

# Superstore Sales Analysis

Interactive dashboard + statistical analysis





# Objective

## Clean & Prep

Handle missing values, outliers, correct types

## EDA

Identify trends and patterns

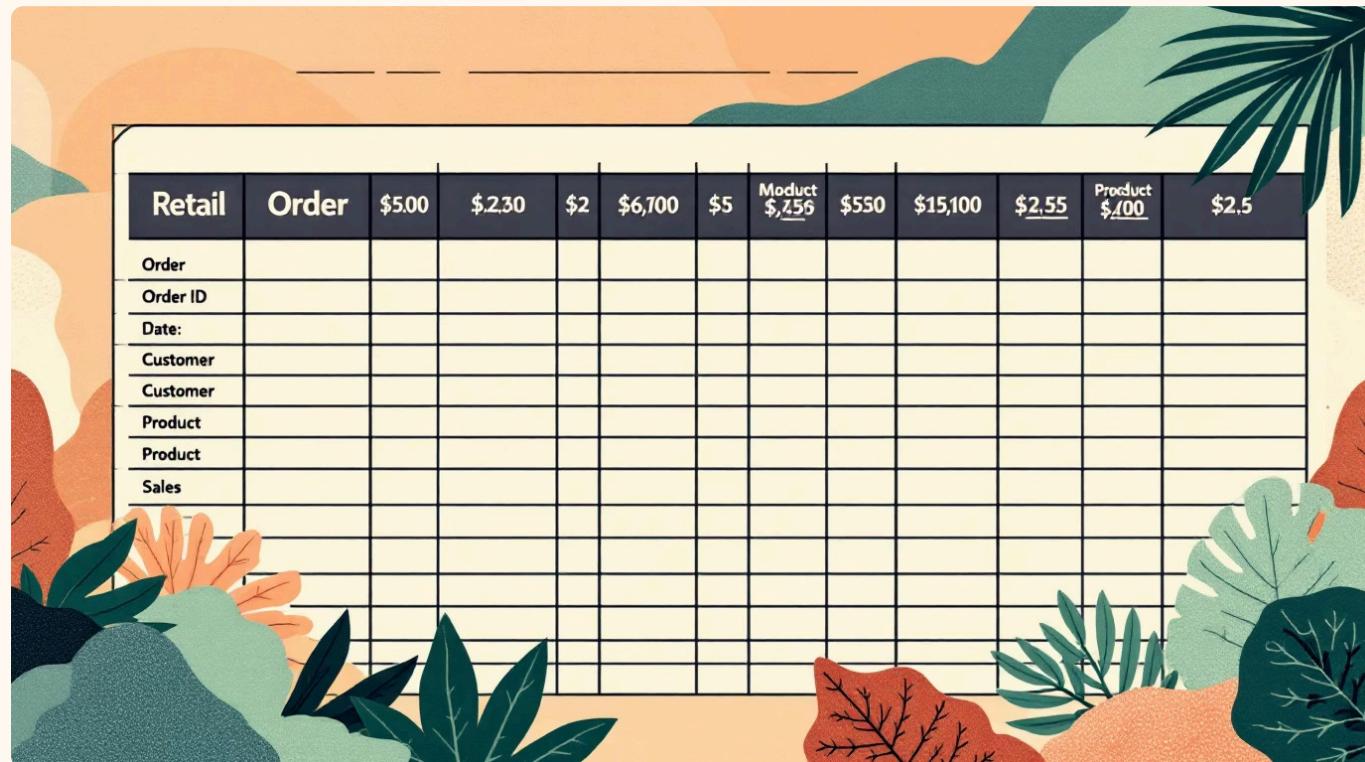
## Statistical Analysis

Z-test, T-test, ANOVA, Chi-square

## Dashboard

Power BI interactive reporting

# Dataset Overview



A grid-based dataset visualization with a tropical leaf border. The grid has 15 columns and 8 rows. The first row contains numerical values: \$5.00, \$.230, \$2, \$6,700, \$5, Moduct \$,756, \$550, \$15,100, \$2.55, Product \$/100, and \$2.5. The second row contains the word "Order". The third row contains "Order ID". The fourth row contains "Date:". The fifth row contains "Customer". The sixth row contains "Customer". The seventh row contains "Product". The eighth row contains "Product". The ninth row contains "Sales".

\$5.00	\$.230	\$2	\$6,700	\$5	Moduct \$,756	\$550	\$15,100	\$2.55	Product \$/100	\$2.5
Order										
Order ID										
Date:										
Customer										
Customer										
Product										
Product										
Sales										



## Order Details

Order ID, Order Date, Ship Mode



## Customer

Customer ID, Name, Region, City



## Products

Category, Sub-category, Product Name



## Metrics

Sales, Profit, Discount, Quantity, Shipping days

# Data Cleaning

## Missing Values

Postal Code and others identified & handled

## Types & Columns

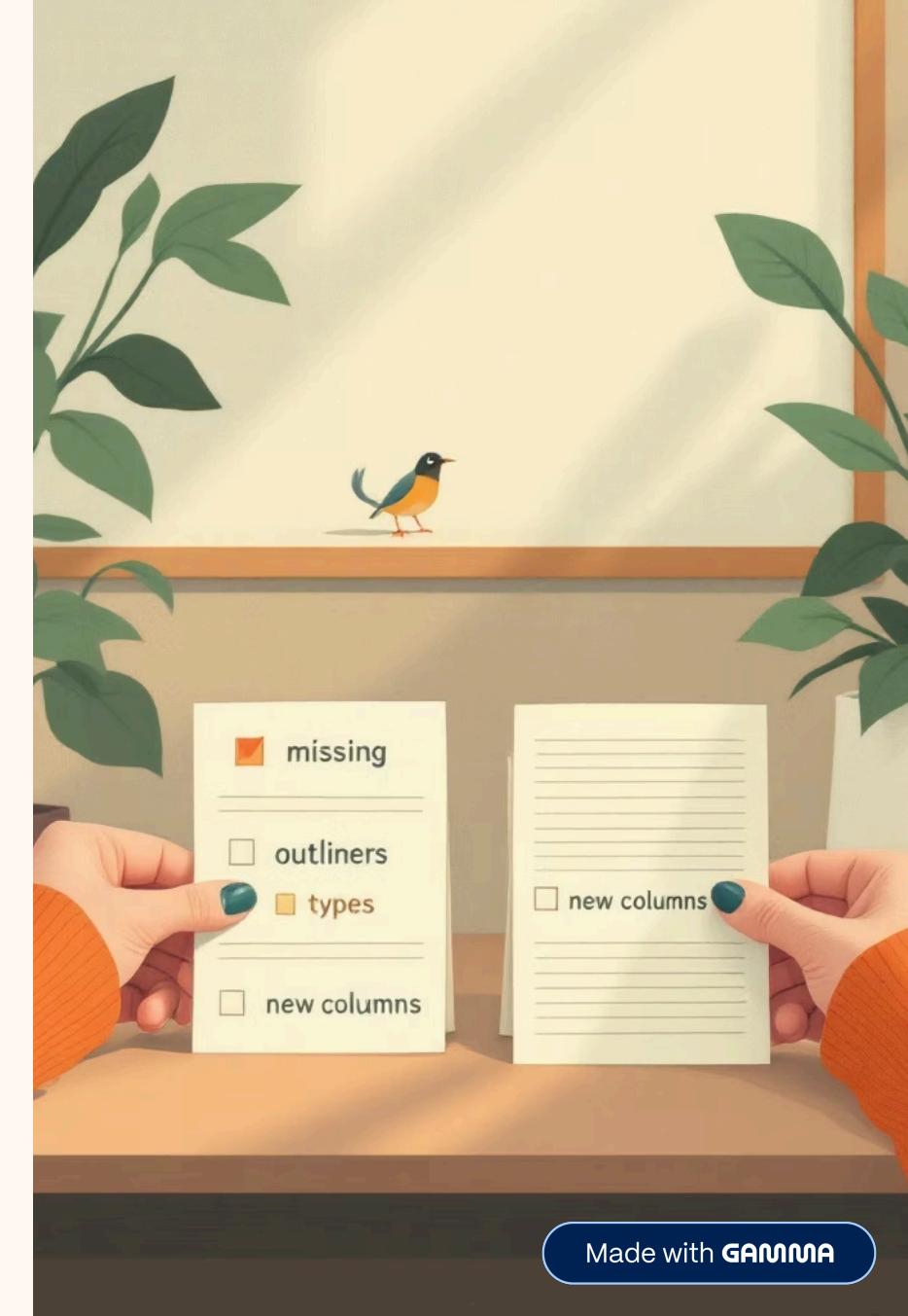
Corrected data types; removed unnecessary columns

## Outliers

Detected via boxplots; treated appropriately

## Derived Fields

Created shipping days and calculated metrics

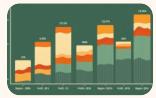


# Exploratory Visuals



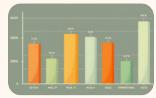
Discount vs  
Profit

Negative impact of  
higher discounts



Profit by Region

Regional  
performance  
differences



Sales by  
Category

Category-wise  
sales distribution

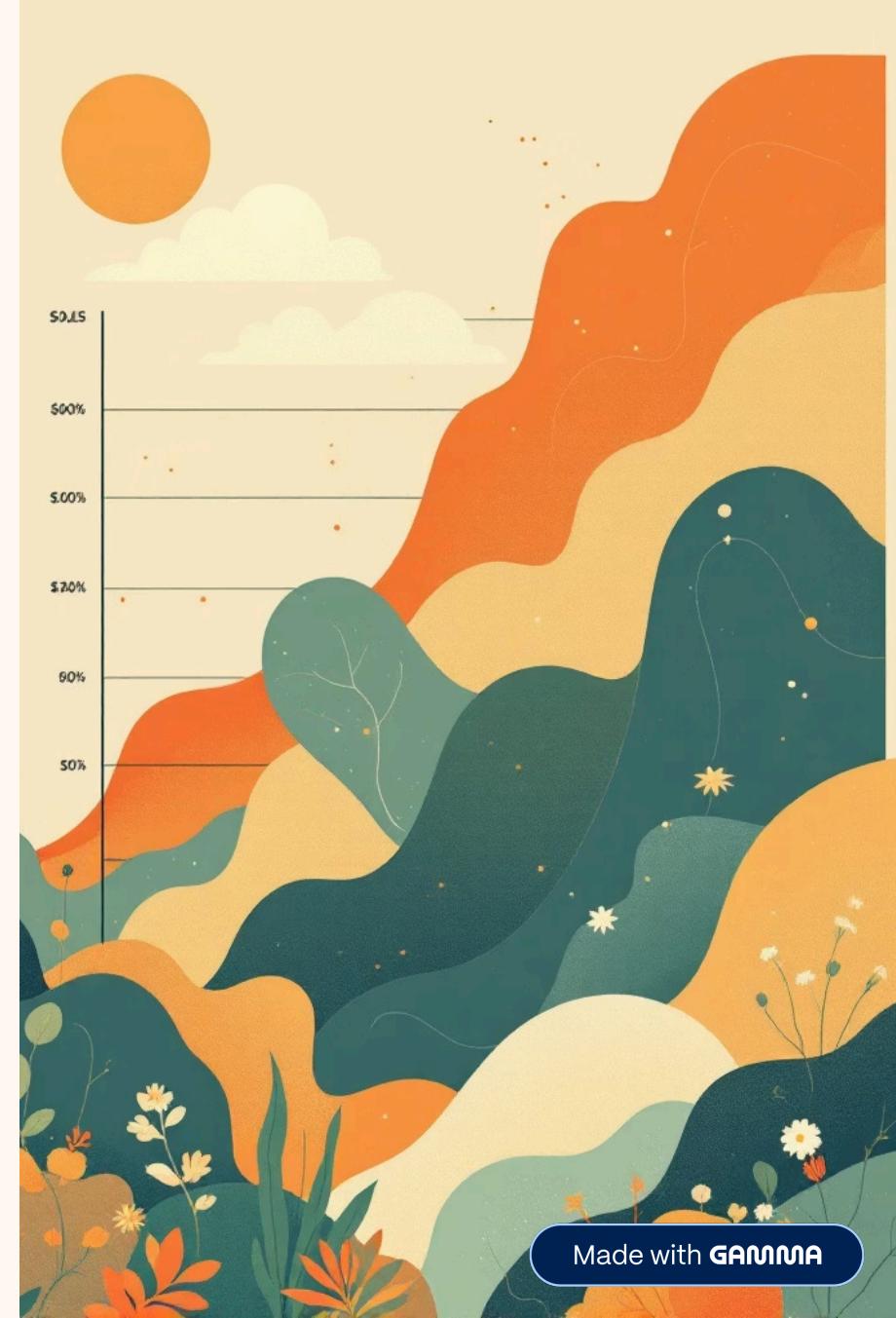


Yearly Trends

Sales increasing  
over years

# Correlation Insights

Sales & Profit: moderate positive correlation. Discounts often reduce profit.



# Statistical Tests

- Z-test

Sample mean vs target; p-value → significant difference

- T-test

Profit: high-discount vs low-discount groups → significant effect

- ANOVA

Profit across categories → at least one differs (p small)

- Chi-square

Ship Mode vs Category → relationship explored



# Dashboard Overview



## KPI Cards

Total sales, Profit, Quantity



## Interactive Filters

Slicers for dynamic exploration



## Regional Mix

Pie charts for contribution

# SALES DASHBOARD

## SUPERSTORE SHOP

Total Profit

161K

Total Sales

1.40M

Total Quantity Sold

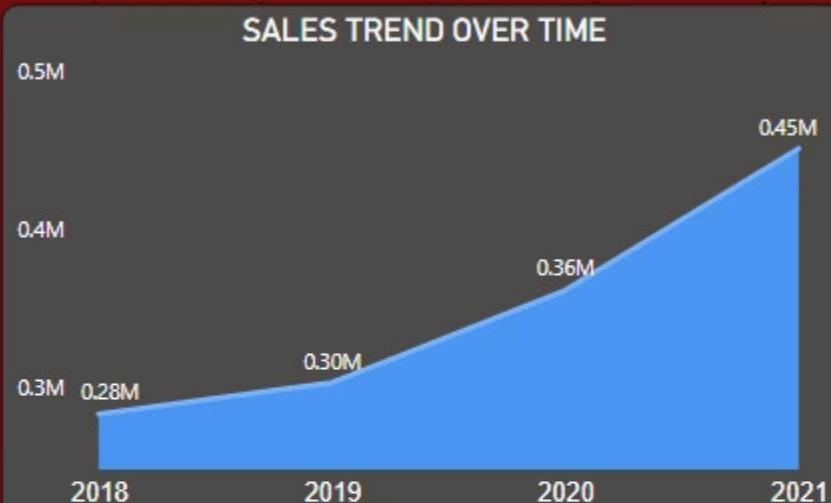
37.51K

Total Orders

5K

YEARS

- Select all
- 2018
- 2019
- 2020
- 2021



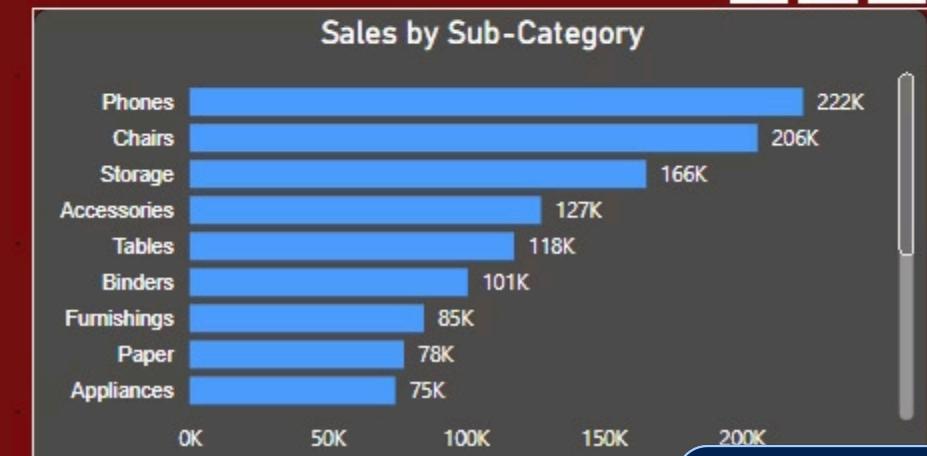
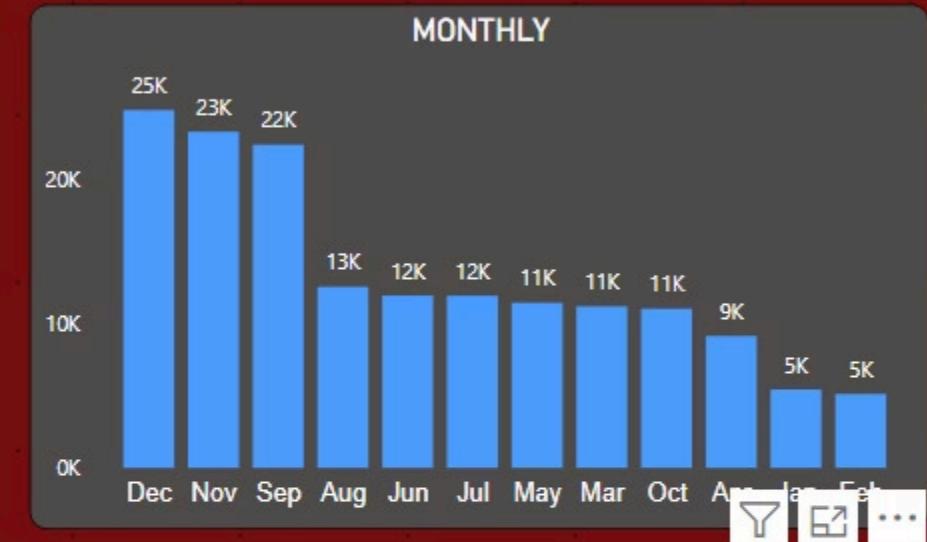
REGION

- Select all
- Central
- East
- South
- West



CATEGORY

- Select all
- Furniture
- Office Supplies



# Key Insights



## Growth

Sales increasing over time



## Discounts

Discounts reduce profitability



## Top Categories

Some categories yield higher profit



## Regional Variation

Performance varies by region



## Shipping

Ship mode influences operations