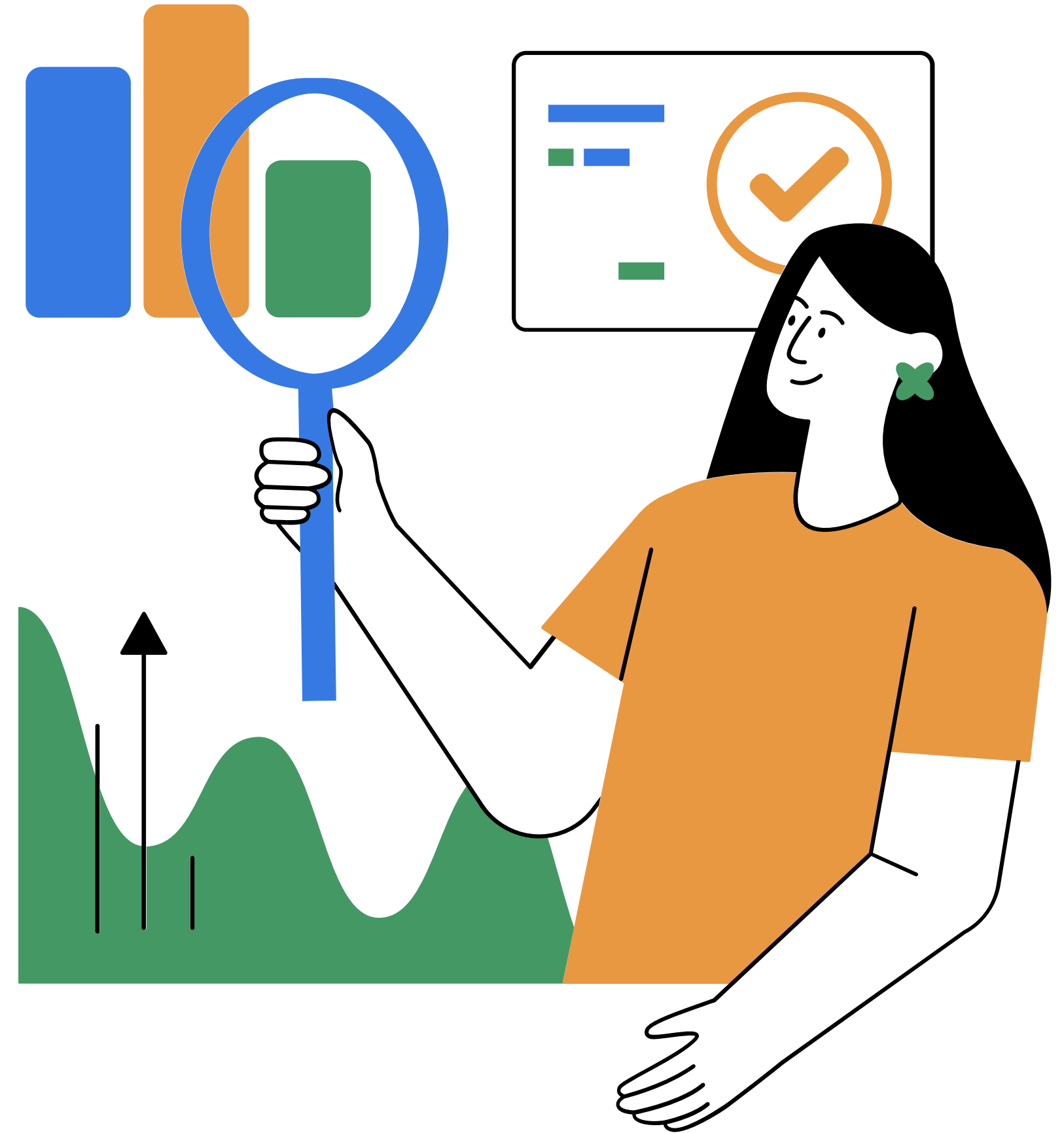


# Superstore Sales Analysis

A data-driven insight on sales, profit, and customer trends using SQL & Power BI

By: Muhammad Fakhri Azhar



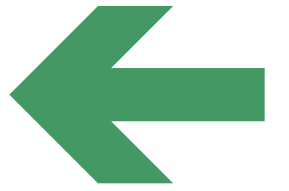
# Introduction

Hi! I'm Muhammad Fakhri Azhar, a physics graduate with a strong passion for data analysis. This project is part of my learning journey in turning data into insights.

## Course License:

- Data Science Bootcamp @Kelas Work by Kelas.com
- Data Analyst Mini Course @RevoU
- Ms.Excel Short Class @MySkill
- Computer Training @FMIPA UNNES





# Contact Info

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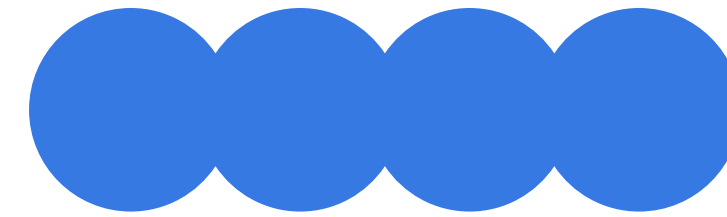
GitHub : [mfakhriazhar](#)

## Project Details on Github :

<https://github.com/mfakhriazhar/superstore-sales-analysis>

# Project Overview

Retail businesses like Superstore deal with tons of transactional data, but unlocking insights from that data can be a little tricky without a structured approach. Many companies have historical sales records, but they often find it difficult to spot trends, identify best-selling products or regions, and measure how discounts affect their bottom line. Without a centralized performance dashboard, making the best decisions about pricing, inventory, and marketing can be difficult. That's where this project comes in! I used SQL to organize and explore the data, and with Power BI, I created interactive dashboards that provide clear, actionable insights to help drive smart decisions.

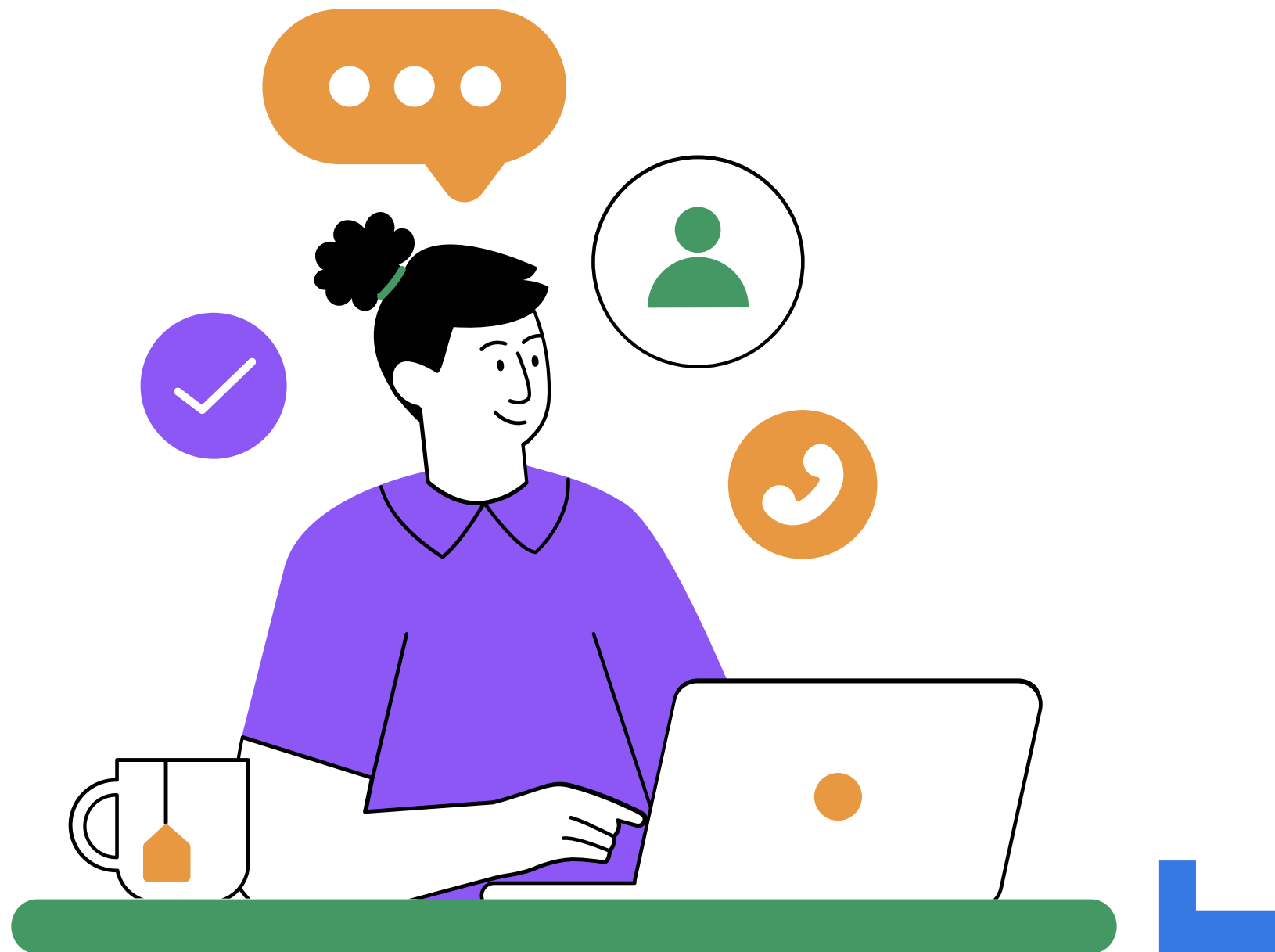


# Project Goals

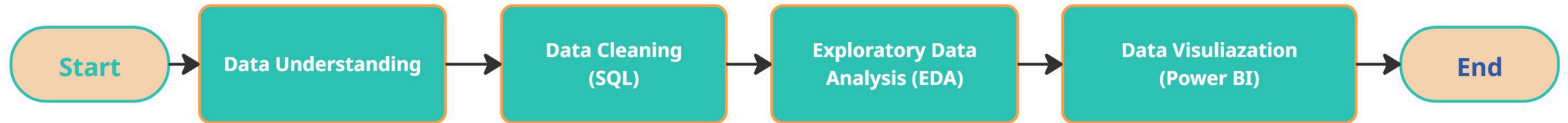
- Analyze overall sales and profit performance
- Identify best-selling products and regions
- Evaluate discount impact on profitability
- Deliver insights through a Power BI dashboard

## Dataset Link:

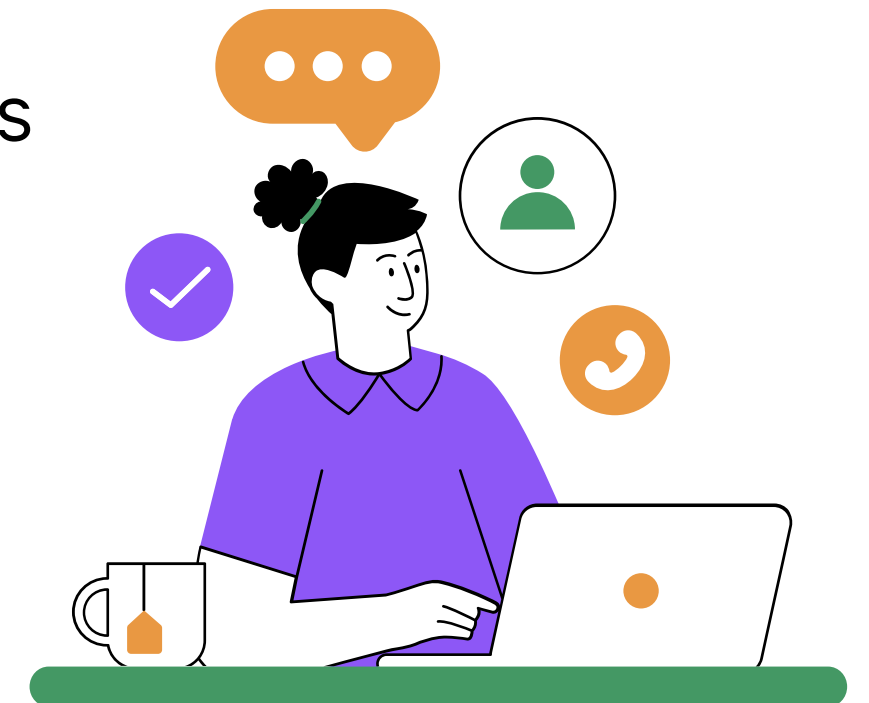
[https://github.com/mfakhriazhar/superstore-sales-analysis/blob/main/fix\\_superstore2.xlsx](https://github.com/mfakhriazhar/superstore-sales-analysis/blob/main/fix_superstore2.xlsx)



# Flowchart



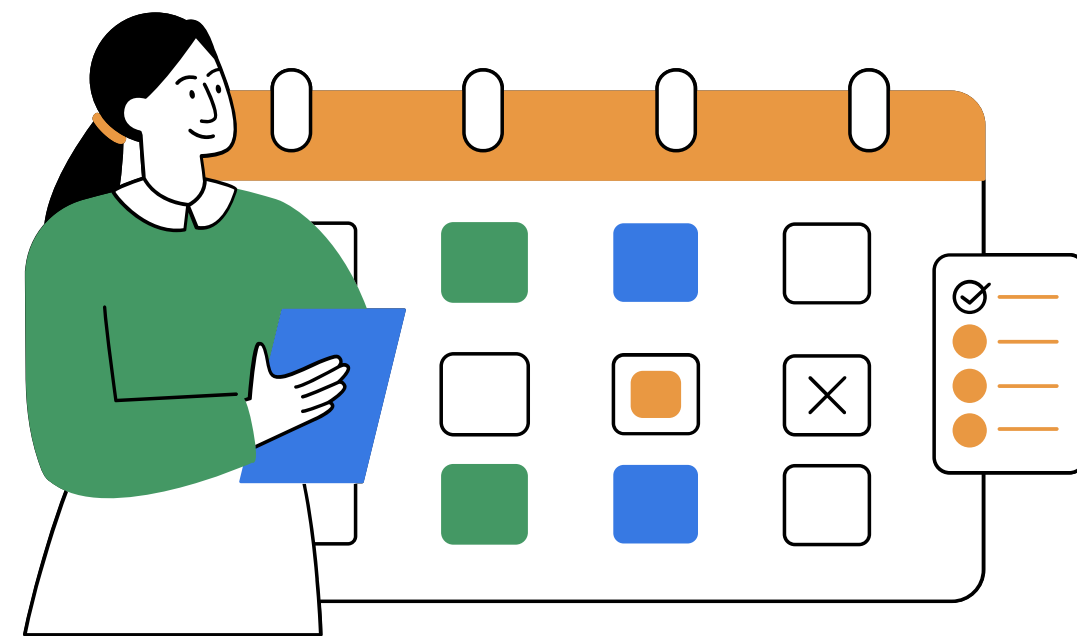
- Data Understanding
  - Understand data structure, important features, and common issues
- Data Cleaning (Excel)
  - Handling missing values, format standardization, and drop duplicates
- EDA
  - Sales identification, customer segmentation, and sales distribution
- Dashboard Visualization (Power BI)
  - Display insights in an interactive and easy-to-understand way





# Data Cleaning

- Converted Order\_Date & Ship\_Date to DATE type
- Removed duplicates based on order & product-level fields
- Standardized currency format (2 decimal places)
- Checked and handled NULL values








## Before:

category	sub_cat	product_name	sales	quantity	discount	profit
Furniture	Bookcases	Bush Somerset Collection Bookcase	261.96	2	0	41.9136
Furniture	Chairs	Hon Deluxe Fabric Upholstered Stacking Chairs,...	731.94	3	0	219.582
Office Supplies	Labels	Self-Adhesive Address Labels for Typewriters b...	14.62	2	0	6.8714
Furniture	Tables	Bretford CR4500 Series Slim Rectangular Table	957.5775	5	0.45	-383.031
Office Supplies	Storage	Eldon Fold 'N Roll Cart System	22.368	2	0.2	2.5164
Furniture	Furnishings	Eldon Expressions Wood and Plastic Desk Acces...	48.86	7	0	14.1694
Office Supplies	Art	Newell 322	7.28	4	0	1.9656
Technology	Phones	Mitel 5320 IP Phone VoIP phone	907.152	6	0.2	90.7152
Office Supplies	Binders	DXL Angle-View Binders with Locking Rings by S...	18.504	3	0.2	5.7825
Office Supplies	Appliances	Belkin F5C206VTEL 6 Outlet Surge	114.9	5	0	34.47
Furniture	Tables	Chromcraft Rectangular Conference Tables	1706.184	9	0.2	85.3092
Technology	Phones	Konftel 250 Conference phone - Charcoal black	911.424	4	0.2	68.3568
Office Supplies	Paper	Xerox 1967	15.552	3	0.2	5.4432
Office Supplies	Binders	Fellowes PB200 Plastic Comb Binding Machine	407.976	3	0.2	132.5922
Office Supplies	Appliances	Belkin F5C206VTEL 6 Outlet Surge	114.9	5	0	34.47

## After:

category	sub_cat	product_name	sales	quantity	discount	profit
Technology	Phones	AT&T EL51110 DECT	377.97	3	0	109.61
Furniture	Tables	Hon 2111 Invitation Series Corner Table	502.49	3	0.2	-87.94
Office Supplies	Paper	Xerox 1887	91.06	6	0.2	31.87
Office Supplies	Fasteners	Binder Clips by OIC	2.37	2	0.2	0.83
Office Supplies	Paper	Things To Do Today Spiral Book	19.01	3	0.2	6.89
Office Supplies	Paper	Strathmore Photo Frame Cards	14.62	2	0	6.73
Furniture	Chairs	DMI Arturo Collection Mission-style Design Woo...	317.06	3	0.3	-18.12
Office Supplies	Art	Prang Dustless Chalk Sticks	2.69	2	0.2	1.01
Office Supplies	Envelopes	Cameo Buff Policy Envelopes	149.35	3	0.2	50.41
Technology	Accessories	Kensington Expert Mouse Optical USB Trackball ...	227.98	3	0.2	28.5
Furniture	Furnishings	Ultra Door Push Plate	29.46	6	0	9.72
Technology	Accessories	Case Logic 2.4GHz Wireless Keyboard	99.98	2	0	8
Office Supplies	Art	Hunt PowerHouse Electric Pencil Sharpener, Blue	151.92	4	0	45.58
Office Supplies	Labels	Dot Matrix Printer Tape Reel Labels, White, 500...	196.62	2	0	96.34

# Key Insights

Result Grid			Filter Rows: <input type="text"/>	Export: 	Wrap Cell Content: 
	total_sales	total_profit	total_order	avg_disc	
	2272168.27999999644	282869.349999999986	4931	0.1551521716702869	



 Total Sales:

\$ 2,27M

 Total Profit:

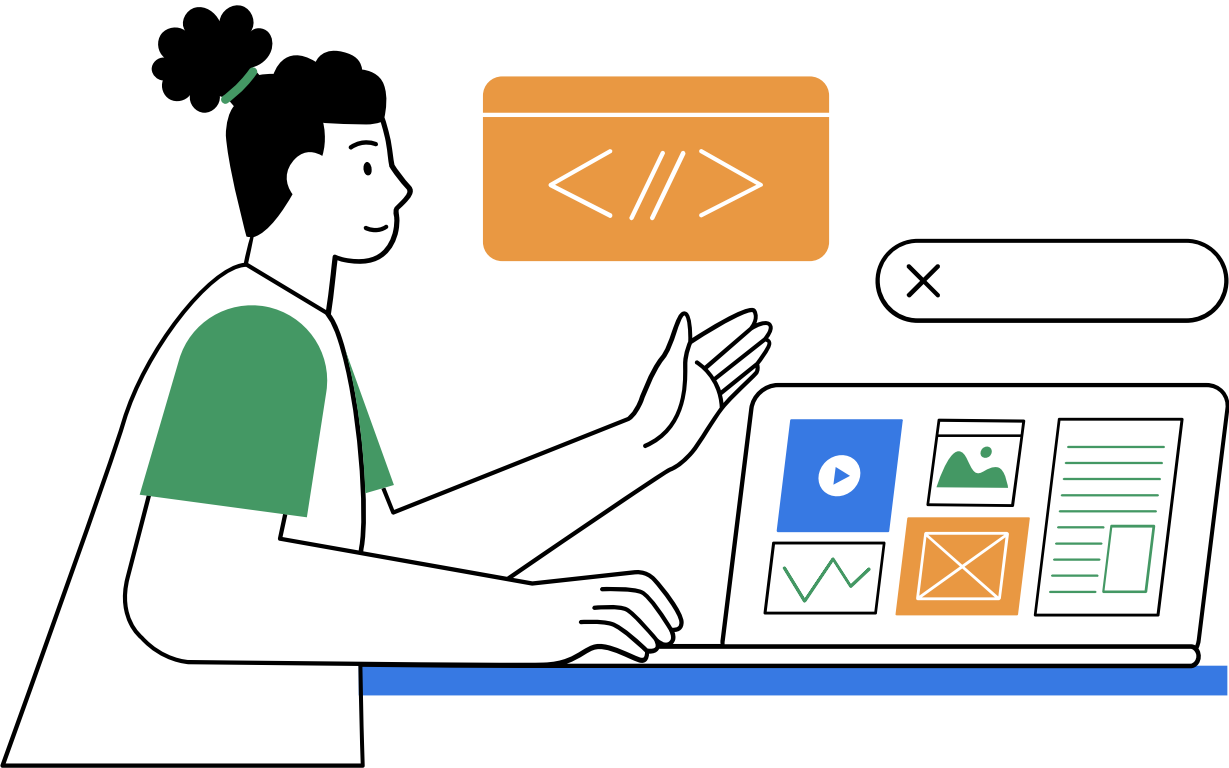
\$ 282,87K

 Total Order:

4931 Order

 Average Discount

16%







# Key Insights

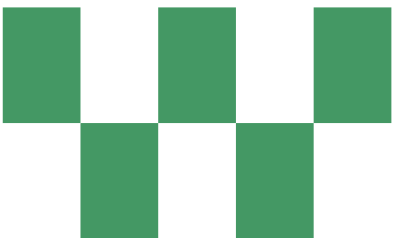
 **Best Region by Sales and Profit:**




 **West**

 **Region with Lowest Profit Margin:**

 **Central**

	region	total_sales	total_profit
▶	West	713471.2799999993	106021.02000000003
	East	671912.7199999986	90683.78999999963
	Central	497800.75999999867	40128.76000000009
	South	388983.52000000014	46035.77999999996



Result Grid    Filter Rows: <input type="text"/>   Export:  Wrap Cell Content: 				
	product_name	total_sales	total_quantity	total_profit
▶	Canon imageCLASS 2200 Advanced Copier	61599.83	20	25199.939999999
	Fellowes PB500 Electric Punch Plastic Comb Bind...	27453.38	31	7753.039999999
	Cisco TelePresence System EX90 Videoconferen...	22638.48	6	-1811.08
	HON 5400 Series Task Chairs for Big and Tall	21870.57	39	0
	GBC DocuBind TL300 Electric Binding System	19823.469999999998	37	2233.499999999
	GBC Ibimaster 500 Manual ProClick Binding System	19024.5	48	760.98000000000
	Hewlett Packard LaserJet 3310 Copier	18839.68	38	6983.89
	HP Designjet T520 Inkjet Large Format Printer ~...	18374.89	12	4094.979999999
	GBC DocuBind P400 Electric Binding System	17965.07	27	-1878.169999999
	High Speed Automatic Electric Letter Opener	17030.309999999998	11	-262

# Key Insights

🔥 **Top Product by Sales and Profit :**  
**Canon imageCLASS 2200 Advanced Copier**

**Total Sales:**

**Total Profit:**

**\$ 61,56K**

**\$ 25,12K**

🏆 **Top Product by Sales Quantity:**  
**Staples**

**215** pieces sold

# Key Insights

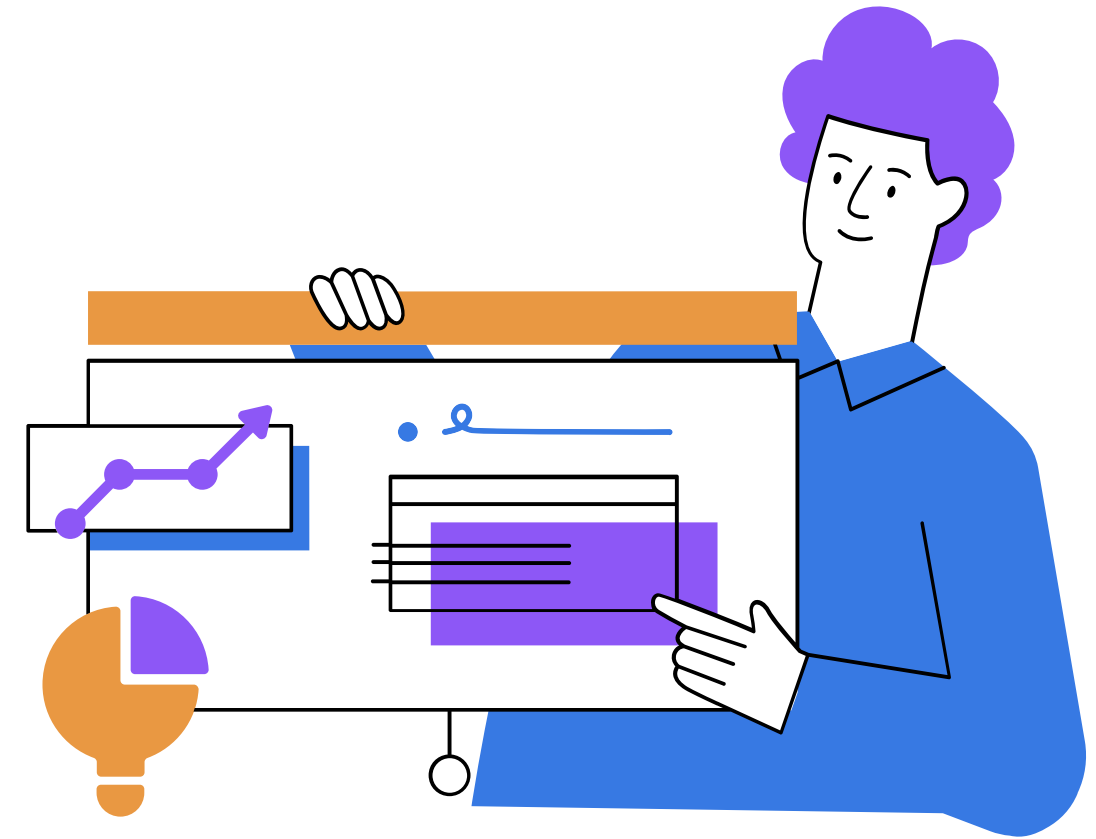


	discount	avg_provit
▶	0	68.11
	0.1	96.06
	0.15	27.29
	0.2	25.2
	0.3	-45.83
	0.32	-88.56
	0.4	-112.51
	0.45	-226.65
	0.5	-310.7
	0.6	-42.03
	0.7	-101.39
	0.8	-105.74

 **Discount > 30%**

## Mostly Unprofitable

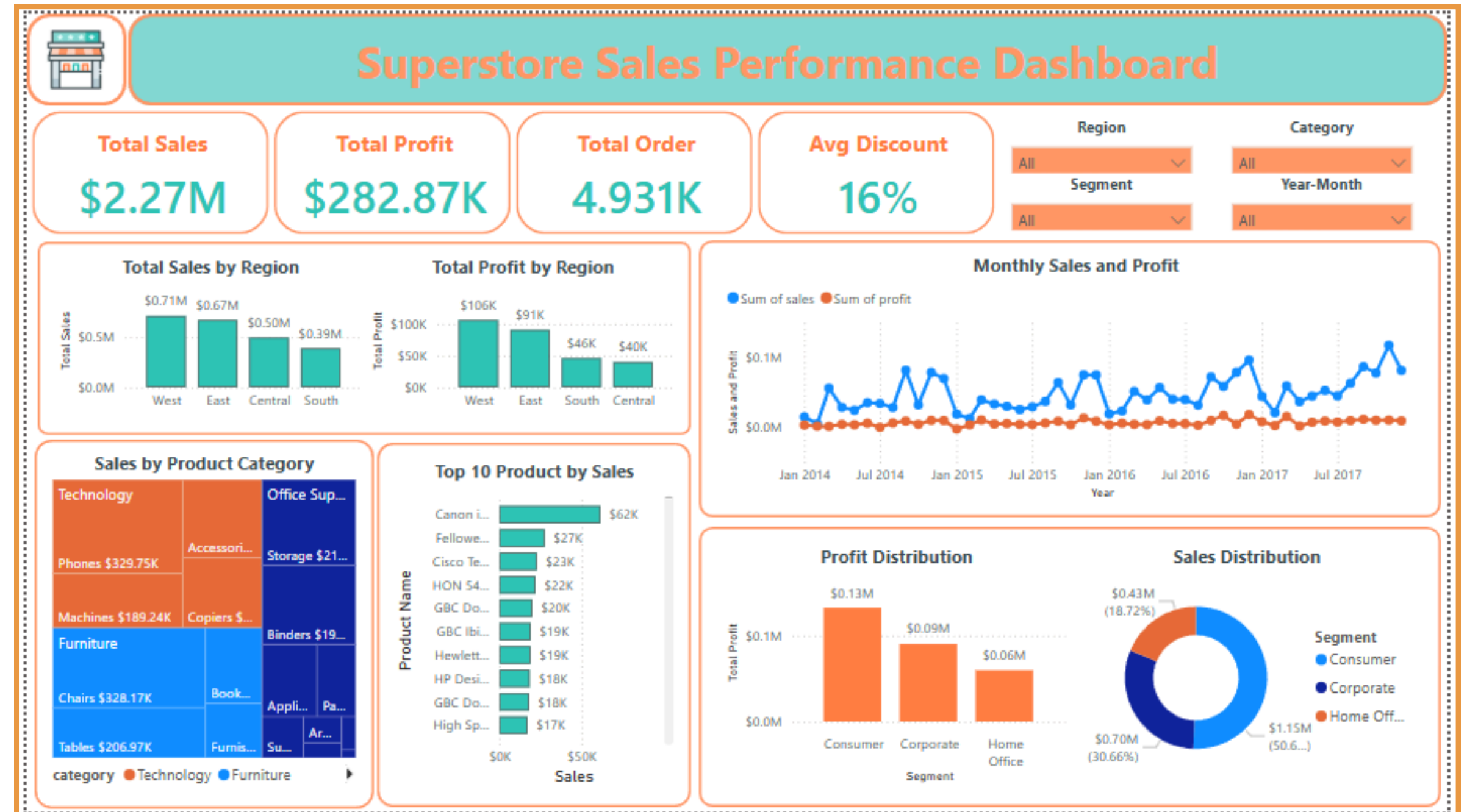
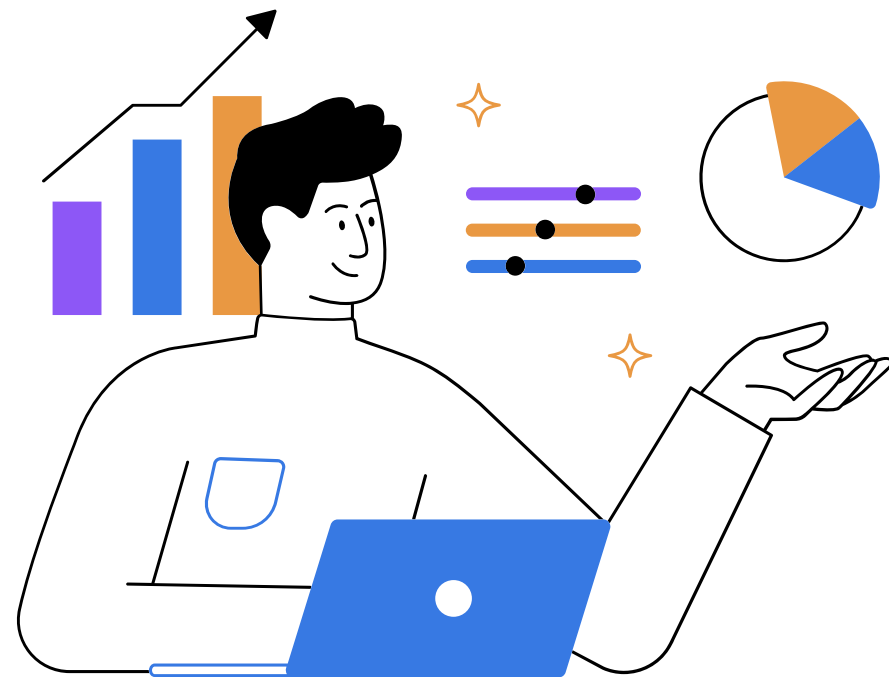
Offering discounts greater than 30% often leads to a significant reduction in profitability, as the sales volume may not compensate for the steep price cuts.

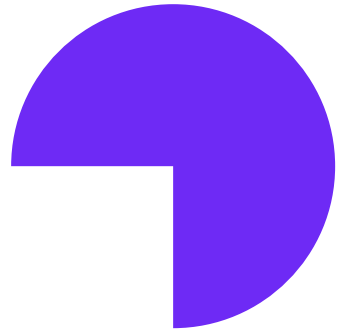


# Dashboard Preview

## Features:

- KPI cards for total metrics
- Line chart: Monthly trends
- Tree map: Category & product breakdown
- Region & segment insights
- Interactive slicers



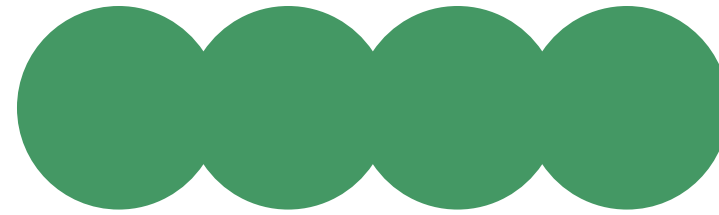


# More Insights

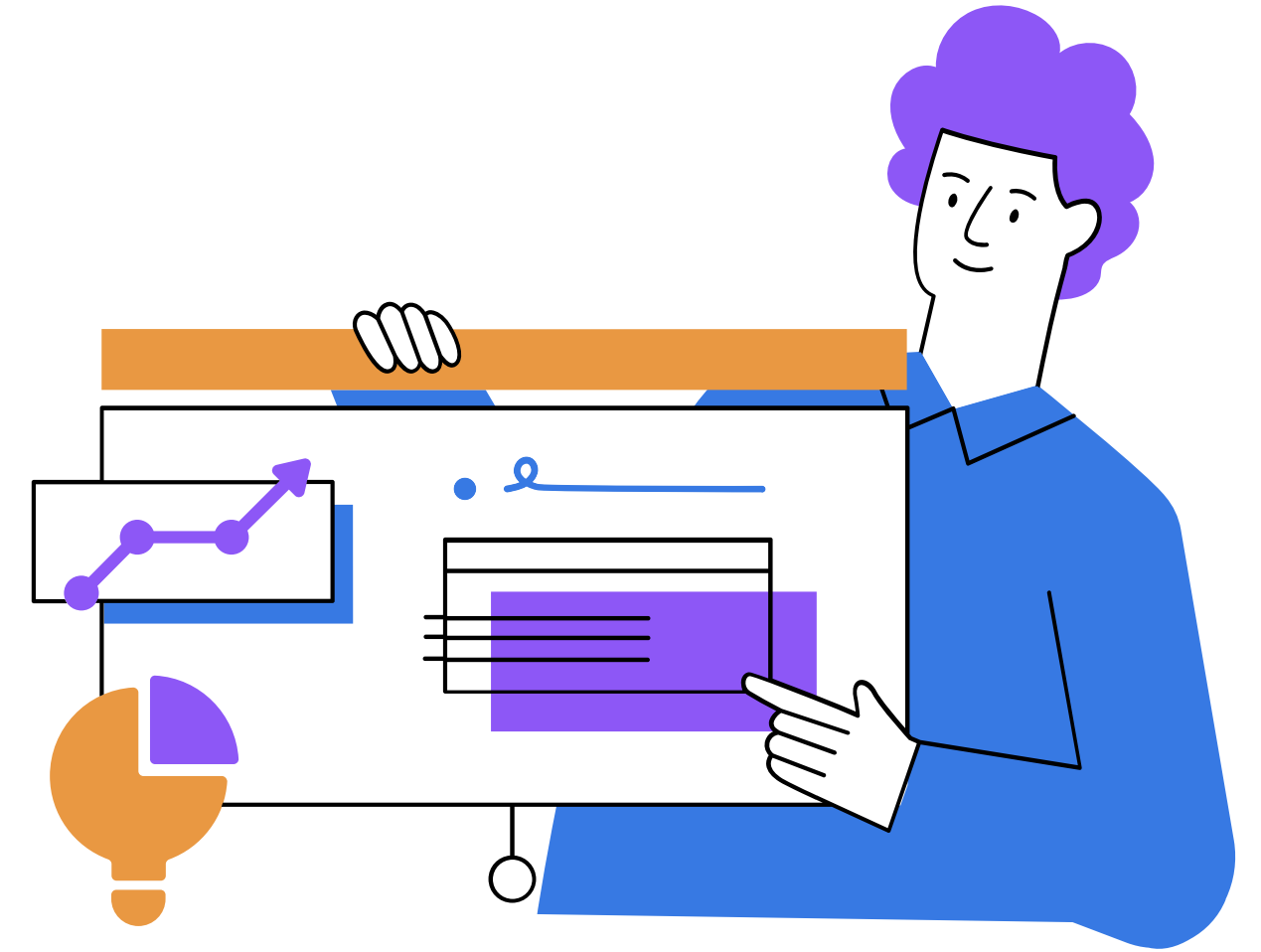
## Business Insights

- Sales tend to peak in Q4, especially November
- Technology dominates in both sales and profit
- High discount (30%+) often leads to negative profit
- Corporate customers bring consistent profit margin
- Central region needs pricing or promotion optimization






# Conclusion




Through this sales analysis project, we were able to uncover meaningful insights from Superstore's historical data using SQL and Power BI. The dashboard highlights key trends such as sales growth over time, top-performing product categories, and regions with high or low profitability. We also found that high discount levels often lead to reduced profit margins, emphasizing the need for a more strategic discount policy. Overall, this project demonstrates how structured data analysis and interactive dashboards can support better business decision-making through clear, actionable insights.

# Thank You



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