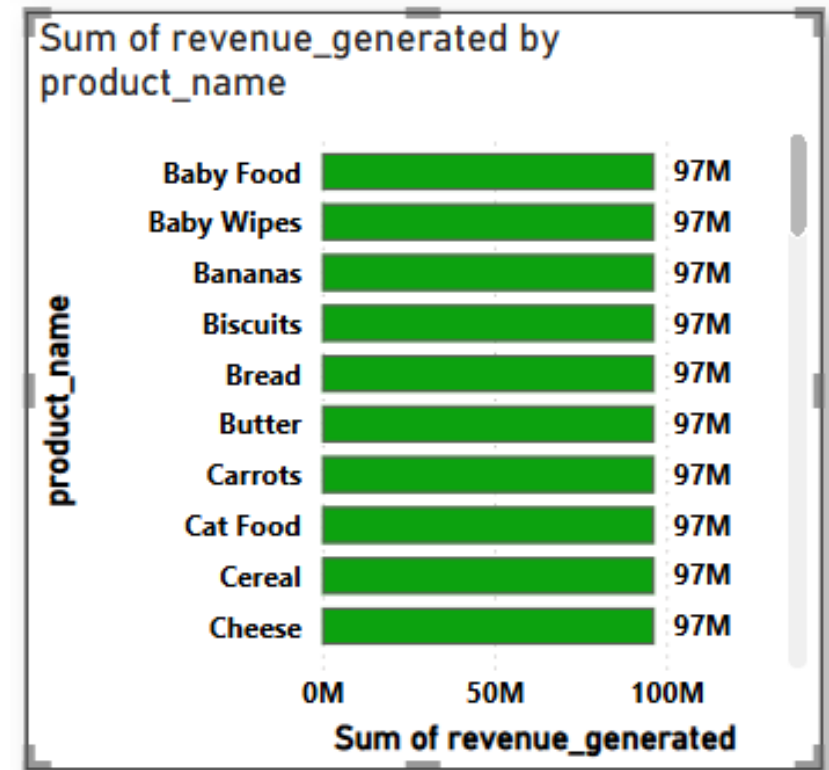
Total Sales Revenue per Product

Purpose: To display the total revenue generated by each product.

Visual : Stacked bar chart.

Insights:

- It shows how much money each product brings from customer orders.
- Some products have much higher sales than others — these are the best-sellers.
- Products with low sales revenue may need better marketing or replacement.
- Helps Blinkit decide which products to promote or stock more.



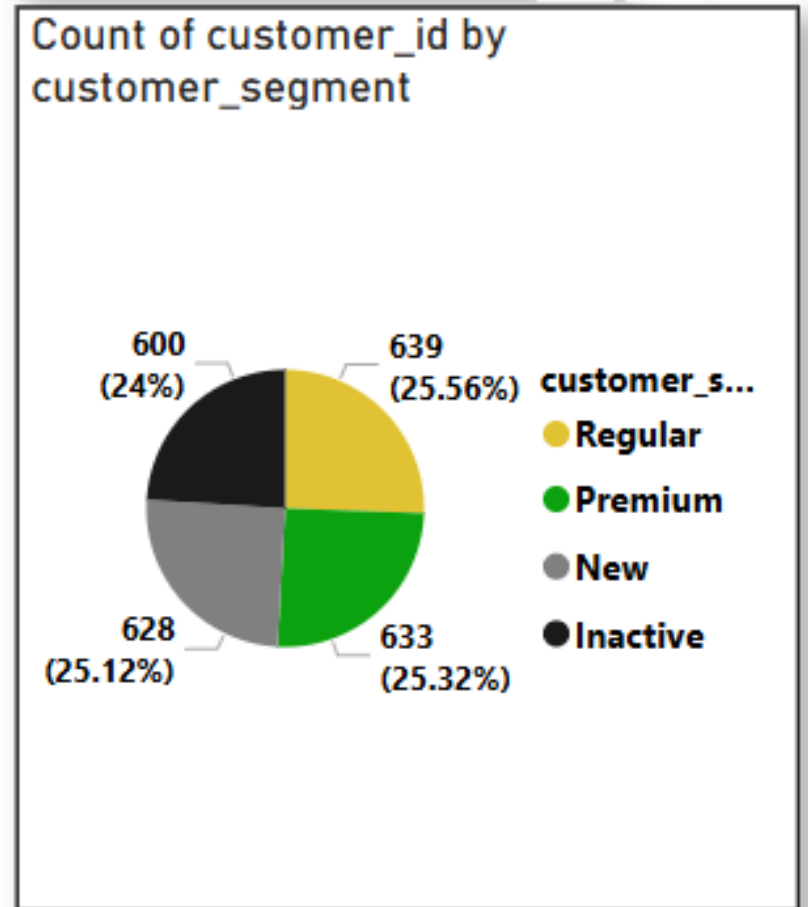
Customer Segments

Purpose: Show distribution of customer types

Visual: Pie chart

Insights:

- Shows how many customers belong to each segment
- Helps understand what type of customers use Blinkit most.
- Helps plan loyalty programs or promotions.



Order Frequency by Pincode

Purpose: Visualize how many orders come from each postal zone

Visual: Matrix

Insights:

- Shows which areas (pincodes) have the most orders.
- High-order areas are strong zones for Blinkit.
- Low-order areas may need more marketing or services.
- Helps in planning delivery coverage and store placement.

pincode	Count of order_id
6749	1
7186	1
13634	1
14359	1
14789	1
15696	1
16283	1
17255	1
19668	1
22174	1
22922	1
23472	1
Total	5000

Return on Ad Spend by Campaign

Purpose : To check which campaigns gave better returns on ad money spent.

Visual: Table

Insights:

- Some campaigns gave high returns, meaning they were very effective.
- A few campaigns gave low returns and may not be worth the cost.
- Helps Blinkit decide where to spend more or less on marketing.

Sum of campaign_id	campaign_name	Sum of spend	Sum of revenue_generated	Measure
894940830	App Push Notification	53,66,967.60	1,06,63,110.00	1.99
902829894	Category Promotion	55,51,749.00	1,07,47,366.11	1.94
897157743	Email Campaign	54,32,189.01	1,08,05,355.66	1.99
932438310	Festival Offer	53,90,061.42	1,05,21,191.73	1.95
874138266	Flash Sale	54,95,063.46	1,06,68,261.06	1.94
932946840	Membership Drive	53,70,209.40	1,05,74,853.75	1.97
906505539	New User Discount	55,00,364.43	1,08,11,580.51	1.97
934280295	Referral Program	54,54,076.53	1,10,74,147.80	2.03
846068832	Weekend Special	53,98,833.87	1,07,14,355.49	1.98
8121306549		4,89,59,514.72	9,65,80,222.11	1.97

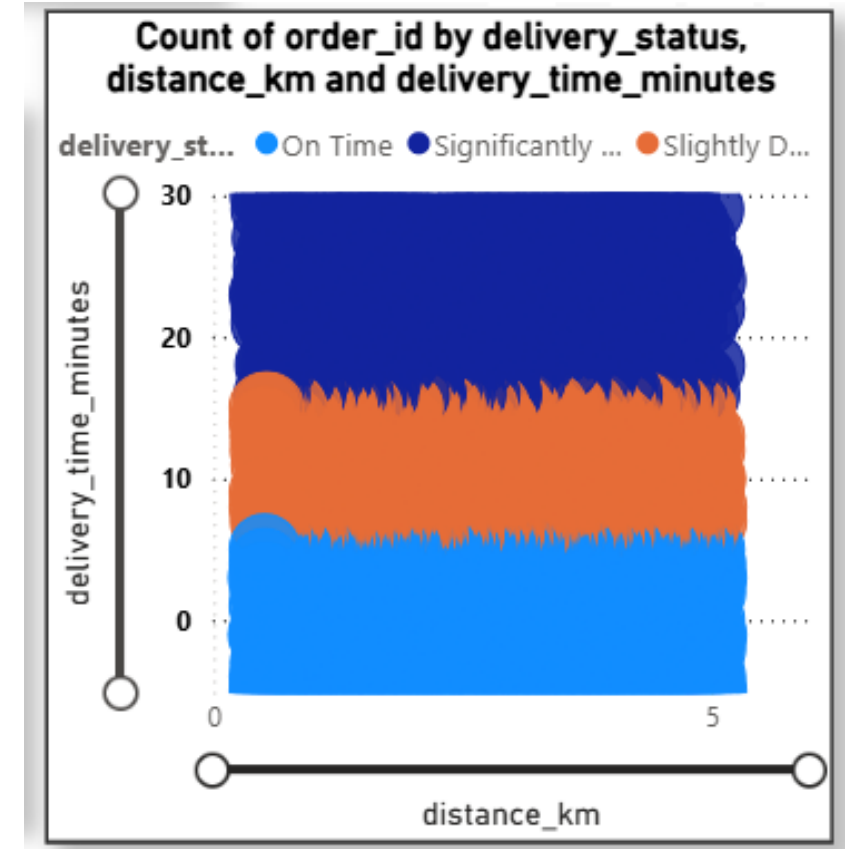
Delivery Time vs Distance

Purpose : To see how delivery time changes with distance.

Visual : Scatter Plot

Insights:

- Most short-distance deliveries take less time, but some still get delayed.
- A few long-distance deliveries are handled quickly, showing good logistics.
- Helps identify if delays are caused by distance or other issues.



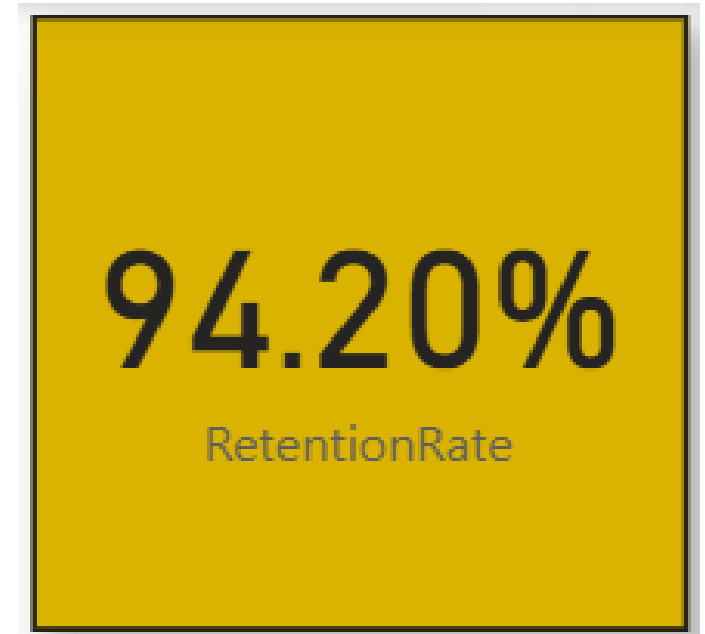
Customer Retention Rate

Purpose: To calculate how many existing customers continue placing orders.

Visual : Card

Insights:

- A good percentage of customers are returning, showing customer trust.
- Helps Blinkit understand loyalty and improve repeat business.
- Can be used to target loyal customers with offers.



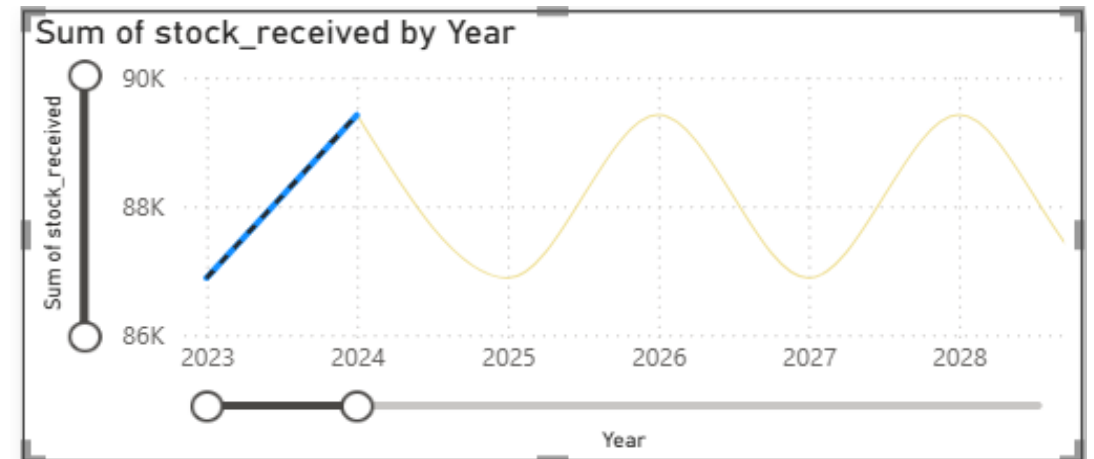
Forecast of Future Stock Levels

Purpose : To predict future stock levels based on past stock received data.

Visual : Line Chart

Insights:

- The stock level is expected to stay steady over the coming days.
- Helps Blinkit plan restocking before inventory runs low.
- Supports better inventory and warehouse management.



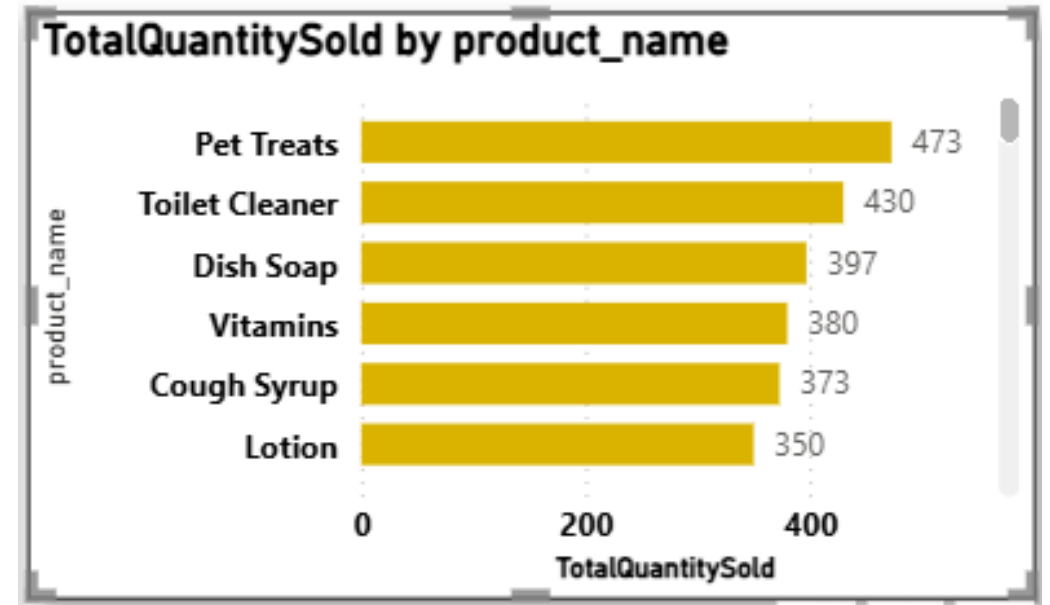
Top 5 Best-Selling Products

Purpose : To quickly identify the most popular products based on customer demand.

Visual : Clustered bar chart

Insights:

- These top 5 products contribute significantly to total sales.
- Keeping these items in stock is essential for customer satisfaction.
- Useful for marketing.



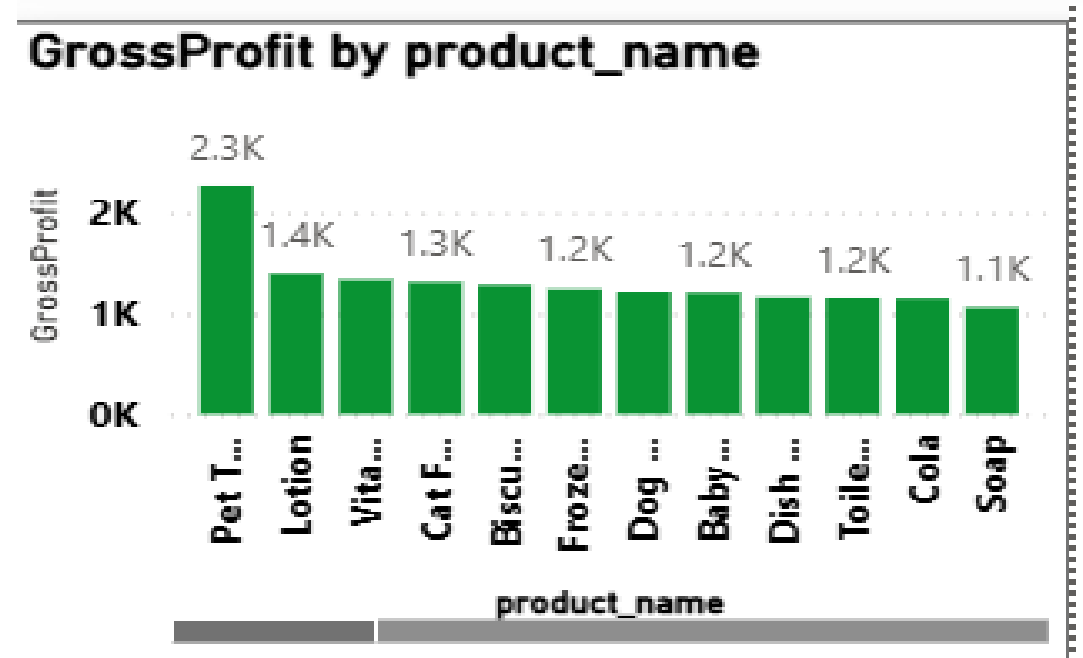
Gross Profit by Product

Purpose : To calculate how much profit Blinkit is earning after cost using margin percentage.

Visual : Clustered column chart

Insights:

- Helps track profitability across all products.
- Useful for pricing and financial planning.
- Shows which products or categories has higher profits.



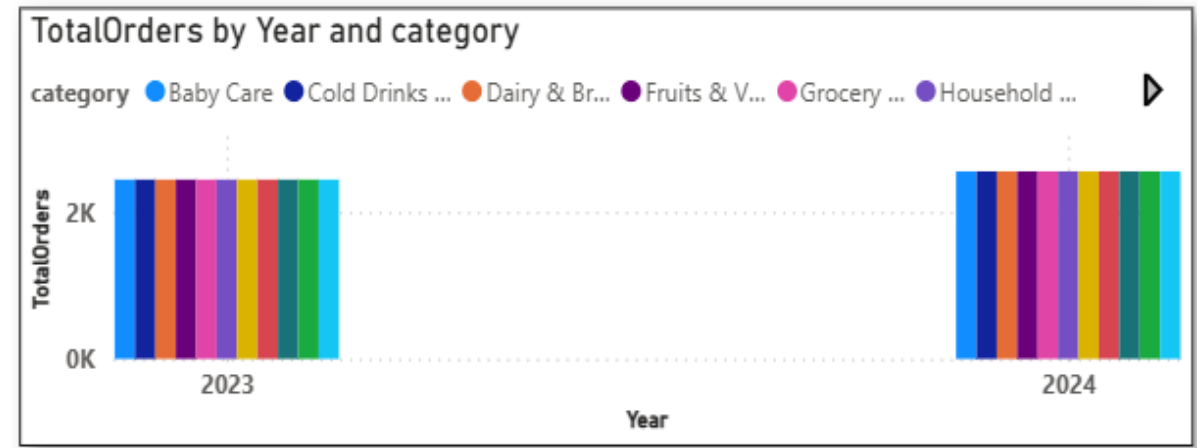
Track Order Trends Across Categories

Purpose : To monitor how order volumes vary across product categories over time.

Visual : Line and Clustered column chart

Insights:

- Some categories show consistent demand, while others fluctuate.
- Seasonal trends affect specific category orders.
- Helps Blinkit plan stock and marketing per category more effectively.



Order Quantity per Product Category

Purpose : To display how many units were ordered in each product category.

Visual : Matrix

Insights:

- Some categories have significantly higher order volumes than others.
- Helps identify customer preferences across categories.
- Useful for inventory planning and category-level sales strategy.

category	Baby Food	Baby Wipes	Bananas	Biscuits	Bread
Baby Care	236	328			
Cold Drinks & Juices					
Dairy & Breakfast					270
Fruits & Vegetables			85		
Grocery & Staples					
Household Care					
Instant & Frozen Food					
Personal Care					
Total	236	328	85	247	270

Customer Lifetime Value Analysis

Purpose : To calculate the total expected revenue from a customer over their entire relationship with Blinkit.

Visual: Card

Insights:

- High CLV customers bring long-term business value.
- Helps identify and retain loyal, high-spending customers.
- Useful for planning marketing, retention, and loyalty programs.



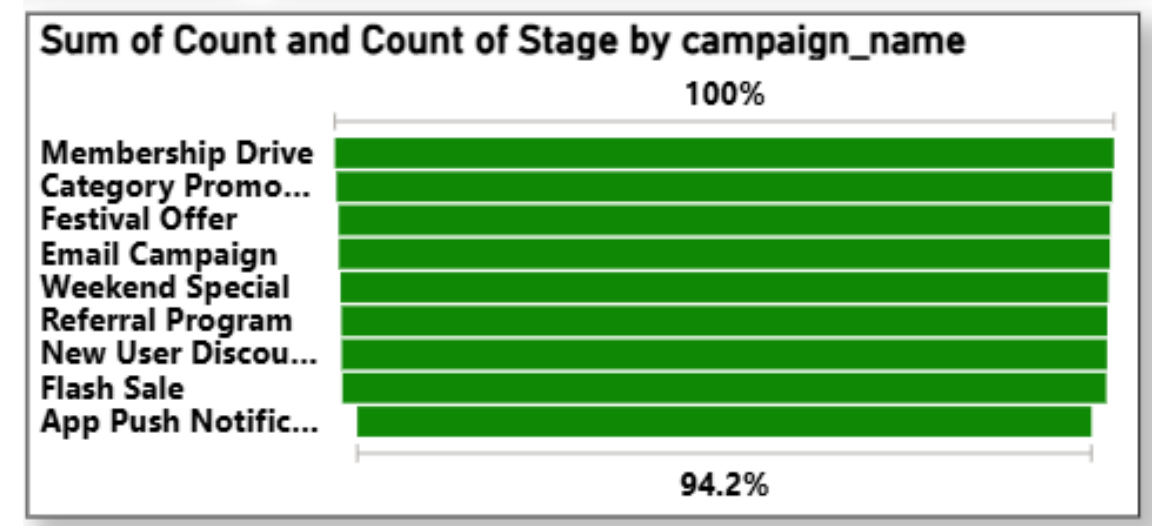
Tracking of Campaign Conversion

Purpose : To track how many users progress through each stage of a marketing campaign.

Visual : Funnel chart

Insights:

- Significant drop-offs at certain stages may indicate issues in the funnel.
- Helps identify where users lose interest or fail to convert.
- Supports optimizing campaign strategy to improve final conversions.



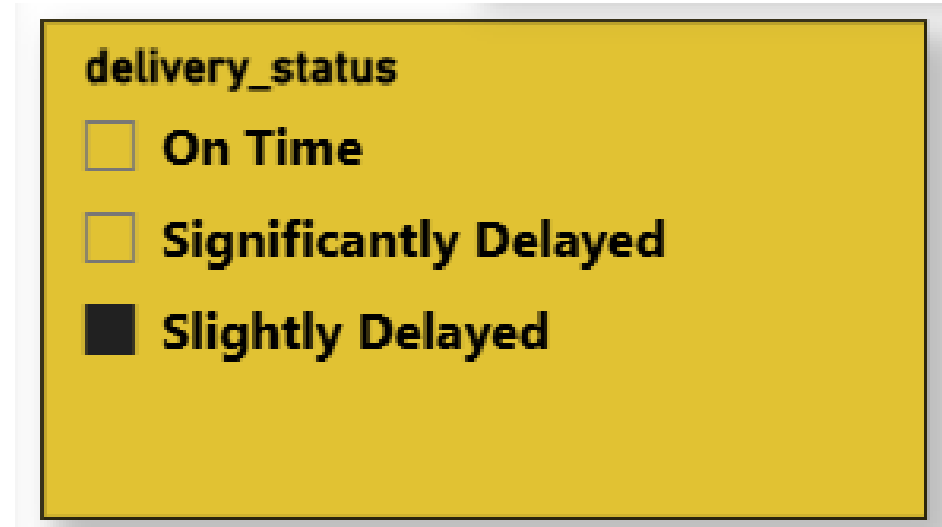
Delivery Status Filter (On-Time vs Delayed)

Purpose : To filter and compare orders based on delivery performance.

Visual : Slicer

Insights:

- Quickly separates on-time vs delayed deliveries.
- Helps analyze impact of delays on customer satisfaction or ratings.
- Supports performance monitoring for logistics teams.



Feedback Drill-Through Report

Purpose : To explore detailed customer feedback by drilling through from summary visuals.

Visual : Table

Insights:

- Helps identify recurring issues or praise in comments.
- Supports deeper analysis for improving customer satisfaction.

Year	Month	Day	feedback_text	feedback_category	rating
2023	March	16	Average experience, could improve.	App Experience	4
2023	March	16	Delivery was fine, but the product could be better.	App Experience	3
2023	March	16	Items were in perfect condition.	Delivery	5
2023	March	16	Items were missing from my order.	App Experience	3
2023	March	16	Nothing to complain about, but nothing exceptional.	Customer Service	3
2023	March	16	Product was damaged during delivery.	Customer Service	2
2023	March	16	Product was damaged during delivery.	Delivery	1
2023	March	16	The product met my expectations.	App Experience	3
2023	March	16	The product met my expectations.	App Experience	4
2023	March	17	Delivery was late and I was unhappy.	Product Quality	1
2023	March	17	Excellent quality, will buy again!	Delivery	5
2023	March	17	Taste was not as expected.	Delivery	3
2023	March	17	The packaging was poor.	Customer Service	2
2023	March	17	Very happy with the service!	Customer Service	4
2023	March	18	Average experience, could improve.	Delivery	3
2023	March	18	Delivery was fine, but the product could be better.	Delivery	3
2023	March	18	Delivery was fine, but the product could be better.	Product Quality	4
2023	March	18	Highly recommended!	Delivery	4
2023	March	18	It was okay, nothing special.	Customer Service	4
2023	March	18	Nothing to complain about, but nothing exceptional.	App Experience	3
2023	March	18	Nothing to complain about, but nothing exceptional.	Delivery	4
2023	March	18	Product was damaged during delivery.	Customer Service	2

Low Stock Alert Trigger

Purpose : To notify when product stock drops below the defined minimum threshold.

Visual : Table

Insights:

- Helps prevent stockouts by triggering timely alerts.
- Ensures continuous product availability.
- Supports better inventory control and restocking decisions.

product_id	product_name	Sum of max_stock_level	Sum of stock_received	Sum of damaged_stock	LowStockStatus
513199	Cola	52	482	274	Sufficient
679321	Cola	68	548	280	Sufficient
712003	Cola	54	523	318	Sufficient
587420	Cookies	50	470	308	Sufficient
690565	Cookies	56	563	306	Sufficient
991434	Cookies	87	535	322	Sufficient
123983	Cough Syrup	72	707	276	Sufficient
Total		20034	147526	80268	Sufficient

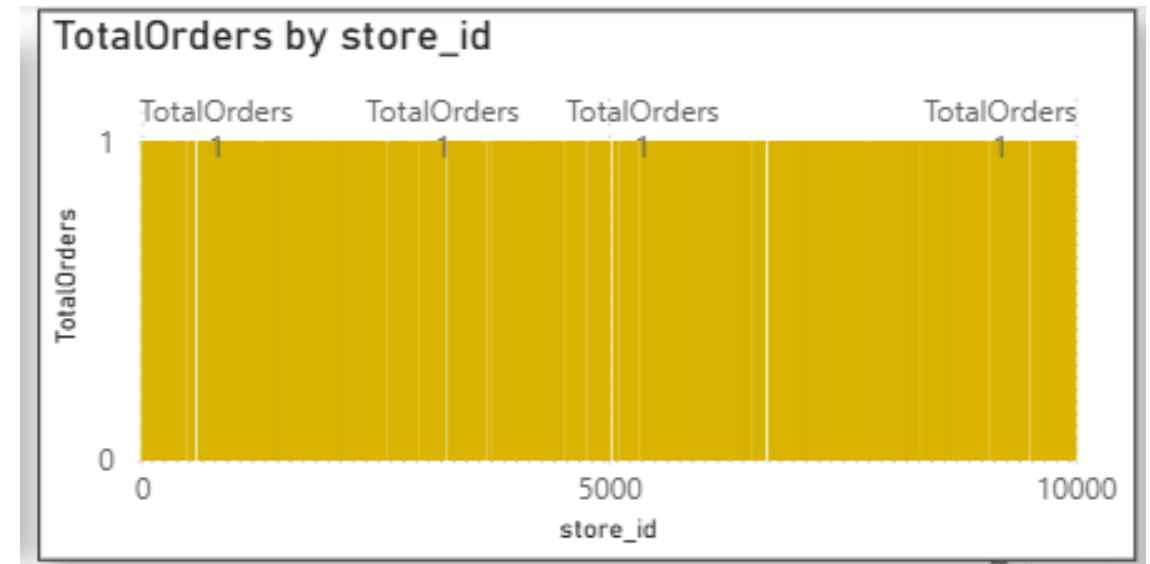
Customer Orders by Store Report

Purpose : To monitor how many orders each store receives from customers.

Visual : Clustered column chart

Insights:

- Identifies high-performing vs low-performing stores.
- Helps allocate resources based on order volume.
- Useful for regional planning and store-level strategy.



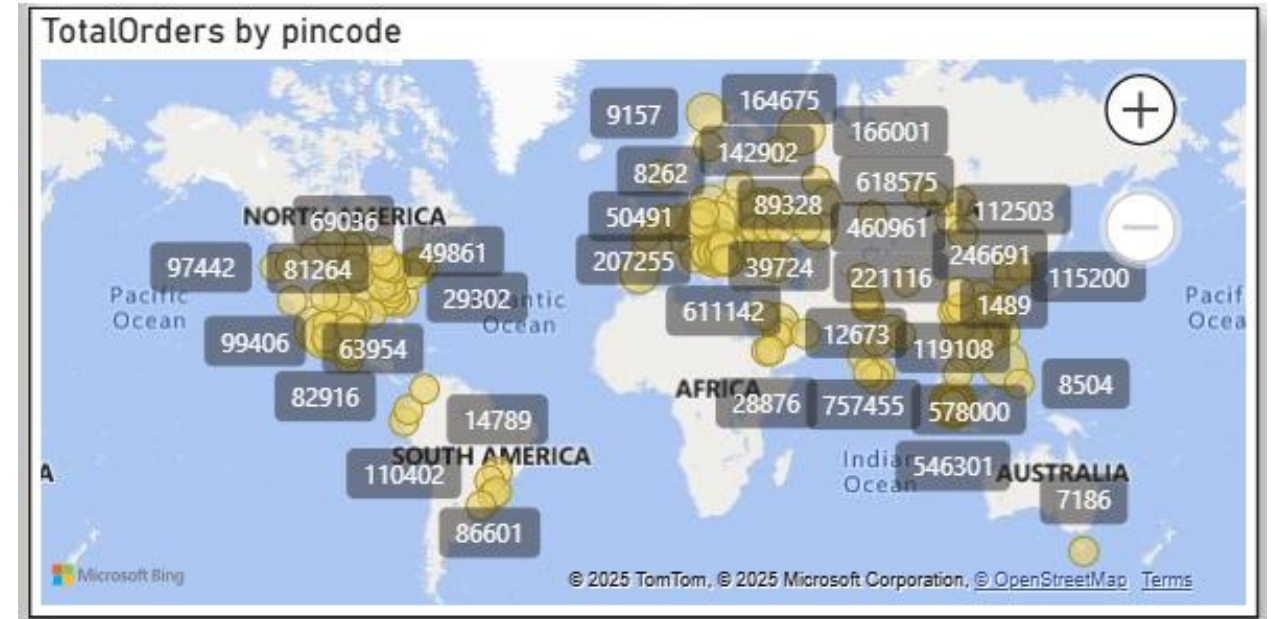
Order Density by Area

Purpose : To visualize which geographic areas generate the most customer orders.

Visual : Map

Insights:

- Highlights high-order zones for targeted marketing.
- Reveals underperforming areas needing attention.
- Supports delivery route optimization and expansion planning.



Product-Wise Discount Percentage

Purpose : To calculate how much discount is offered on each product compared to its MRP.

Visual : Table

Insights:

- Shows which products have the highest discounts.
- Helps evaluate pricing strategies and promotional effectiveness.
- Useful for margin analysis and inventory clearance planning.

category	product_name	Sum of mrp	Sum of price	%GT Sum of Discount_Percentage
Baby Care	Baby Food	4,436.21	3,105.35	2.42%
Baby Care	Baby Wipes	5,720.46	4,004.32	3.22%
Fruits & Vegetables	Bananas	1,971.73	1,478.80	1.01%
Snacks & Munchies	Biscuits	5,640.30	3,666.20	3.29%
Dairy & Breakfast	Bread	5,697.62	4,558.09	1.88%
Dairy & Breakfast	Butter	3,673.23	2,938.59	1.07%
Total		1,82,356.51	1,30,879.63	= 1 ... %






Emoji Ratings by Product Category

Purpose : To analyze how different product categories are rated using emoji-based feedback.

Visual : Table

Insights:

- Some categories consistently receive more positive (smiley) emojis.
- Negative emojis are clustered in specific product categories.
- Helps identify which types of products need improvement in quality or service.

category						Total
Baby Care	1	1	1	1	1	5
Cold Drinks & Juices	1	1	1	1	1	5
Dairy & Breakfast	1	1	1	1	1	5
Fruits & Vegetables	1	1	1	1	1	5
Grocery & Staples	1	1	1	1	1	5
Household Care	1	1	1	1	1	5
Total	1	1	1	1	1	5

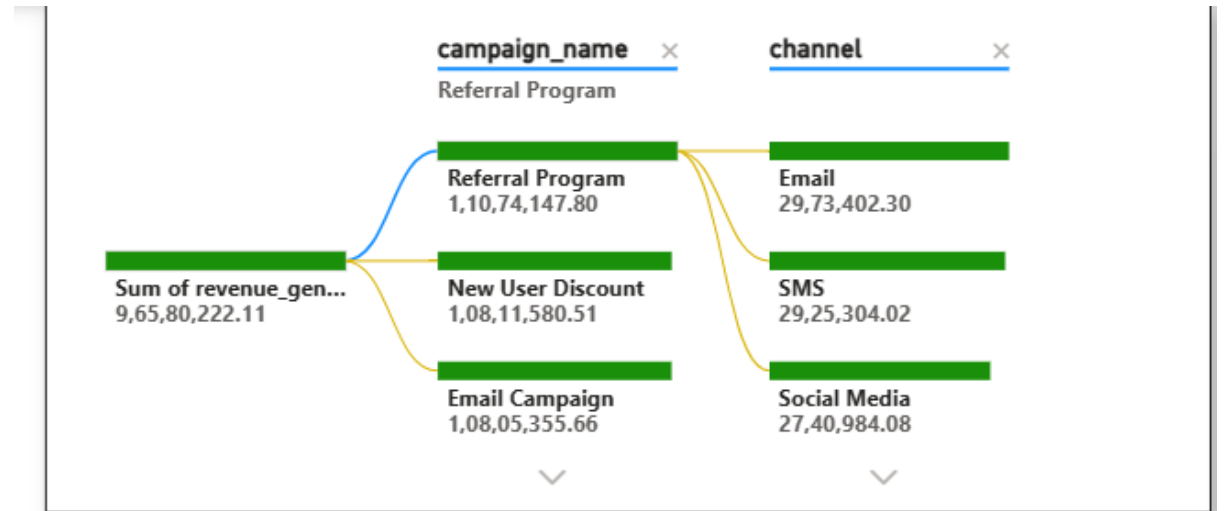
Sales Breakdown – Product Decomposition Analysis

Purpose : To break down total product sales across multiple dimensions like category, brand, and region.

Visual : Decomposition Tree

Insights:

- Quickly identifies which categories or sub-groups contribute most to sales.
- Helps pinpoint underperforming segments or top-selling contributors.



Key Findings

1. Many products have stock running low, which can lead to missed sales if not restocked quickly — inventory management needs improvement.
2. Some orders are delayed beyond promised delivery times, affecting customer satisfaction — delivery operations should be optimized.
3. Top-selling products and high-performing stores are clearly visible — these can be used as benchmarks to improve performance in other areas.



Conclusion

The BlinkIt analysis highlights key areas of business performance — strong product sales and top-performing stores demonstrate effective demand, while delayed deliveries and low stock levels suggest opportunities to improve logistics and inventory. By acting on these insights, the company can enhance customer satisfaction, avoid stockouts, and optimize overall operations for better growth.



GitHub Link

Link: <https://github.com/TanimaDhar02>



Thank You

Name : Tanim Dhar

Email Id: tanima.simplex@gmail.com

