Infosys Springboard TEAM 4
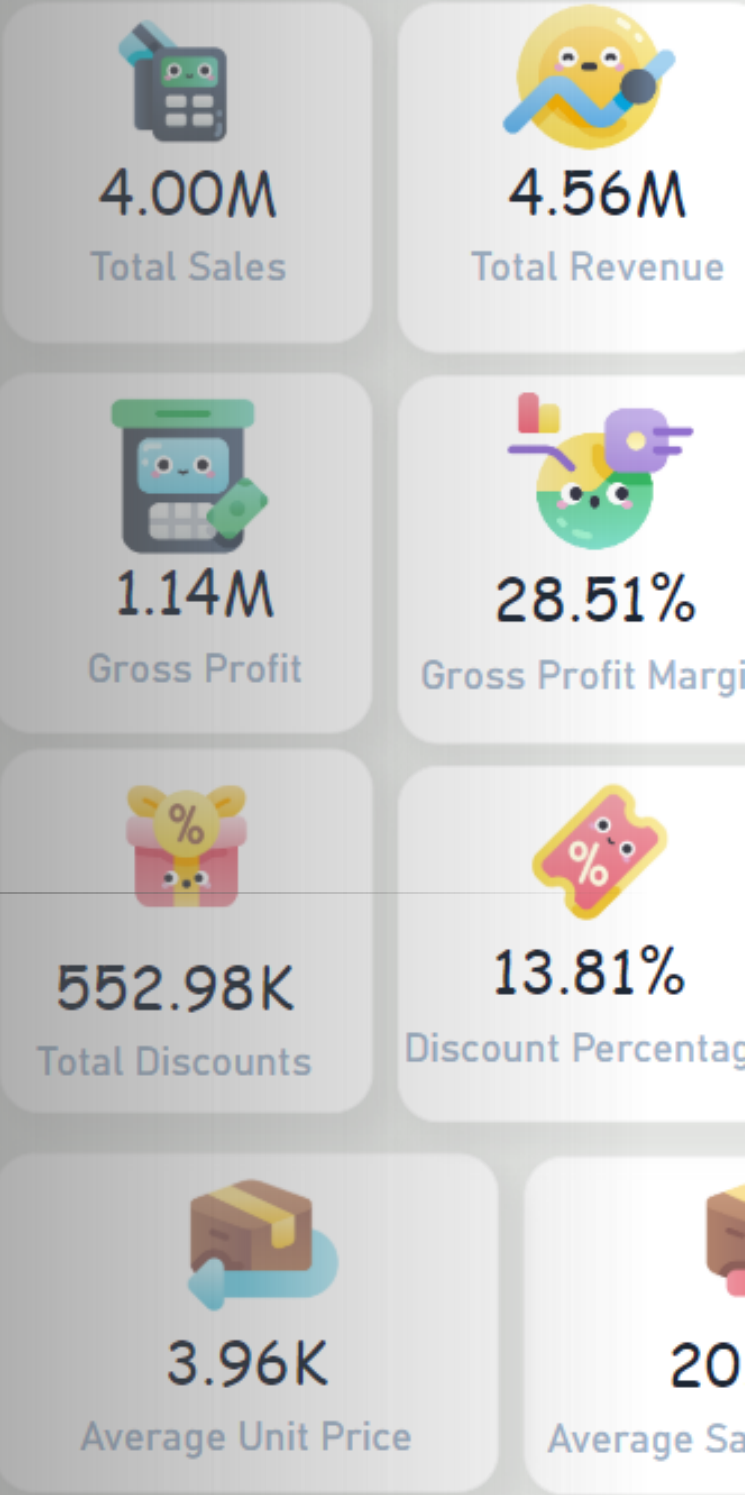
BY TEAM 4

SALES PERFORMANCE ANALYSIS

Created by Anubhav Sinha and Team
(Prateek,Karthik,Rohit, Naresh)

SALES DASHBOARD

Dashboard

Trend Analysis

Unit Analysis

Geo Analysis

Qtr Analysis

Advance Analysis

4.00M
Total Sales

4.56M
Total Revenue

1.14M
Gross Profit

28.51%
Gross Profit Margi

552.98K
Total Discounts

13.81%
Discount Percentag

3.96K
Average Unit Price

20
Average Sa

INTRODUCTION

In today's fast-paced business landscape, timely and accurate insights are critical for success. Our Business Intelligence solution empowers organizations to harness the power of their data, transforming raw information into actionable insights. By visualizing key sales performance metrics, we enable data-driven decision-making that drives growth and profitability.

ABSTRACT

This project leverages Business Intelligence (BI) tools to transform raw sales data into actionable insights. By developing interactive dashboards and visualizations, we provide real-time monitoring of key sales metrics, enabling data-driven decision-making. The analysis identifies high-performing segments, channels, and regions, empowering stakeholders to optimize sales strategies and drive business growth.
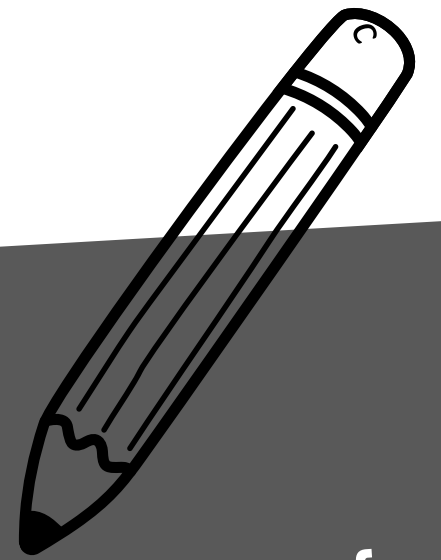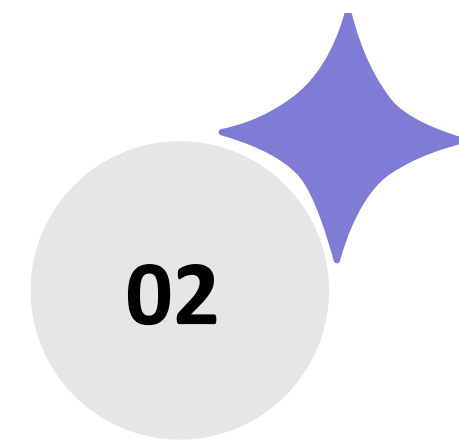
OBJECTIVES & GOALS

These are the objective we have to remember before proceed
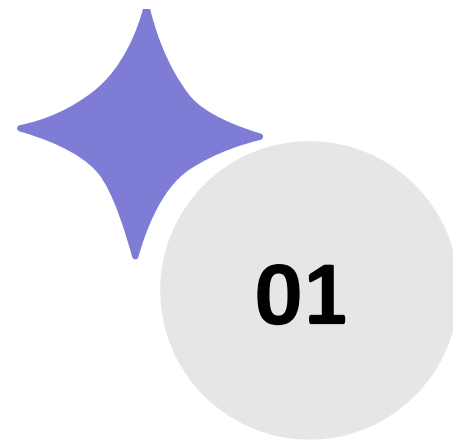
01

Objectives 01

Determine high-performing products, regions, and sales channels.

02

Objectives 02

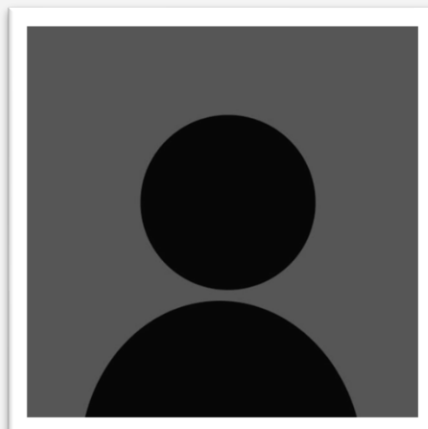Identify seasonal trends and opportunities to maximize revenue.

03

Objectives 03

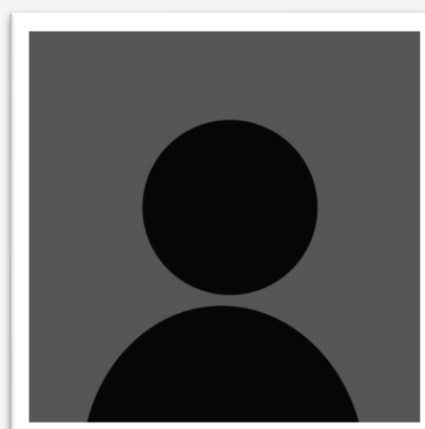Understand customer purchasing purchasing patterns for strategic strategic planning.

TEAM MEMBERS

ANUBHAV

PRATEEK

KARTHIK
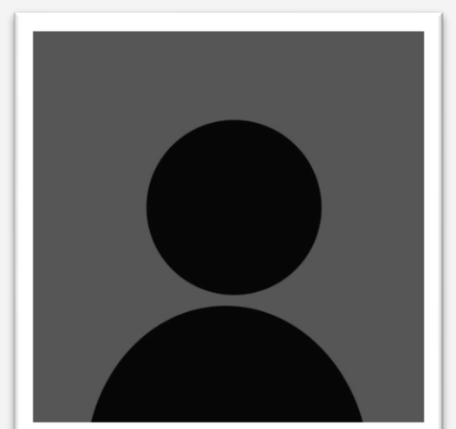
ROHIT

OUR
PROJECT TIMELINE

FIVE TASKS FOLLOWED TO MAKE SALES DASHBOARD

ANALYSIS OF THE REQUIREMENTS REGARDING THE PROJECT

COLLECTING THE DATASET

WORKING WITH THE DATASET USING DAX FORMULA'S

CUSTOMER SEGMENTATION USING DAX DATA TRANSFORMATION

MAKING A VISUAL FOR DISPLAYING THE SALES TREND

1st Week

2nd Week

3rd Week

4th Week

5th Week

06
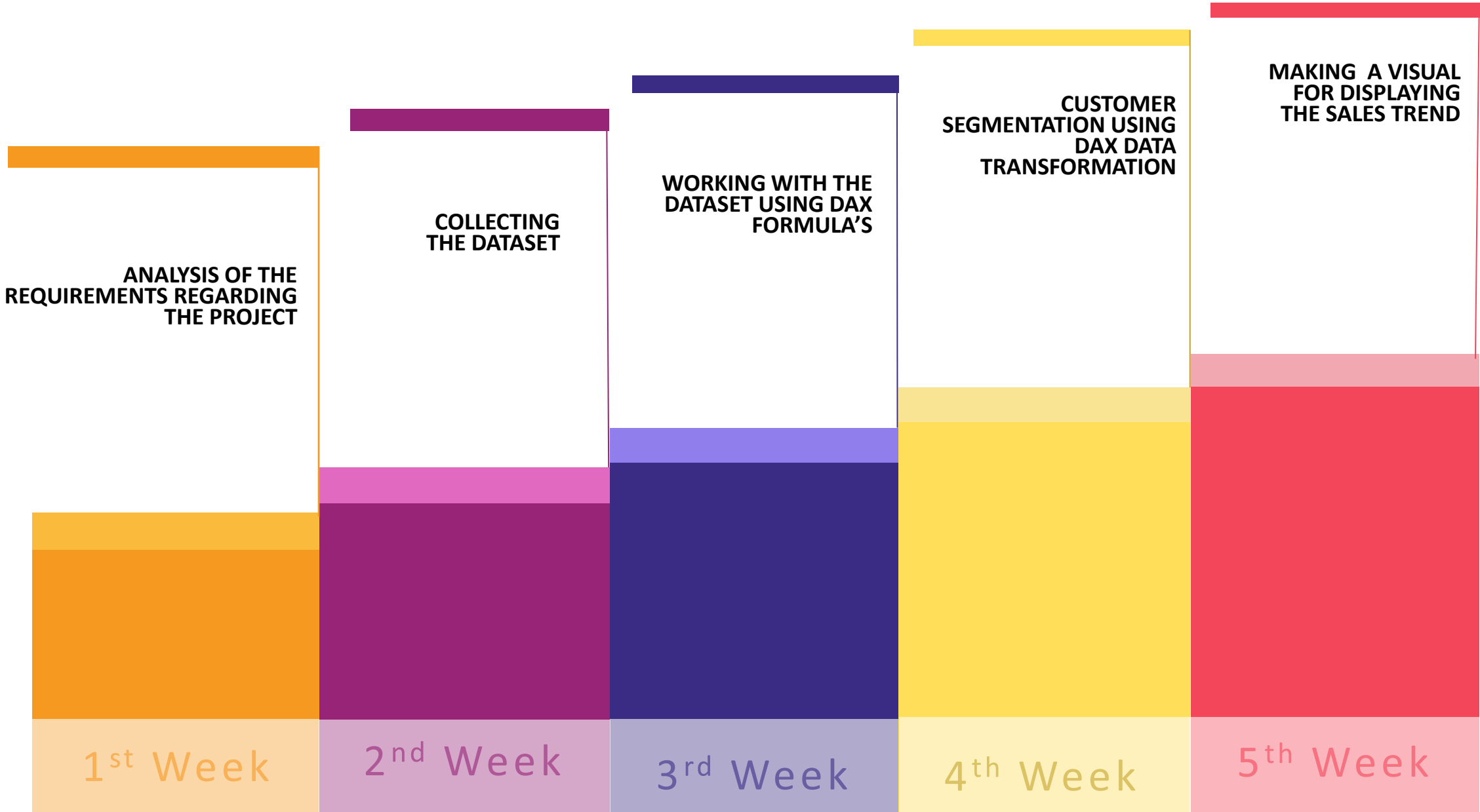
Problem Statement

Business Intelligence (BI) provides solutions that facilitate informed decision-making in business processes. With a suitable BI solution, companies can play an active role in timely monitoring business performance and swiftly responding to external business environments.

OUTCOMES:

The process of information delivery becomes smoother between visualized data and users than before. By viewing sales dashboard, users can clarify sales performance in current month.

Objectives:

- Evaluate sales performance across different metrics
- Identify trends and patterns
- Improve profitability and customer retention

Collected Dataset

Customer ID	Customer Name	Product ID	Product Name	Category	Unit Sold	Date Of Order	Date Of Delivery	State	City	Pincode	Rating	Feedback	Sales Channel	Payment Mode	Manufacturing Price	Sale Price	Gross Sales	Discounts	Sales	COGS	Profit
CUST0001	Amit Bhatia	PROD0081	T-shirt	Fashion	2	2023-08-25 00:00:00	2023-08-27 00:00:00	Gujarat	Ahmedabad	821889	2	Average	Mobile App	Net Banking	6346.31	3905.56	3905.56	546.27	3359.29	2183.5385	1175.7515
CUST0001	Amit Bhatia	PROD0082	Headphones	Electronics	6	2023-06-25 00:00:00	2023-07-02 00:00:00	Tamil Nadu	Coimbatore	616611	2	Good	Website	Credit Card	9383.44	148669.36	148669.36	31748.25	116921.11	75998.7215	40922.3885
CUST0001	Amit Bhatia	PROD0120	Laptop	Electronics	5	2023-06-04 00:00:00	2023-06-05 00:00:00	West Bengal	Darjeeling	832810	3	Excellent	Mobile App	Net Banking	9383.44	128384.2	128384.2	11810.07	116574.13	75773.1845	40800.9455
CUST0001	Amit Bhatia	PROD0079	Smartphone	Electronics	4	2023-01-11 00:00:00	2023-01-15 00:00:00	Tamil Nadu	Madurai	304807	4	Satisfactory	Website	Debit Card	6346.31	191051.69	191051.69	12883.18	178168.51	115809.5315	62358.9785
CUST0001	Amit Bhatia	PROD0058	Headphones	Electronics	5	2023-12-20 00:00:00	2023-12-27 00:00:00	Delhi	New Delhi	216600	3	Poor	Mobile App	UPI	9344.88	119633.68	119633.68	7485.5	112148.18	72896.317	39251.863
CUST0002	Amit Chauhan	PROD0072	Book	Books	2	2023-01-30 00:00:00	2023-02-01 00:00:00	Gujarat	Ahmedabad	467770	5	Average	Mobile App	Net Banking	3416	483.29	483.29	46.9	436.39	283.6535	152.7365
CUST0002	Amit Chauhan	PROD0149	Laptop	Electronics	4	2023-03-04 00:00:00	2023-03-06 00:00:00	Gujarat	Ahmedabad	354961	3	Satisfactory	Mobile App	Cash on Delivery	9383.44	129046.27	129046.27	27062.27	101984	66289.6	35694.4
CUST0002	Amit Chauhan	PROD0176	Laptop	Electronics	8	2023-12-26 00:00:00	2023-12-31 00:00:00	Tamil Nadu	Chennai	266277	3	Excellent	Physical Store	Net Banking	8818.91	340039.06	340039.06	99107.9	240931.16	156605.254	84325.906
CUST0002	Amit Chauhan	PROD0180	Headphones	Electronics	2	2023-03-01 00:00:00	2023-03-07 00:00:00	Tamil Nadu	Coimbatore	758768	1	Poor	Website	UPI	9344.88	19390.19	19390.19	2687.62	16702.57	10856.6705	5845.8995
CUST0002	Amit Chauhan	PROD0082	Book	Books	6	2023-07-17 00:00:00	2023-07-20 00:00:00	Delhi	New Delhi	616757	4	Good	Physical Store	Debit Card	9383.44	1280.36	1280.36	81.32	1199.04	779.376	419.664
CUST0003	Amit Das	PROD0143	T-shirt	Fashion	9	2023-11-14 00:00:00	2023-11-16 00:00:00	Karnataka	Bangalore	661821	1	Satisfactory	Website	UPI	3856.31	16930.9	16930.9	2749.31	14181.59	9218.0335	4963.5565
CUST0003	Amit Das	PROD0094	Smartphone	Electronics	3	2023-08-29 00:00:00	2023-09-03 00:00:00	Punjab	Chandigarh	311493	4	Excellent	Physical Store	Debit Card	3856.31	69872.31	69872.31	11647.94	58224.37	37845.8405	20378.5295
CUST0003	Amit Das	PROD0014	T-shirt	Fashion	2	2023-03-28 00:00:00	2023-04-01 00:00:00	Karnataka	Hubli	644688	1	Average	Website	Debit Card	3856.31	2276.01	2276.01	220.5	2055.51	1336.0815	719.4285
CUST0004	Amit Gupta	PROD0118	Book	Books	2	2023-06-01 00:00:00	2023-06-03 00:00:00	Punjab	Chandigarh	356208	5	Excellent	Mobile App	UPI	8818.91	784.35	784.35	50.03	734.32	477.308	257.012
CUST0005	Amit Iyer	PROD0129	Smartphone	Electronics	4	2023-01-04 00:00:00	2023-01-07 00:00:00	Rajasthan	Jodhpur	586026	4	Satisfactory	Physical Store	Net Banking	9383.44	121767.16	121767.16	23180.15	98587.01	64081.5565	34505.4535
CUST0005	Amit Iyer	PROD0154	Book	Books	8	2023-11-30 00:00:00	2023-12-07 00:00:00	Tamil Nadu	Madurai	935262	4	Average	Mobile App	Credit Card	9344.88	6202.21	6202.21	773.66	5428.55	3528.5575	1899.9925
CUST0005	Amit Iyer	PROD0057	Smartphone	Electronics	3	2023-03-19 00:00:00	2023-03-24 00:00:00	Tamil Nadu	Madurai	356779	1	Satisfactory	Physical Store	Net Banking	3416	115331.42	115331.42	13628.52	101702.9	66106.885	35596.015
CUST0006	Amit Kumar	PROD0195	Shoes	Fashion	4	2023-10-04 00:00:00	2023-10-06 00:00:00	Tamil Nadu	Chennai	535420	5	Poor	Website	UPI	9383.44	4334.65	4334.65	571.55	3763.1	2446.015	1317.085
CUST0006	Amit Kumar	PROD0088	Headphones	Electronics	8	2023-06-18 00:00:00	2023-06-23 00:00:00	Rajasthan	Udaipur	662131	5	Average	Website	Net Banking	3856.31	136860.62	136860.62	17224.08	119636.54	77763.751	41872.789
CUST0007	Amit Malhotra	PROD0195	Smartphone	Electronics	9	2023-12-19 00:00:00	2023-12-23 00:00:00	Maharashtra	Nagpur	564212	2	Satisfactory	Physical Store	Debit Card	9383.44	305823.63	305823.63	83334.47	222489.16	144617.954	77871.206
CUST0008	Amit Mehta	PROD0183	T-shirt	Fashion	2	2023-04-30 00:00:00	2023-05-01 00:00:00	West Bengal	Kolkata	938369	3	Average	Mobile App	Credit Card	9383.44	3938.46	3938.46	645.27	3293.19	2140.5735	1152.6165
CUST0008	Amit Mehta	PROD0117	T-shirt	Fashion	9	2023-10-17 00:00:00	2023-10-21 00:00:00	Maharashtra	Nagpur	291932	4	Good	Physical Store	Net Banking	9344.88	12816.91	12816.91	1468.48	11348.43	7376.4795	3971.9505
CUST0009	Amit Nair	PROD0196	Book	Books	5	2023-03-06 00:00:00	2023-03-10 00:00:00	Punjab	Amritsar	262597	2	Average	Physical Store	Net Banking	3416	4697.43	4697.43	363.49	4333.94	2817.061	1516.879
CUST0009	Amit Nair	PROD0016	Laptop	Electronics	2	2023-04-05 00:00:00	2023-04-12 00:00:00	Karnataka	Mysore	708993	2	Good	Website	Net Banking	9383.44	8705.62	8705.62	469.36	8236.26	5353.569	2882.691
CUST0009	Amit Nair	PROD0138	Headphones	Electronics	8	2023-03-21 00:00:00	2023-03-24 00:00:00	Maharashtra	Pune	414356	1	Average	Physical Store	Net Banking	3416	274905.21	274905.21	27632.53	247272.68	160727.242	86545.438
CUST0009	Amit Nair	PROD0189	Book	Books	1	2023-09-03 00:00:00	2023-09-05 00:00:00	Gujarat	Surat	766038	1	Average	Website	Credit Card	9344.88	906.63	906.63	133.23	773.4	502.71	270.69
CUST0009	Amit Nair	PROD0169	T-shirt	Fashion	9	2023-01-17 00:00:00	2023-01-22 00:00:00	Gujarat	Vadodara	233253	4	Poor	Website	Cash on Delivery	6346.31	11882.38	11882.38	2184.81	9697.57	6303.4205	3394.1495
CUST0010	Amit Pandey	PROD0131	Book	Books	2	2023-11-25 00:00:00	2023-11-26 00:00:00	Karnataka	Bangalore	158306	2	Good	Physical Store	Cash on Delivery	9383.44	1195.14	1195.14	63.36	1131.78	735.657	396.123
CUST0010	Amit Pandey	PROD0195	Laptop	Electronics	9	2023-03-13 00:00:00	2023-03-20 00:00:00	Tamil Nadu	Coimbatore	314217	2	Good	Physical Store	UPI	9383.44	380043.7	380043.7	35681.15	344362.55	223835.6575	120526.8925
CUST0010	Amit Pandey	PROD0135	Headphones	Electronics	6	2023-07-18 00:00:00	2023-07-24 00:00:00	Rajasthan	Jodhpur	624494	3	Average	Mobile App	UPI	9344.88	273895.61	273895.61	37772.48	236123.13	153480.0345	82643.0955
CUST0010	Amit Pandey	PROD0010	Headphones	Electronics	3	2023-06-02 00:00:00	2023-06-05 00:00:00	Delhi	New Delhi	383902	3	Average	Physical Store	Cash on Delivery	3416	96761.98	96761.98	24061.87	72700.11	47255.0715	25445.0385
CUST0010	Amit Pandey	PROD0082	Headphones	Electronics	4	2023-09-18 00:00:00	2023-09-21 00:00:00	Uttar Pradesh	Varanasi	989899	1	Good	Physical Store	Credit Card	9383.44	96963.75	96963.75	6098.7	90865.05	59062.2825	31802.7675
CUST0011	Amit Patel	PROD0051	Laptop	Electronics	4	2023-07-19 00:00:00	2023-07-25 00:00:00	Karnataka	Hubli	307944	2	Satisfactory	Website	Debit Card	8818.91	48507.28	48507.28	3272.7	45234.58	29402.477	15832.103
CUST0011	Amit Patel	PROD0005	T-shirt	Fashion	3	2023-06-13 00:00:00	2023-06-14 00:00:00	Uttar Pradesh	Kanpur	351340	2	Excellent	Website	Debit Card	9344.88	5150.44	5150.44	394.78	4755.66	3091.179	1664.481
CUST0011	Amit Patel	PROD0070	Headphones	Electronics	2	2023-05-26 00:00:00	2023-06-01 00:00:00	Uttar Pradesh	Lucknow	841967	5	Good	Website	Net Banking	9344.88	11225.3	11225.3	3014.43	8210.87	5337.0655	2873.8045
CUST0011	Amit Patel	PROD0188	Laptop	Electronics	3	2023-10-07 00:00:00	2023-10-12 00:00:00	Delhi	New Delhi	739469	1	Satisfactory	Mobile App	UPI	9383.44	135391.46	135391.46	34427.08	100964.38	65626.847	35337.533

Sheet1

DATASET DESCRIPTION

1 BASIC DETAILS

2 CLIENT INFORMATION
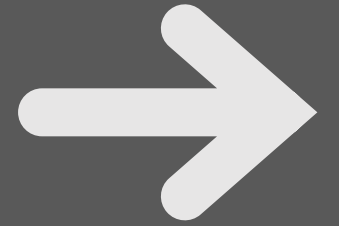
3 PRODUCT INFORMATION

👍 CUSTOMER ID

👍 PRODUCT ID

👍 DATE OF ORDER

👍 DATE OF DELIVERY

👍 STATE

👍 CITY

👍 PINCODE

👍 CUSTOMER NAME

👍 FEEDBACK

👍 RATING

👍 PRODUCT NAME

👍 CATEGORY

👍 UNIT SOLD

👍 MANUFACTURING PRICE

DATASET DESCRIPTION

4   **SALES METRICS**
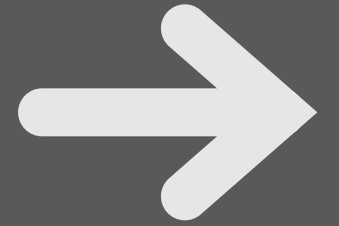
5   **FEEDBACK**

6   **MARKETING**

👍 SALE PRICE

👍 GROSS SALES

👍 DISCOUNT

👍 SALES

👍 COGS

👍 PROFIT

👍 RETURN DATE

👍 REASON

👍 RATING

👍 FEEDBACK

👍 SALES CHANNEL

👍 PAYMENT MODE

Data Transformation Techniques

1   **Calculated Columns**

DAX formulas create new columns like Actual Cost and Customer Satisfaction ratings.

2   **DAX Measures**

Complex calculations yield insights on sales percentages, channel channel performance, and profit margins.

3   **Data Aggregation**

Measures like Total Sales and Client Count provide high-level performance snapshots.

Data Transformation and Calculated Columns

To derive insights from the dataset, several calculated columns were created using DAX in Power BI:
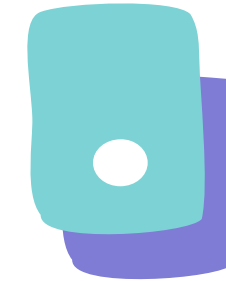
Actual Cost = [Sale Amount] - [Profit Margin]

Customer Satisfaction = IF ([Customer Rating] = 5, "Excellent", IF ([Customer Rating] = 4, "Good", "Average"))

**Discount** = [Sale Amount] * [Discount Rate]

Unit Price = [Sale Amount] / [Quantity]

DAX FORMULA'S USED

To analyze various aspects of sales performance, the following DAX measures were created:

- Sales % by Category = DIVIDE ([Total Sales], CALCULATE([Total Sales], ALL([Product Category])))
- Sales By Channel = CALCULATE (SUM([Sale Amount]), ALLEXCEPT([Sales Channel]))
- Sales By Region = CALCULATE(SUM([Sale Amount]), ALLEXCEPT([Region]))
- Sales Per Client = DIVIDE([Total Sales], [Client Count])
- Total Discount = SUMX([Sale Amount] * [Discount Rate])
- Total Sales = SUM([Sale Amount])
- Total Units Sold = SUM([Quantity])
- Total Cost = SUM([Actual Cost])
- Total Sales by Category = CALCULATE(SUM([Sale Amount]), ALLEXCEPT([Product Category]))
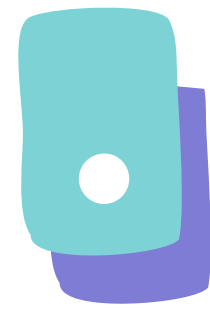
- Non-Return Count = COUNTROWS(FILTER([Product Return Status] = "No Return"))
- Gross Profit Margin = DIVIDE([Gross Profit], [Total Sales])
- Gross Profit = SUM([Profit Margin])
- Client Count = DISTINCTCOUNT([Client Code])
- Average Unit Price = AVERAGEX([Unit Price])
- Average Sales per Order = AVERAGEX([Sale Amount])
- YTD Sales = TOTALYTD([Total Sales], Date[Date])

Dashboard Overview

Key Metrics

- Total Sales: 4.00M
- Total Revenue: 4.56M
- Units Sold: 1,165
- Gross Profit: 1.14M (28.51% margin)
- Total Discount: 552.98K (13.81%)
- Average Sales Price: 20.75K
- Average Unit Price: 3.96K

Insights

While gross profit margin (28.51%) is healthy, optimizing discounts can further improve profits.
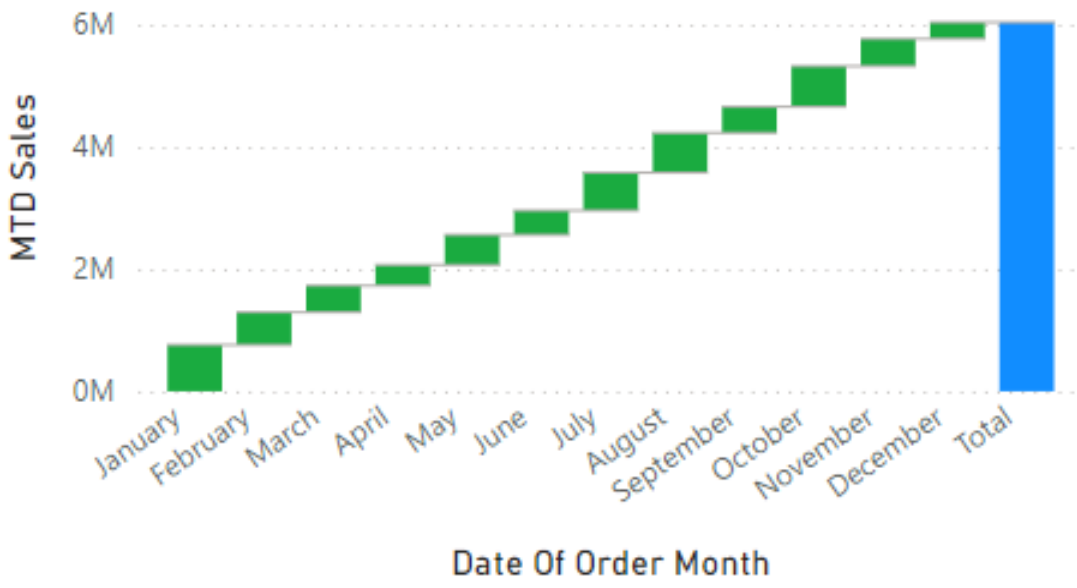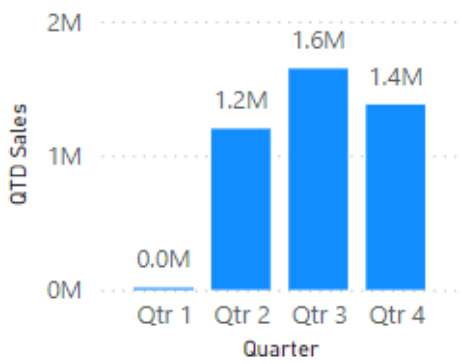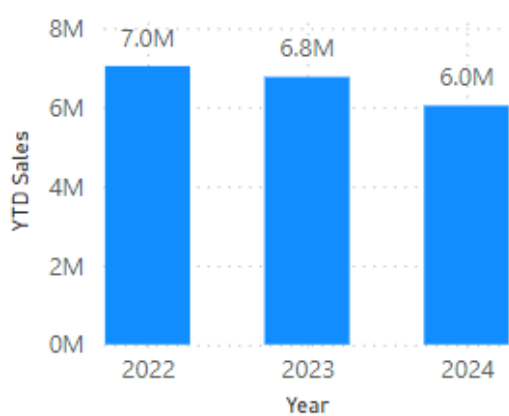
Trend Analysis: Unveiling Seasonal Patterns

1 Monthly Sales (Waterfall Chart)

Peak: January (0.8M), October (0.7M). Low: April (0.3M), June (0.4M).

2 Quarterly Sales (Stacked Column Chart)

Q3 is the highest-performing quarter (1.65M).

3 Yearly Sales

2022: 7.0M 2023: 6.8M 2024: 6.0M

4 Payment Modes (Pie Chart)

UPI, COD, and Credit Card dominate at 26% each.

Customer Segmentation & Sales Channels

Website

7.04M

Physical Store

6.45M

Mobile App

6.35M

Insight:

Sales Channels: **Mobile App & Website**: Growing rapidly; focus on improving user experience and digital marketing.

Physical Store: Strong performance, but potential for expansion in digital channels to reach wider audiences.

Total Sales
by Sales Channel

Website
7.04M

Mobile App

Physical Store
6.45M

6.35M

Total Sales
by Payment Mode
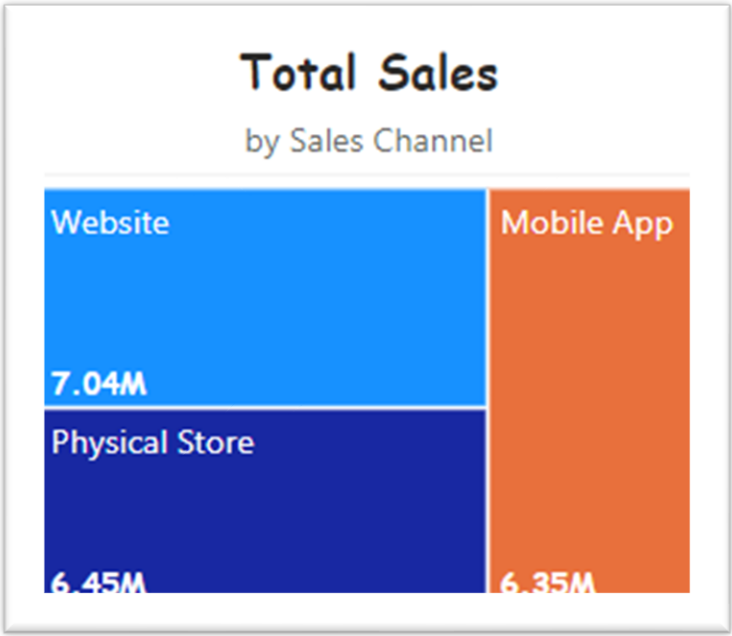
Payment Mode Analysis (Pie Chart)
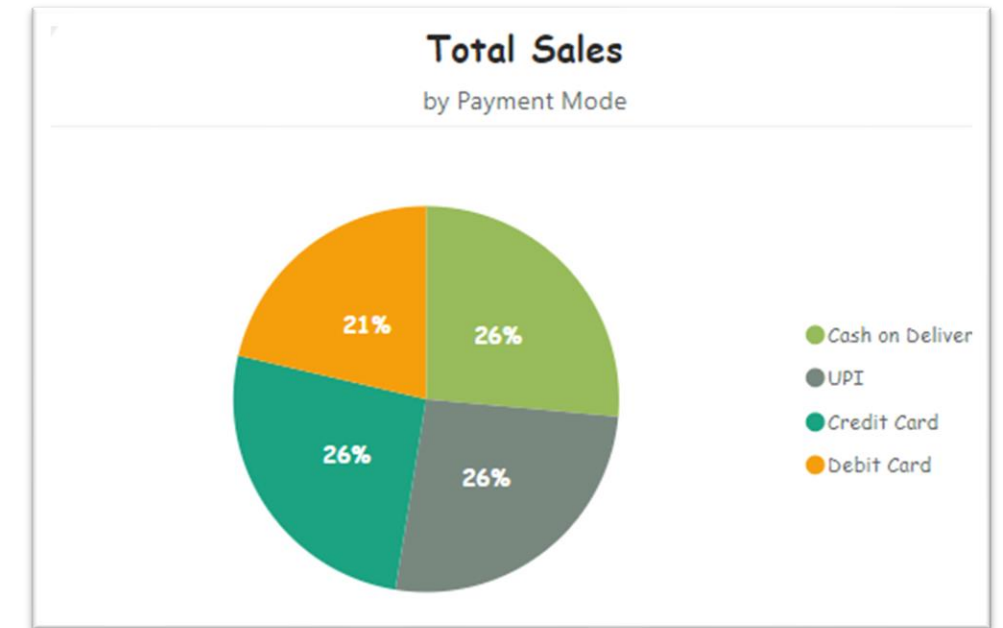
Cash on Delivery

26%

Debit & Credit Card

21% & 26%

Net Banking and UPI

26%

Actionable Insights:

Encourage digital payments with loyalty points or small discounts for faster transactions and lower handling costs.

Use insights to forecast future payment mode preferences and optimize payment processing.

18

Insights

- **Seasonality**: Peaks in January and October suggest opportunities for targeted campaigns during these months.
- **Growth Areas**: Encourage Debit Card usage with cashback offers or discounts.
- **Recommendation**: Implement predictive analytics to better prepare for low-demand months like April and June
- **Yearly Sales Insight**: Identifies the year-over-year growth trend; useful for setting yearly targets and understanding long-term performance.

Sum of Unit Sold by Product Name
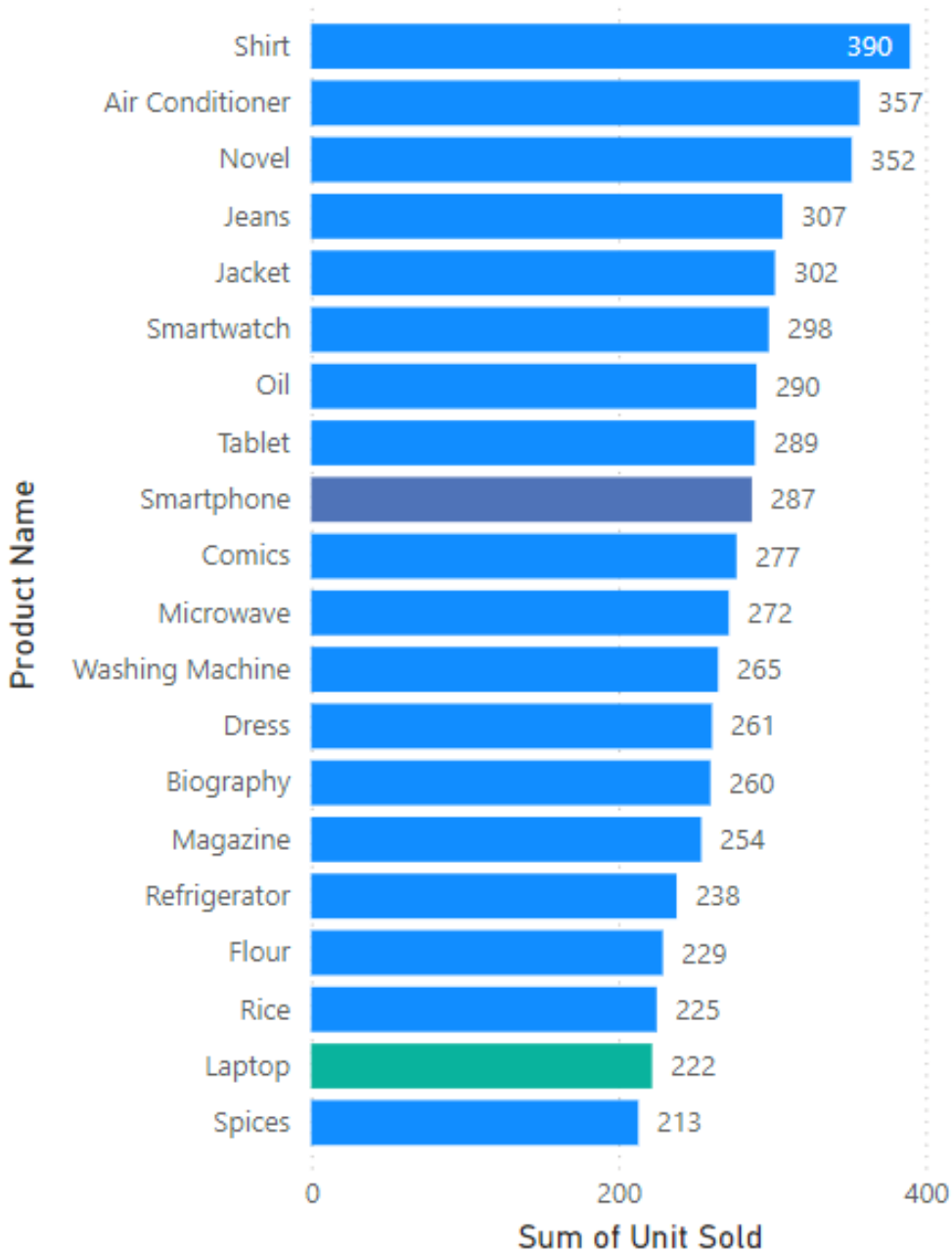
Product Analysis: Understanding Performance Drivers

Shirts

390 units sold.

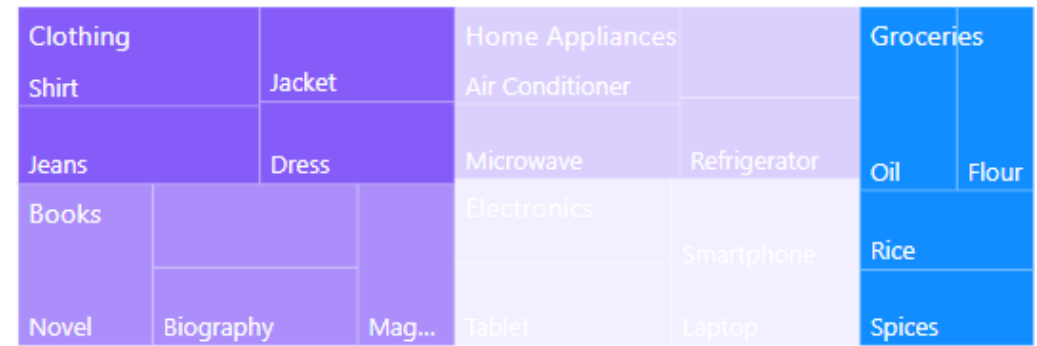## Novels

352 units sold.

Air Conditioner

357 units sold.

Recommendations:

Focus on expanding Electronics and Fashion categories while increasing visibility for Books.

Introduce promotions or bundles in lower-performing products to boost engagement.

Conduct customer surveys to understand the high demand for these items and tailor promotions accordingly.
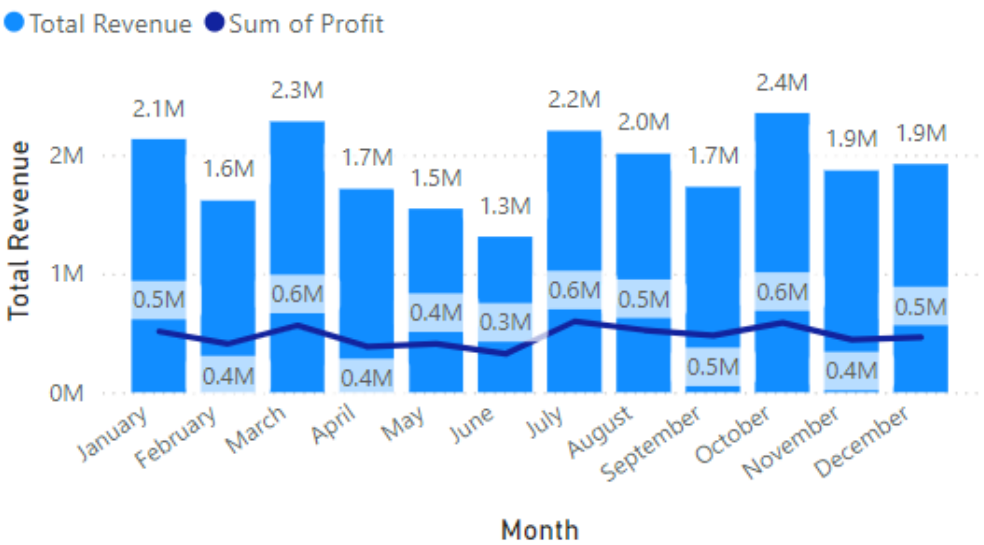
Revenue vs. Profit (Line & Stacked Column Chart):

1 **January**

Revenue 2.1M, Profit 0.5M

2 **March**

Revenue 2.3M, Profit 0.6M

3 **October**

Revenue 2.4M, Profit 0.6M

Category Insights (Treemap): Clothing leads in unit sales.

Action Plan:

Category Performance: Clothing consistently dominates; diversify product offerings to reduce dependency.

Profitability: Months with lower profit margins (e.g., May, June) need cost optimization or better pricing strategies.

Geographic Analysis: Targeting Growth Opportunities

5.6M
Maharashtra
Sales 5.6M, Profit 1.6M

3.6M
West Bengal
Sales 3.6M, Profit 1.1M

2.0M
Tamil Nadu
Sales 2.0M, Profit 0.6M

Decomposition Tree: Maharashtra's top-performing products vary by city, indicating region-specific demand.

Sales by State

State	Total Sales
Maharashtra	5.6M
West Bengal	3.6M
Delhi	3.3M
Karnataka	2.8M
Uttar Prad...	2.6M
Tamil Nadu	2.0M

Profit by State

State	Sum of Profit
Maharas...	1.6M
West Be...	1.1M
Delhi	0.9M
Karnataka	0.8M
Uttar Pra...	0.7M
Tamil Na...	0.6M
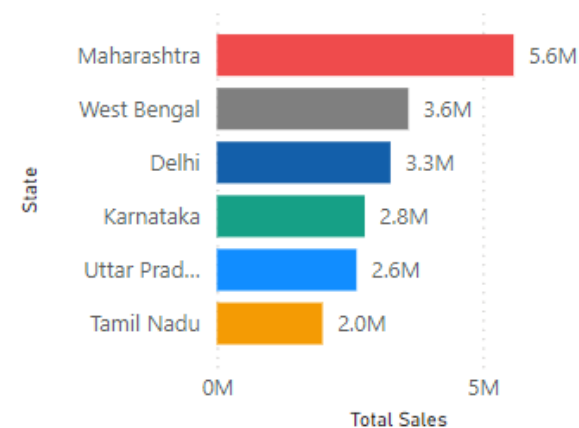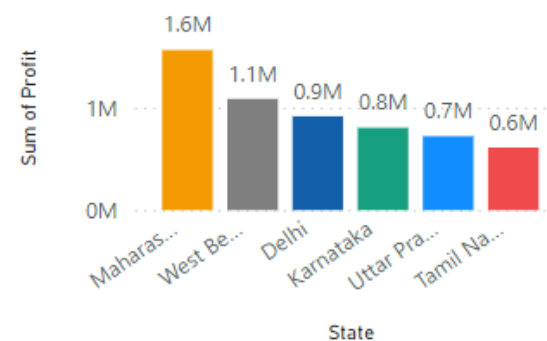
Insights

Maharashtra is a stronghold, offering an opportunity to deepen penetration with exclusive offers. Tamil Nadu shows potential for growth, requiring exploration of localized advertising or partnerships.

22

Quarterly Breakdown of
Top-Performing Products by Category

Quarter	Category	Product Name
Qtr 1	Books	

Gross Profit 4,780,033.95

Qtr 1 1,305,388.70
Qtr 2 902,541.40
Qtr 3 1,262,956.81
Qtr 4 1,309,147.04

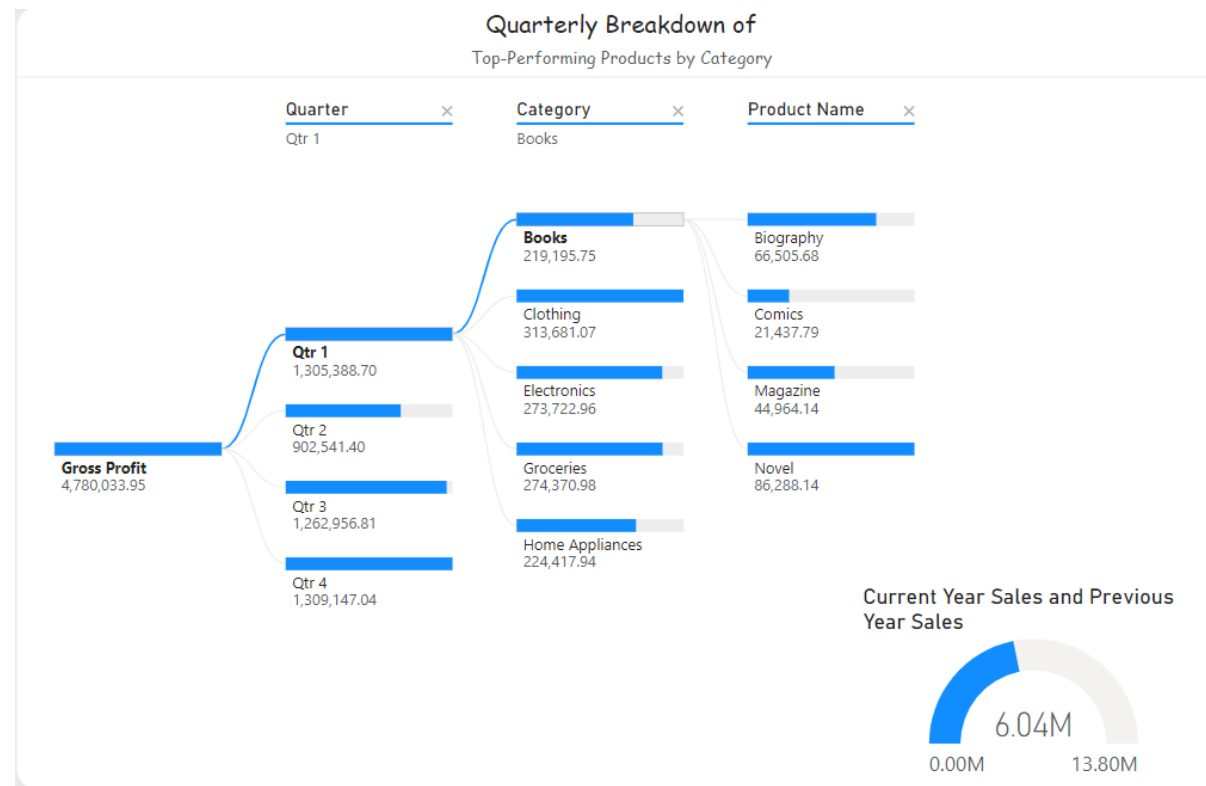**Books** 219,195.75
Clothing 313,681.07
Electronics 273,722.96
Groceries 274,370.98
Home Appliances 224,417.94

Biography 66,505.68
Comics 21,437.79
Magazine 44,964.14
Novel 86,288.14

Current Year Sales and Previous Year Sales

6.04M
0.00M   13.80M

Decomposition Tree:
All Quarter highlights strong Clothing sales.

Gauge Chart:
Current year lags behind previous year slightly; sales gap identified.

Insights

Seasonal Peaks: Q4 drives the highest sales; pre-stock inventory and plan promotions accordingly.

Performance Gap: Current year shows a dip; assess external factors (e.g., competition, economic conditions).

Recommendation: Revisit promotional strategies for Q1, Q2 and Q3 to close the yearly gap.

Advanced Analysis

1 **Total Orders**

1,000

2 **Returned Orders**

106 (10.6%)

Total Orders, Delivered Orders and Returned Orders

	100%
Total Orders	1000
Delivered Orders	1000
Returned Orders	106

10.6%

Scatter Chart:

Products with high sales but low profits: Need pricing optimization.
Products with high profits but low sales: Require increased visibility and promotions.

Insights:

Returns: A 10.6% return rate is concerning; investigate product quality or delivery issues.
Profit Optimization: Low-profit items with high sales need reevaluation of pricing or supply chain costs.
Recommendation: Conduct customer surveys to identify reasons for returns and improve satisfaction.

Future Analysis Opportunities

1

Predictive Customer Behavior

Develop models to forecast buying patterns and customer lifetime value.

2

Churn Prediction

Identify factors contributing to customer churn and develop retention strategies.
strategies.

3

Sentiment Analysis

Perform advanced analysis on customer feedback for deeper insights.

4

Campaign Effectiveness

Assess marketing campaign impact on sales performance and customer acquisition.
acquisition.

Recommendation

1.Invest in mobile app updates and digital marketing to enhance sales channels.
2.Implement dynamic pricing and seasonal promotions to address low-demand periods.
3.Conduct root-cause analysis for returned products to reduce the return rate.
4.Focus on underperforming regions like Tamil Nadu with localized campaigns.
5.Diversify product categories to reduce dependency on Clothing.

Conclusion

•The dashboard highlights areas of strong performance and opportunities for improvement.
•Insights derived will guide strategic decisions for sustainable growth.

Conclusion and Project Impact

Improved Decision-Making

Data-driven insights enable more informed and strategic business decisions.

Performance Optimization

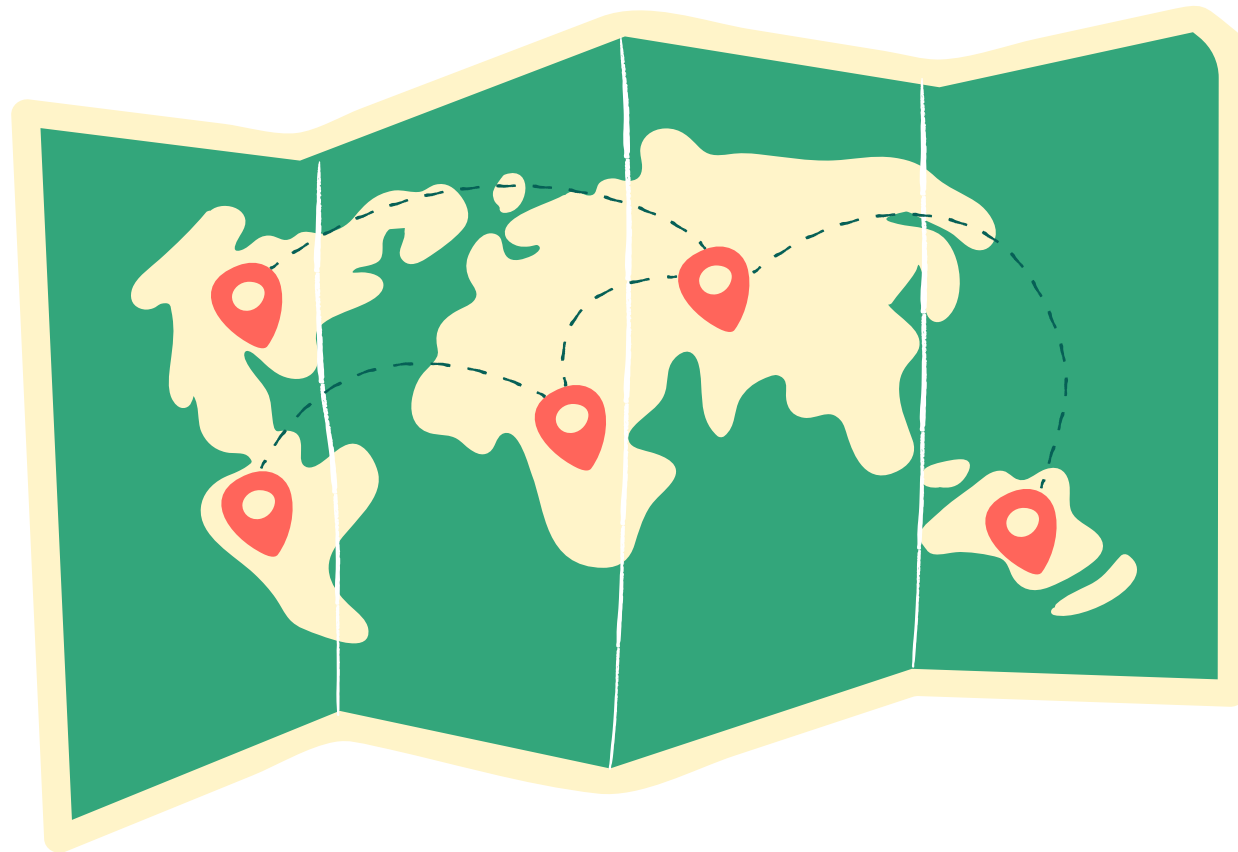Continuous monitoring of KPIs leads to improved sales and operational efficiency.

Enhanced Customer Experience

Deep understanding of customer behavior results in improved satisfaction and loyalty.

REFERENCES

DATASET FROM KAGGLE

TEAM 4

THANK YOU

FOR ATTENTION