FESTIVAL ELECTRONICS SALE ANALYSIS: PERFORMANCE INSIGHTS FOR CHANDIGARH'S E-COMMERCE MARKET

PRESENTED BY:

ROHAN NEGI

SQL CAPSTONE PROJECT

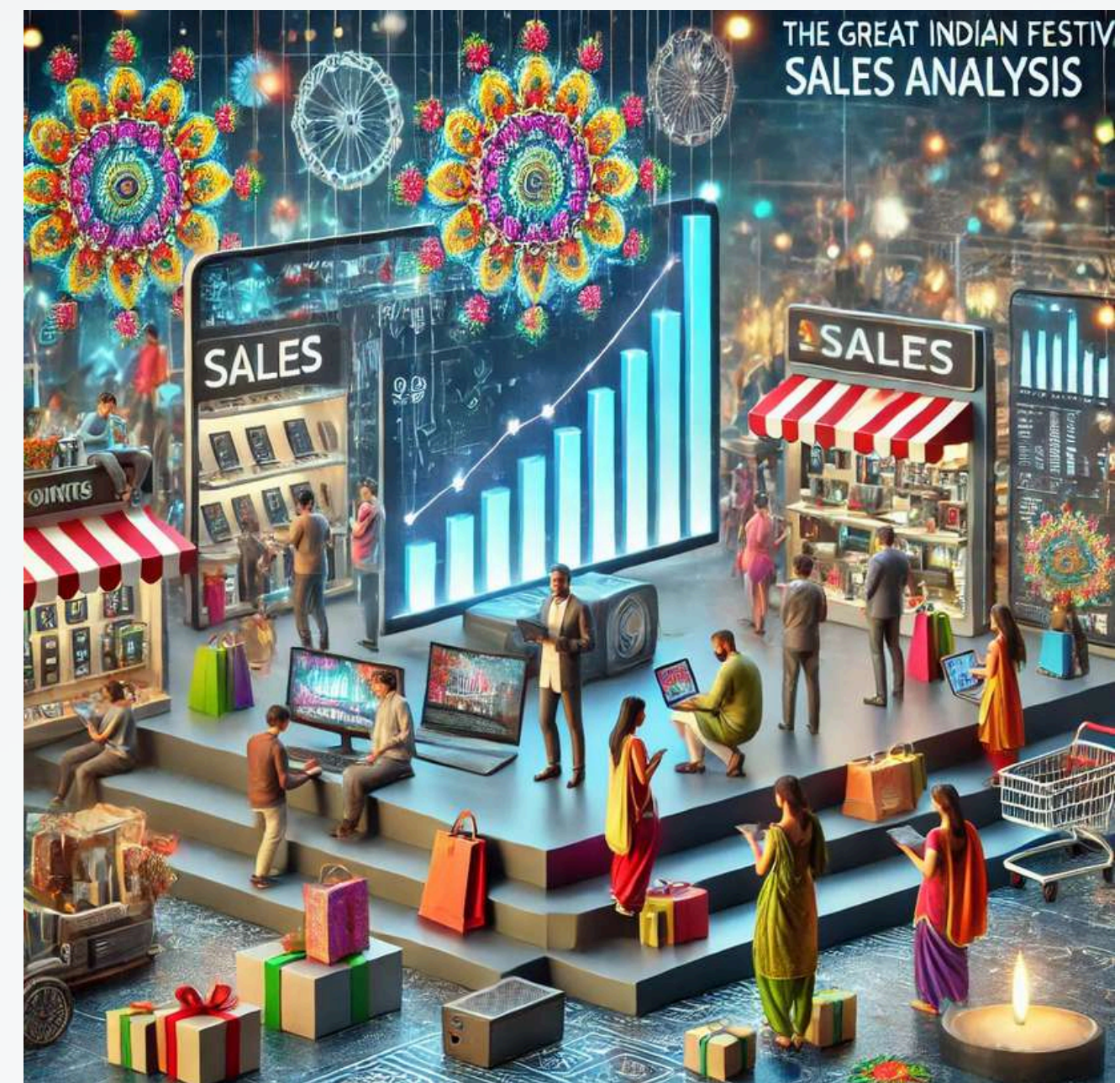## SUBMITTED TO:
NEERAJ SHARMA

Skill Circle

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Introduction

The e-commerce sales analysis project focuses on the Great Indian Festival a significant sales event. The purpose of this analysis is to gain insights into customer behavior product performance, and sales trends. The project covers key areas such as product returns, customer demographics and channel performance, helping us understand how to optimize future sales campaigns.
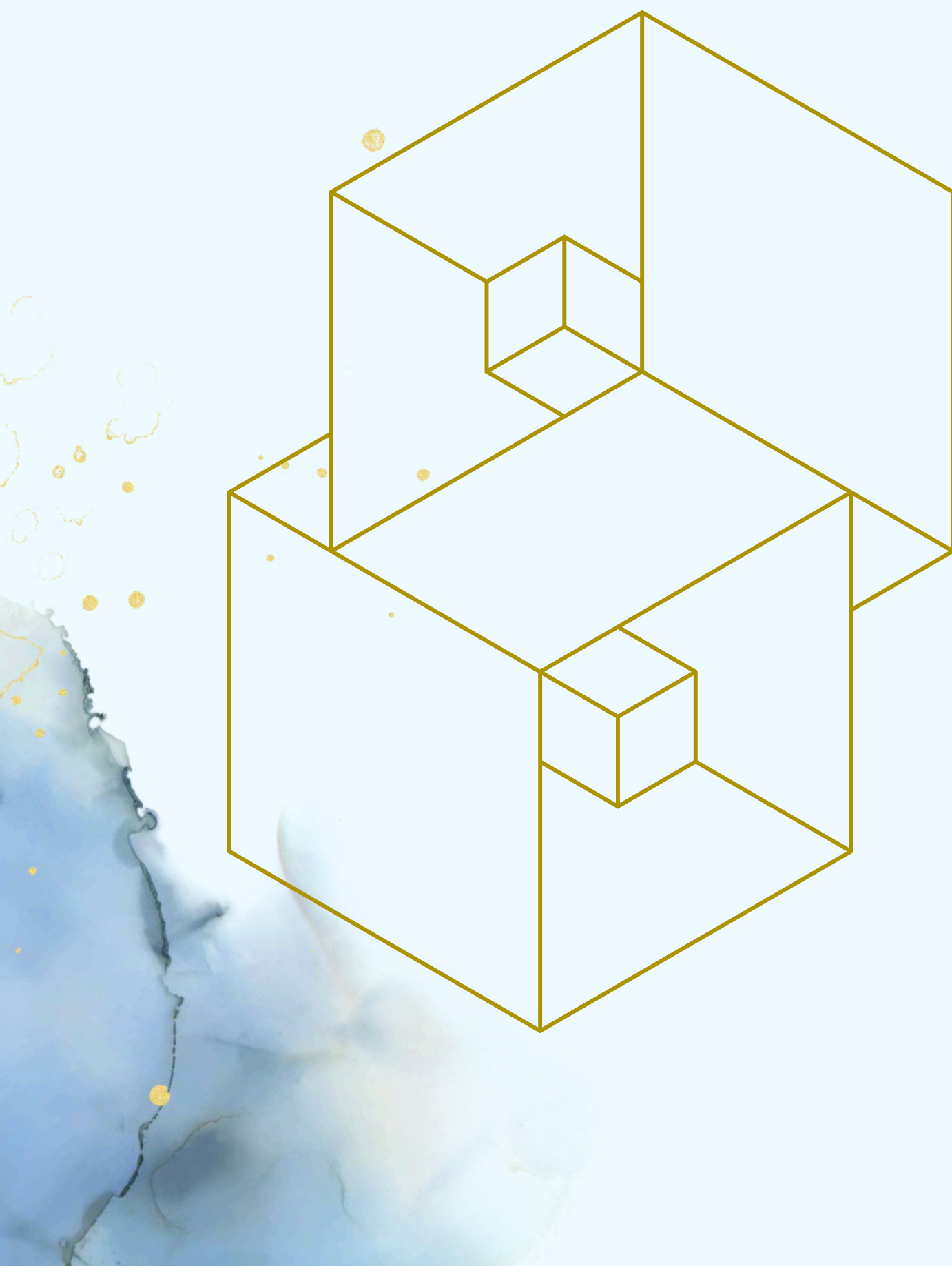
Why We Did This Analysis

- Identify top-selling products and brands.
- Understand customer demographics (age, gender, region) driving sales.
- Analyze the reasons for product returns and customer dissatisfaction.
- Evaluate sales channel performance and growth trends.
- Optimize inventory management for high-demand products

Customers Segmentation

Sales Distribution by Age

Why :

This analysis breaks down sales by age group, revealing which demographics drive the most sales and informing targeted marketing strategies.

Findings :

This analysis breaks down sales by age group, highlighting purchasing behaviors and enabling age-based targeted marketing strategies.

	AgeGroup	TotalSales
▶	18-25	8179661.00
	26-35	8471250.00
	36-45	1976062.00
	55+	1391242.00
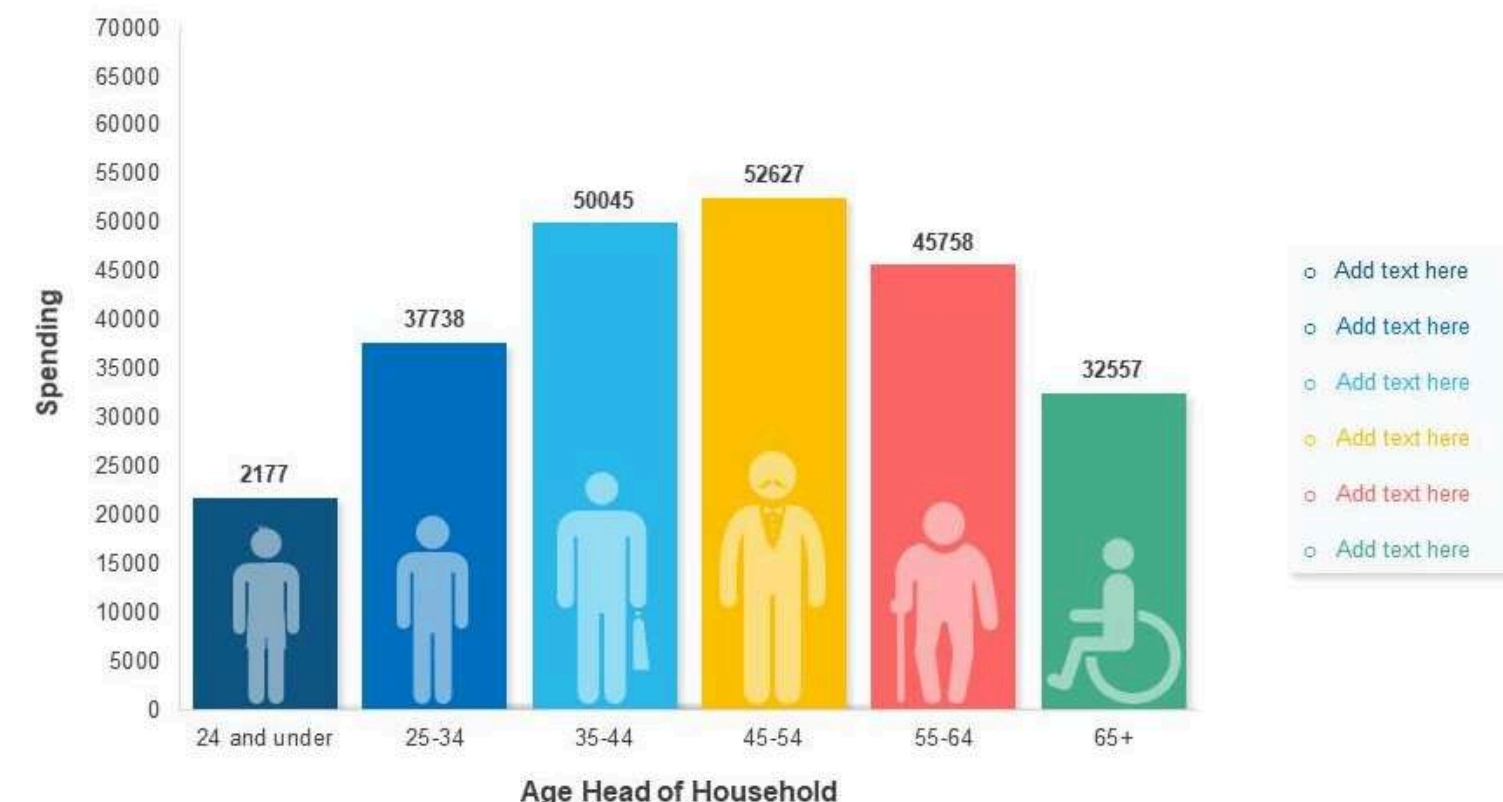
Sales Distribution by Gender

er	TotalSales
	16135706.00
e	15882509.00

Why :

This analysis explores sales by gender, revealing purchasing behaviors and guiding targeted marketing efforts.

Findings :

This analysis calculates sales by gender, offering insights into spending patterns to refine targeted marketing strategies.

Sales by region

Region	TotalSales
North	11784509.00
West	8272469.00
South	11961237.00

Why :
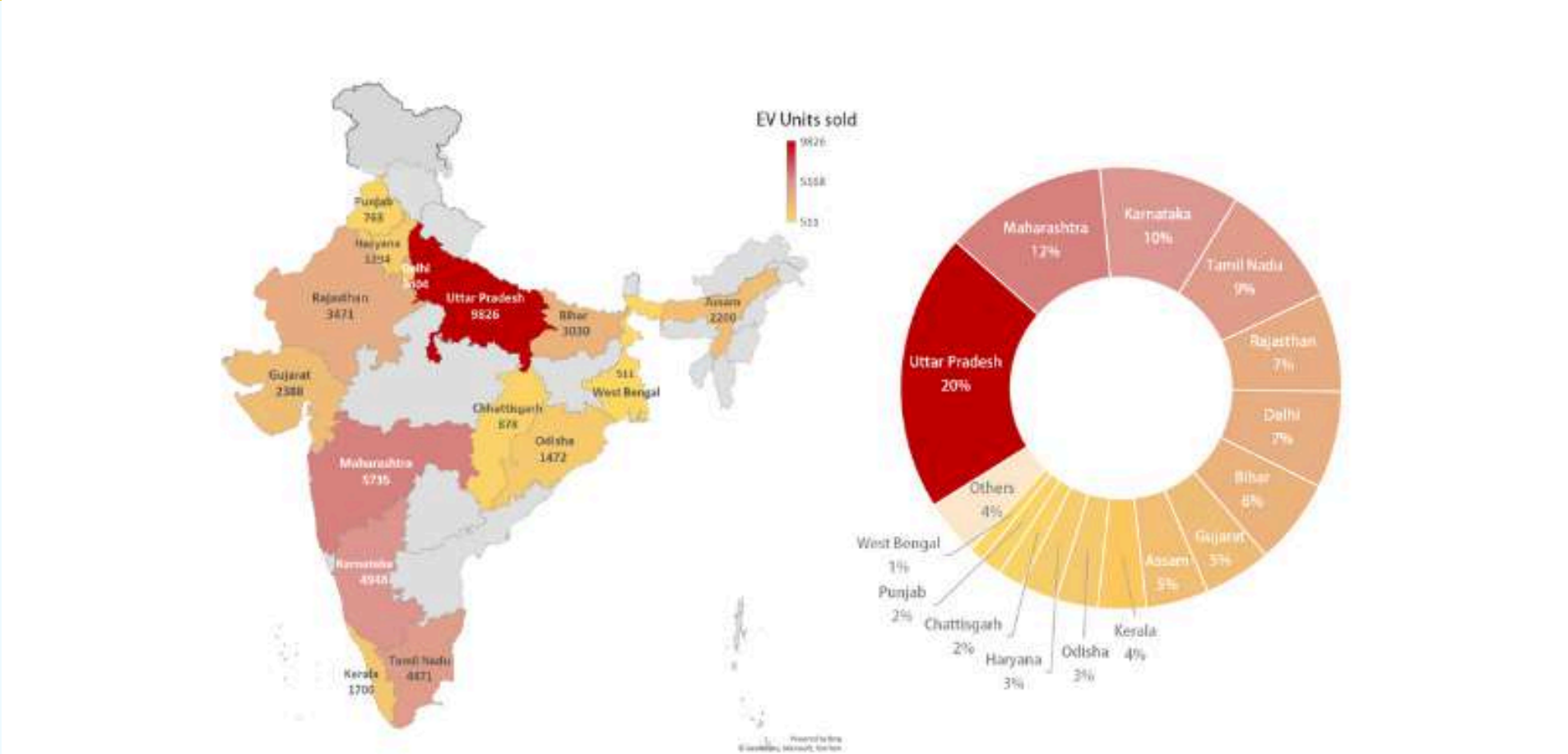
This analysis breaks down sales by region, identifying geographic trends to optimize regional marketing and resource allocation for growth.

Findings :

This analysis summarizes sales by region, offering insights into geographic performance and guiding focus on high-performing areas for targeted strategies.

Sales Performance Analysis

Total sales by channel

Why :

This analysis evaluates sales across channels, identifying which ones generate the most revenue.

Findings:

This analysis summarizes sales by channel, assessing each channel's contribution to overall revenue.

Result Grid | Filter Rows:

	ChannelName	TotalSales
▶	Online Amazon	9976233.00
	Online Flipkart	10036070.00
	Croma Store	8516598.00
	Offline Reliance Digital	8469427.00

Sales Contribution Percentage

Why :

This analysis shows each channel's contribution to total sales, identifying high-performing regions and optimizing resource allocation.

Findings :

This analysis calculates each channel's sales contribution percentage, helping assess their relative performance in generating total sales.

ChannelName	TotalSales	ContributionPercentage
Online Amazon	9976233.00	26.96
Online Flipkart	10036070.00	27.13
Croma Store	8516598.00	23.02
Offline Reliance Digital	8469427.00	22.89

Calculate the Net_Profit in SalesChannels

Why :

This analysis calculates net profit by sales channel, evaluating profitability and identifying areas for financial improvement.

Findings :

This analysis calculates net profit per channel by subtracting net sales from total sales, offering insights into profitability.

Net_profit
1553285
1246869
1058882
985771

Sales Review

Your company Name

Products Trends Analysis

PRICE ELASTICITY ANALYSIS

Why :

This analysis calculates the average price and total quantity sold per product, offering insights into pricing strategy and sales performance.

Findings :

This analysis calculates the average price and total quantity sold per product, offering insights into pricing and overall sales performance.

Product_Name	AveragePrice	TotalQuantitySold
Xiaomi Redmi Note 6 Pro	8999.000000	26
Realme XT (8GB, 128GB)	19999.000000	30
Vivo V17 Pro	32990.000000	45
Google Pixel 8 Pro	97499.000000	61
Apple iPhone 15 Pro Max	139990.000000	60
OnePlus 11 Pro	64999.000000	12

Discounts Slabs per category

Why :

This analysis calculates the average price and total quantity sold for each product, providing insights into pricing strategy and sales performance.

Findings :

This analysis calculates the average price and total quantity sold for each product, providing insights into pricing and sales performance across the product range.

category	Discount_Slab	Product_Count
Audio Devices	11-20%	3
Audio Devices	21-30%	7
Mobile Phones	0-10%	2
Mobile Phones	11-20%	10
PC	11-20%	5
Wearables	11-20%	8

Orders Insights

Top Selling Products

Why :

This analysis identifies the top-selling products by total quantity sold, helping to pinpoint bestsellers and inform inventory and marketing strategies.

Findings :

This analysis identifies the top five selling products by total quantity sold, helping to highlight bestsellers and inform inventory and marketing strategies.

Product_Name	TotalQuantitySold
Google Pixel 8 Pro	61
Apple iPhone 15 Pro Max	60
OnePlus Watch	56
boAt Xtend	53
Fitbit Versa 3	48

Revenue by Product

Why :

This analysis calculates the total revenue generated by each product, enabling the business to assess product performance and prioritize sales strategies accordingly.

Findings :

This analysis calculates the total revenue generated by each product, enabling businesses to assess financial performance and prioritize high-revenue items.

Product_Name	TotalQuantitySold
Google Pixel 8 Pro	61
Apple iPhone 15 Pro Max	60
OnePlus Watch	56
boAt Xtend	53
Fitbit Versa 3	48

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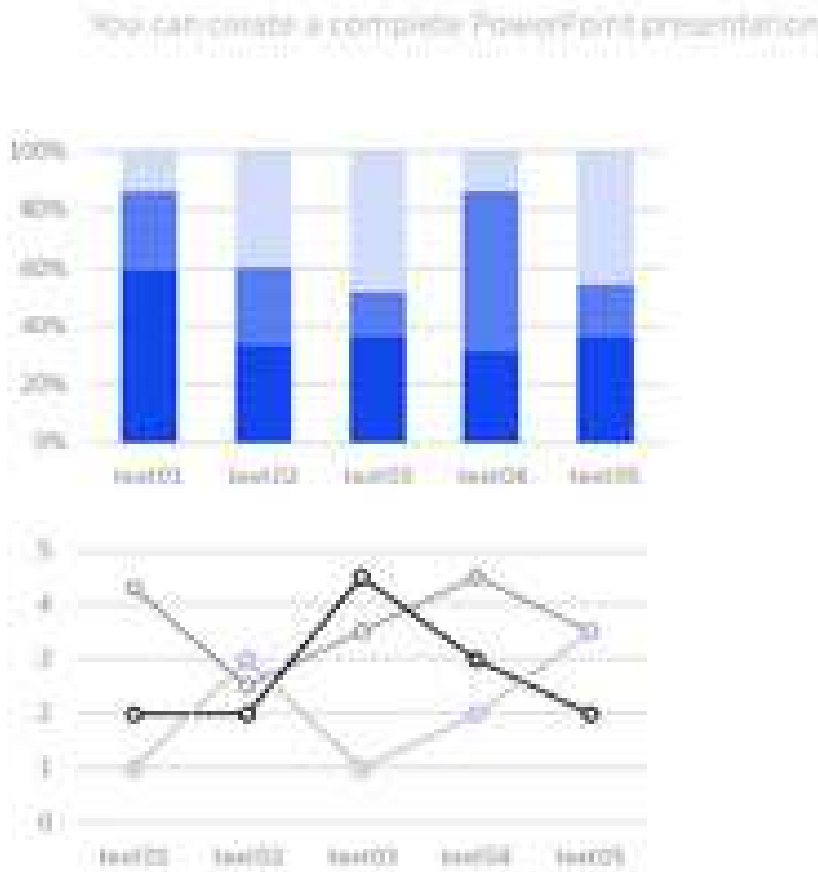
Average Order Value

Why :

This analysis calculates the average order value, providing insights into customer spending behavior and helping to optimize pricing and sales strategies.

Findings :

This analysis determines the average monetary value of each order, offering insights into customer purchasing patterns and helping to optimize pricing and sales strategies.

Average Order Value

AverageOrderValue

115570.78
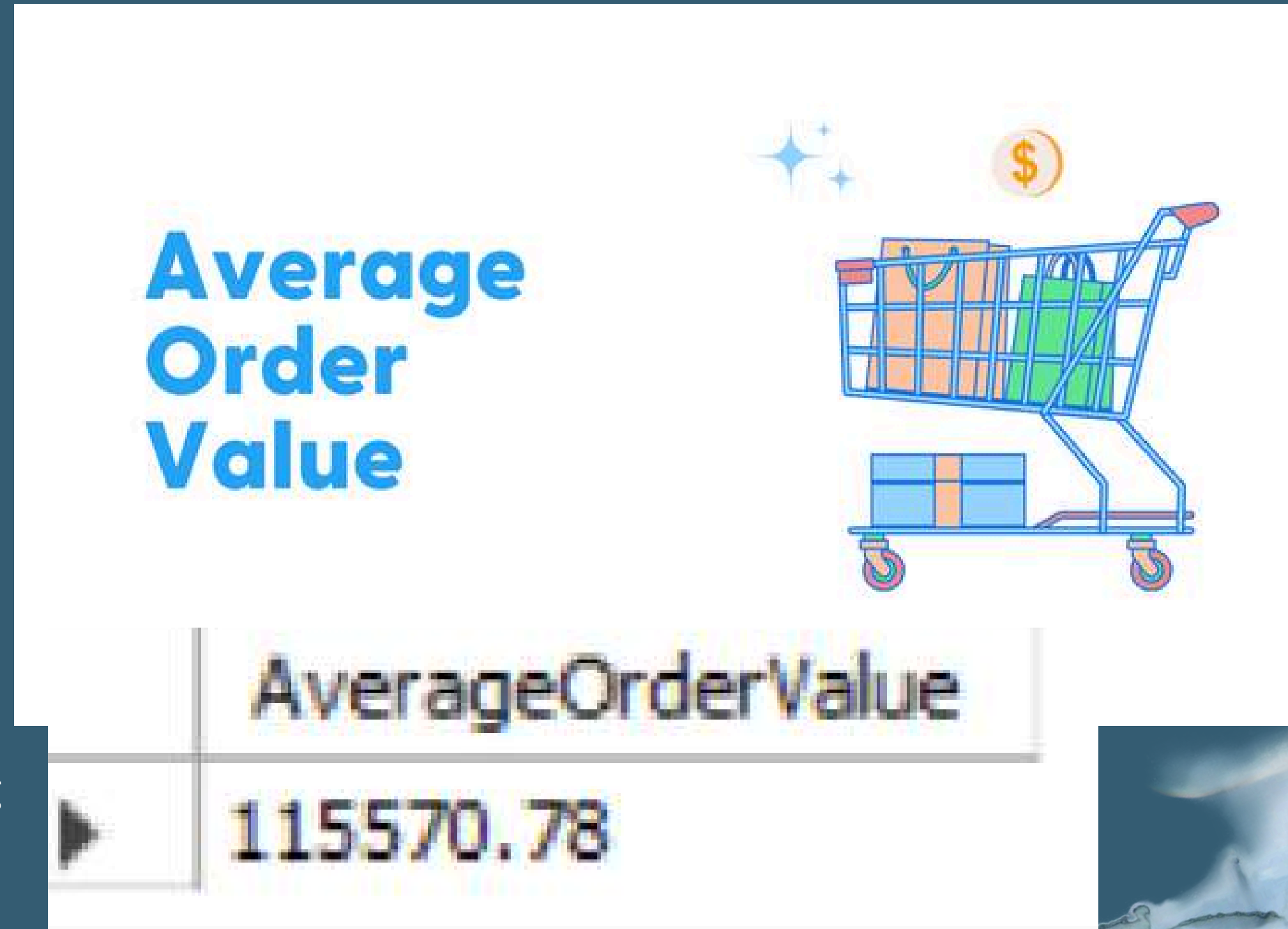
Order Frequency per Customer

Why :

This analysis tracks the order frequency per customer, helping to identify loyal customers and assess customer engagement for targeted retention strategies.

Findings :

This analysis tracks the order frequency per customer, helping to identify high-value customers and assess customer loyalty and engagement.

CustomerID	TotalOrders
C105	7
C121	5
C024	4
C009	3
C010	3
C115	3

Channel Growth Trend

Why :

This analysis monitors daily sales trends by channel, evaluating performance and identifying growth patterns.

Findings :

This analysis tracks daily sales growth by channel, revealing performance insights and consumer purchasing patterns.

OrderDate	ChannelName	DailySales
2022-01-10	Croma Store	160332.00
2022-01-15	Online Amazon	15658.00
2022-03-10	Croma Store	240498.00
2022-03-15	Online Amazon	15658.00
2022-05-10	Croma Store	160332.00
2022-05-15	Online Amazon	15658.00
2022-07-10	Croma Store	160332.00
2022-07-10	Online Amazon	7829.00
2022-07-15	Online Amazon	15658.00
2022-09-10	Croma Store	160332.00
2022-09-15	Online Amazon	31316.00
2022-09-20	Online Amazon	23487.00
2022-11-10	Croma Store	320664.00
2022-11-15	Online Amazon	15658.00
2023-02-05	Offline Relian...	666392.00
2023-02-15	Offline Relian...	333196.00

Top brands by category

Why :

This analysis identifies the top-selling brands within each product category, enabling businesses to evaluate brand performance and inform inventory and marketing decisions.

Findings :

This analysis summarizes total quantities sold for each brand within product categories, providing insights into brand popularity and sales performance across different segments.

Category	Brand	TotalQuantitySold
Audio Devices	Sony	17
Audio Devices	HEDD	9
Audio Devices	Dunu	6
Audio Devices	Audeze	4
Audio Devices	Meze Audio	2
Audio Devices	Focal	2
Audio Devices	Bose	1
Audio Devices	Apple	1
Mobile Phones	Google	61
Mobile Phones	Apple	61
Mobile Phones	Vivo	45
Mobile Phones	Realme	30
Mobile Phones	Xiaomi	26
Mobile Phones	OnePlus	12
Mobile Phones	Huawei	12
Mobile Phones	Oppo	6

Top brand for each category

Why :

This analysis identifies the top brand for each product category based on total sales, enabling businesses to focus on leading brands for strategic marketing and inventory decisions.

Findings :

This analysis ranks brands within each product category by total sales, allowing us to identify the top-performing brand in each category for better strategic planning.

Result Grid	Filter Rows:		Ex

category	brand	TotalSales
Audio Devices	HEDD	1398600.00
Mobile Phones	Apple	7005119.00
PC	Dell	280500.00
Wearables	Garmin	7149954.00
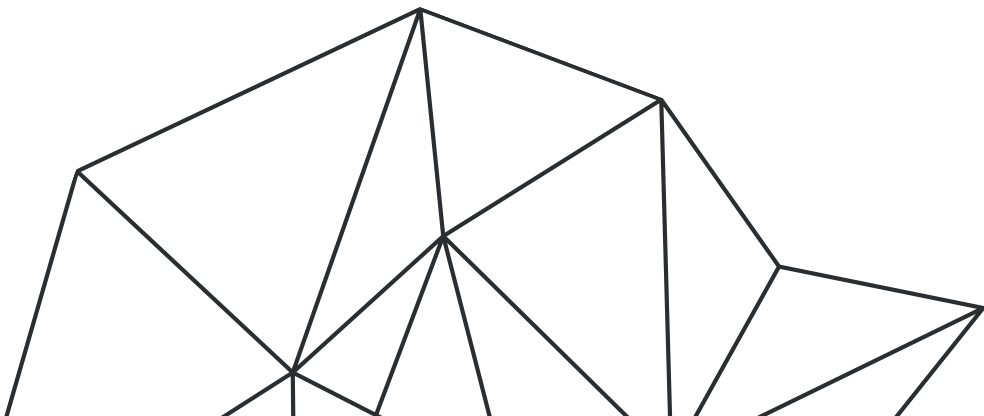
Repeat customers

Why :

This analysis identifies repeat customers by counting the number of orders per customer, helping to gauge customer loyalty and inform retention strategies.

Findings :

This analysis counts customers with multiple orders, highlighting repeat customers and providing insights into customer loyalty and engagement.

| CustomerID	NumberOfOrders
C007	2
C008	2
C009	3
C010	3
C011	2
C012	2
C013	2
C014	2
C015	2
C016	2
C017	2
C018	2
C019	2
C020	2
C021	2
C022	2

Sales Trend Over Time

Why :

This analysis examines daily sales trends to assess overall performance over time, helping to identify peak sales periods and inform future sales strategies.

Findings :

This analysis aggregates daily sales data to provide insights into overall revenue trends over time, facilitating better understanding of sales performance and seasonality.
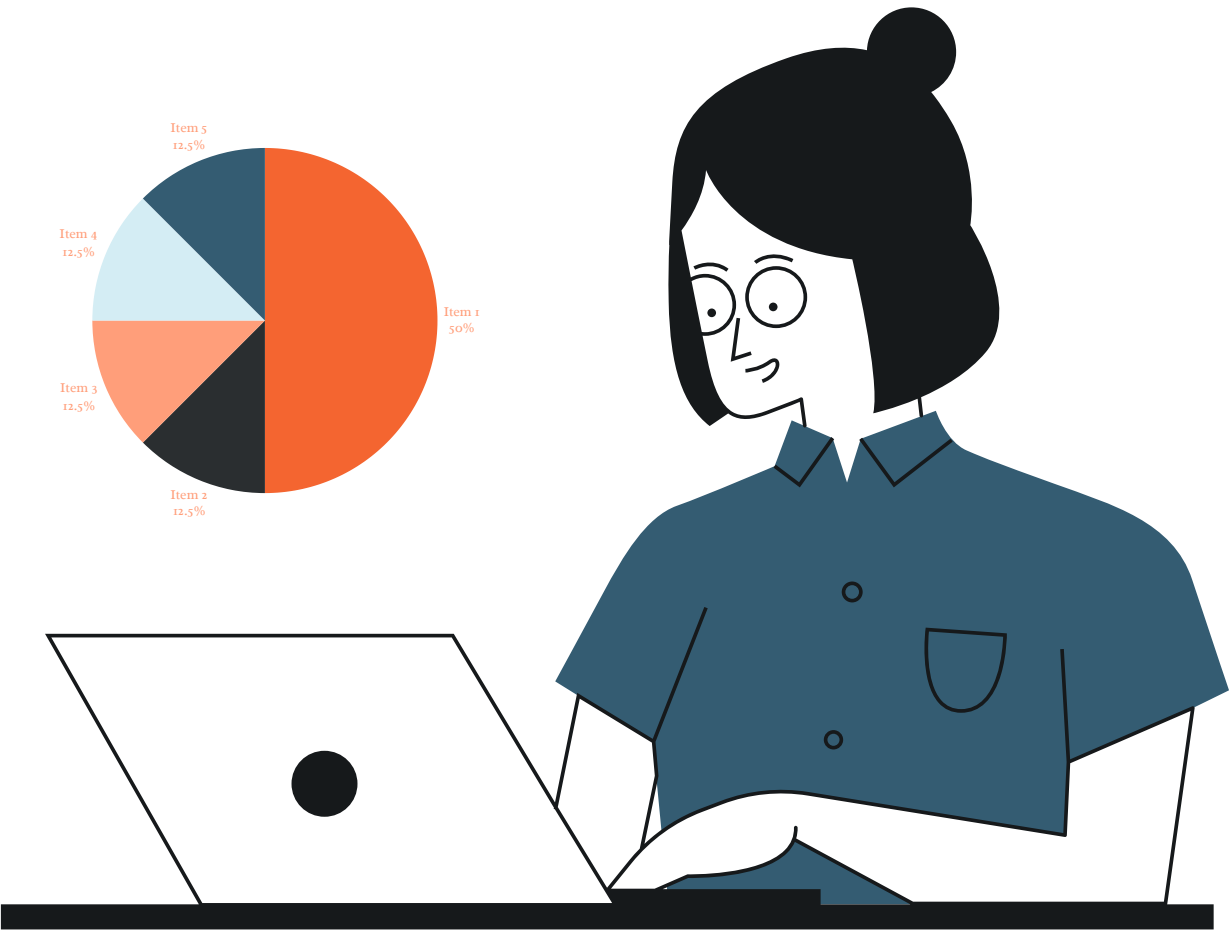
OrderDate	DailySales
2022-01-10	2438545.00
2022-01-15	131520.00
2022-01-20	290094.00
2022-01-25	751056.00
2022-03-10	1410651.00
2022-03-15	83536.00
2022-03-20	536667.00
2022-03-25	583776.00
2022-05-10	1438701.00
2022-05-15	83536.00
2022-05-20	628890.00
2022-05-25	647872.00
2022-07-10	1920758.00
2022-07-15	83536.00
2022-07-20	546261.00
2022-07-25	521472.00

Year	TotalSales
2022	17800761.00
2023	14026956.00
2024	190498.00

Customer Spending Analysis

Meena_Rai	1410137.00
Leela_Bhatt	1259634.00
Seema_Bhatia	1235542.00
Vivek_Singh	1152357.00
Amit_Patel	1147822.00

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Why :

This analysis evaluates individual customer spending to identify top customers, enabling businesses to focus on high-value clients and tailor personalized marketing strategies.

Findings :

This analysis calculates the total spending of each customer, providing insights into customer value and helping to identify the most profitable clients for targeted engagement.

Customer Retention Rate

Why :

This analysis measures customer retention by comparing returning customers to total unique customers, helping assess customer loyalty and the effectiveness of retention strategies.

Findings :

This analysis calculates the customer retention rate by identifying the number of repeat customers, providing insights into customer loyalty and long-term business sustainability.

ReturningCustomers	TotalUniqueCustomers
148	124

Inventory Management

Inventory Check for Low Stock Products

Why :

This analysis identifies low stock products to ensure timely restocking, preventing stockouts and ensuring smooth inventory management to meet customer demand.

Product_Name	QuantityAvailable
Vivo V17 Pro	0
Huawei P50 Pro	5
boAt Xtend	8
Google Pixel 8 Pro	5
Lenovo IdeaPad 3	9
Garmin MARQ Gen 2	9
Fastrack Reflex Vox	7
Bose QuietComfort 45	7
Apple AirPods Max	8
Sony Ult Wear	9
Audeze LCD-X	5
Dunu x Gizaudio DaVinci	8

Findings :

This analysis identifies products with low stock levels, ensuring proactive inventory management and helping to avoid potential stock shortages.

To check all the products in inventory list

Why :

This analysis verifies the existence of all products in the inventory list, ensuring accurate inventory records and alignment with the product catalog.

Findings :

This analysis retrieves all products from the inventory to ensure completeness and verify that all listed products are accounted for in the inventory system.

ProductID	QuantityAvailable	LastRestocked
1	50	2024-06-01
2	30	2024-07-10
3	0	2024-07-15
4	12	2024-06-20
5	25	2024-08-01
6	15	2024-08-01
7	20	2024-08-05
8	10	2024-08-10
9	5	2024-08-15
10	12	2024-08-20
99	8	2024-07-25
111	40	2024-07-15
150	20	2024-06-18
200	5	2024-07-02
201	18	2024-08-01
202	14	2024-07-22

Stock Turnover Rate

Why :

This analysis calculates the stock turnover rate to assess product performance, helping to identify fast-moving items and optimize inventory management strategies.

Findings :

This analysis measures how quickly products are selling relative to their available stock, indicating which items require restocking more frequently.

Product_Name	StockTurnoverRate
Xiaomi Redmi Note 6 Pro	0.5200
Realme XT (8GB, 128GB)	1.0000
Google Pixel 8 Pro	5.2757
Apple iPhone 15 Pro Max	2.4000
OnePlus 11 Pro	0.8000
Samsung Galaxy S22 Ultra	0.1500
Oppo Find X5 Pro	0.6000
Huawei P50 Pro	2.4000
Sony Xperia 1 IV	0.5000
boAt Xtend	6.6250
Apple Watch Series 9	0.6500
iPhone 14 Pro Max	0.0500
Acer Aspire 5	0.1111
Dell Inspiron 15	0.1364
ASUS VivoBook 15	0.2000
Samsung Galaxy Watch 6	2.3333

Customer Returns

Top 5 most returned products and the reasons for their returns

Why :

This analysis helps identify the top 5 most returned products and their reasons, enabling targeted strategies to reduce returns and improve product quality.

Findings :

This analysis provides insights into the most returned products and their associated return reasons, enabling businesses to address potential quality or satisfaction issues.

product_name	ReturnReason	TotalReturned
Huawei P50 Pro	Damaged during shipping	5
Google Pixel 8 Pro	Defective product	4
Oppo Find X5 Pro	Defective product	4
Google Pixel 8 Pro	Product did not match description	3
Vivo V17 Pro	Customer changed mind	3

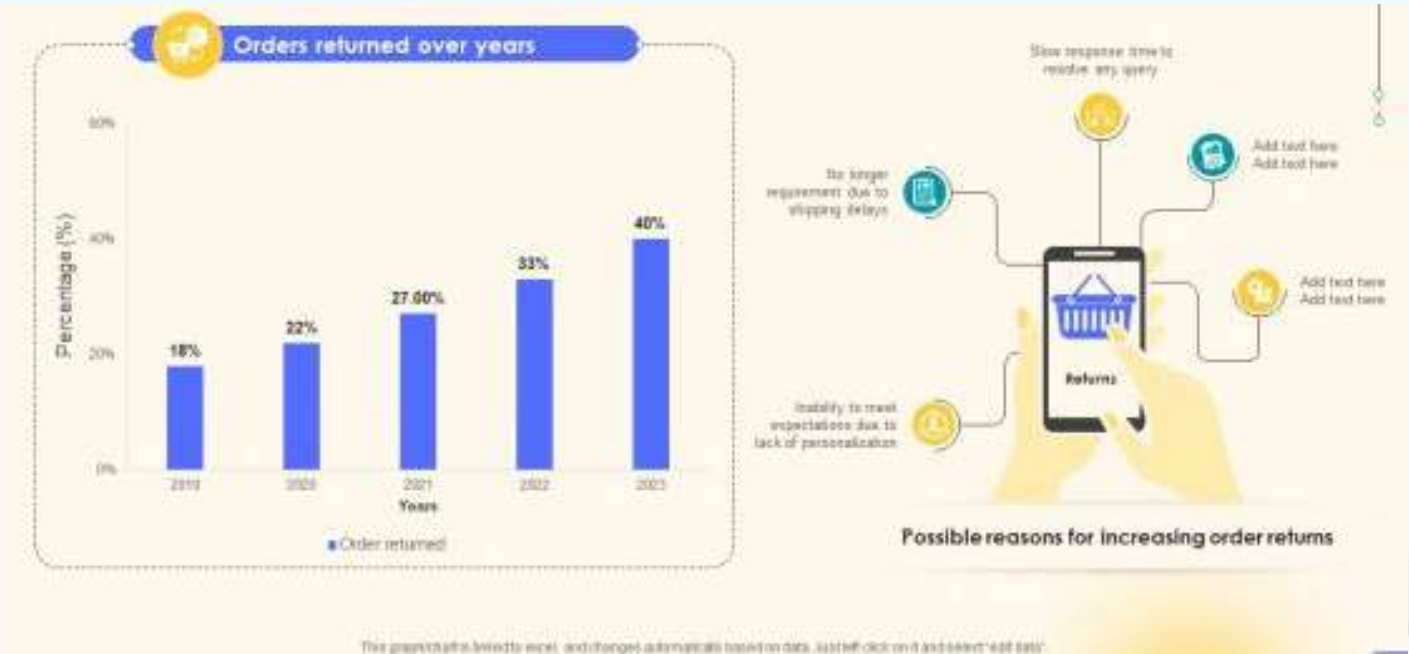# What percentage of total orders for each product are returned

Why :

This analysis calculates the return percentage for each product, assessing performance and identifying items needing quality improvements or better customer education.

Findings :

This analysis quantifies the return percentage for each product, helping evaluate reliability and customer satisfaction based on return rates.

product_name	ReturnPercentage
Xiaomi Redmi Note 6 Pro	7.6923
Apple iPhone 15 Pro Max	1.6667

Orders returned over years

Percentage (%)

18% 22% 27.00% 33% 40%

2019 2020 2021 2022 2023

Years

■ Order returned

Possible reasons for increasing order returns

Customers have the highest number of returns and what are the reasons

Why :

This analysis identifies customers with the highest returns and their reasons, revealing patterns of dissatisfaction to improve customer service strategies.

Findings :

This analysis identifies customers with the highest return rates and their reasons, offering insights into customer behavior and product issues.

CustomerID	FirstName	LastName	TotalReturns	ReturnReasons
C127	Vivek	Singh	1	Defective product
C128	Meena	Rai	1	Wrong item sent
C129	Rajesh	Menon	1	Customer changed mind
C130	Leela	Bhatt	1	Damaged during shipping
C131	Dinesh	Reddy	1	Product did not match description
C132	Kavita	Purohit	1	Customer changed mind
C133	Suresh	Jadhav	1	Wrong item sent
C134	Nisha	Chauhan	1	Defective product
C135	Mukesh	Ambani	1	Customer changed mind
C136	Seema	Bhatia	1	Damaged during shipping
C137	Mahesh	Goyal	1	Wrong item sent
C138	Geeta	Verma	1	Defective product
C139	Ramesh	Gupta	1	Product did not match description
C140	Rekha	Sharma	1	Customer changed mind
C141	Ganesh	Patil	1	Wrong item sent
C142	Saritha	Sahu	1	Damaged during shipping

Conclusions

The Great Indian Festival sales analysis reveals key insights that can drive future sales strategies. Electronics and PC sub-categories performed exceptionally well, contributing the most to revenue. Customer demographics show that the 25-34 age group, particularly male buyers, were the primary drivers of sales. However, a notable volume of returns was observed, with "Wrong item sent" and "Defective product" as the main reasons, impacting profitability. Mobile apps emerged as the fastest-growing sales channel.

Future Improvements

Optimized Inventory Forecasting
- Implement AI-driven demand forecasting to ensure sufficient stock of high-demand products, preventing stockouts during peak periods.

Enhanced Logistics
- Strengthen quality control and delivery accuracy to reduce return rates and improve customer satisfaction.

Targeted Marketing Campaigns
- Leverage demographic data to create personalized marketing strategies, boosting engagement in key age groups and regions.

Channel Optimization
- Focus on promoting fast-growing channels like mobile apps while expanding engagement across underperforming channels.

Thank You