

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

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

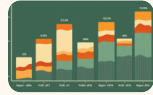


Exploratory Visuals



Discount vs Profit

Negative impact of higher discounts



Profit by Region

Regional performance differences



Sales by Category

Category-wise sales distribution

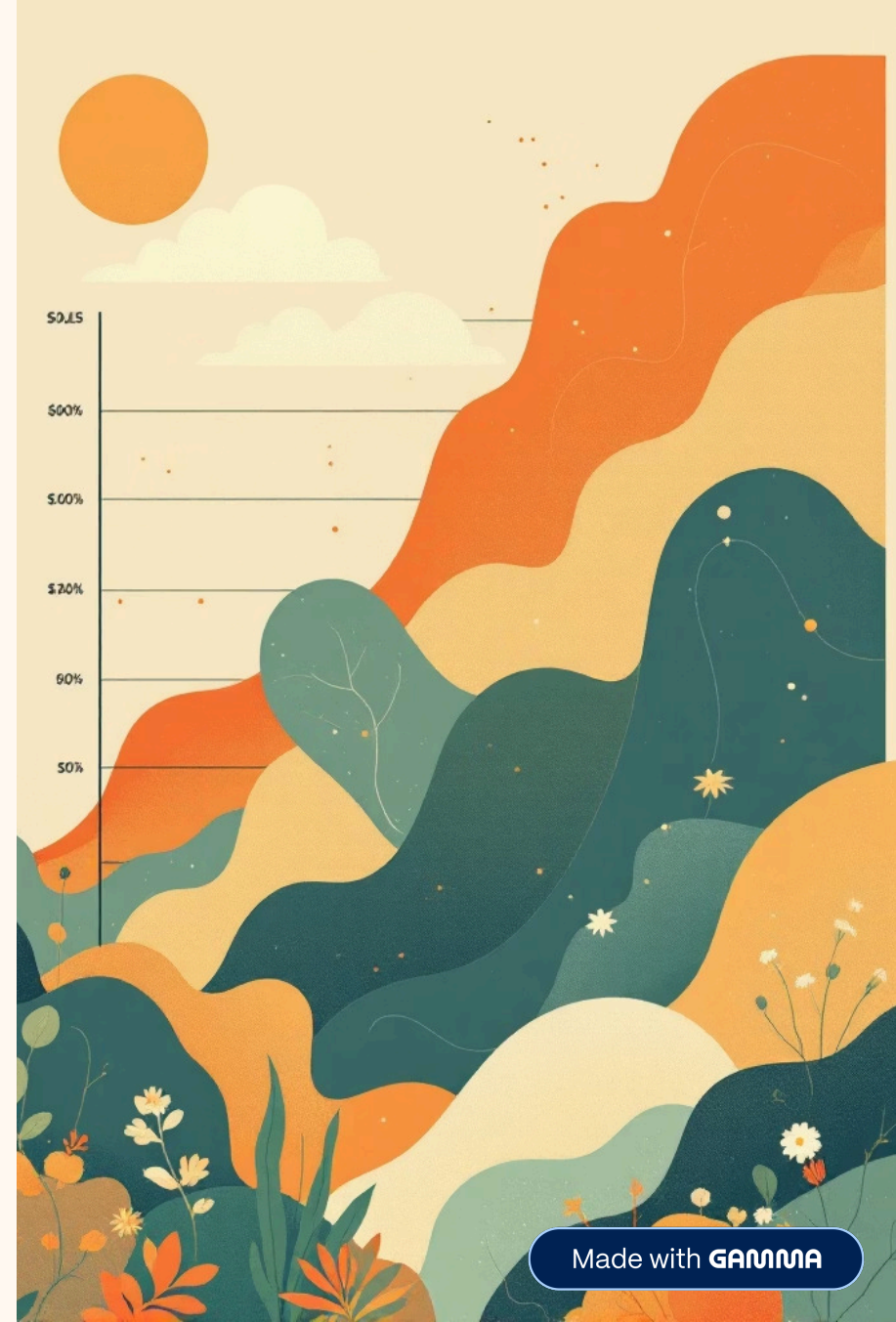


Yearly Trends

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

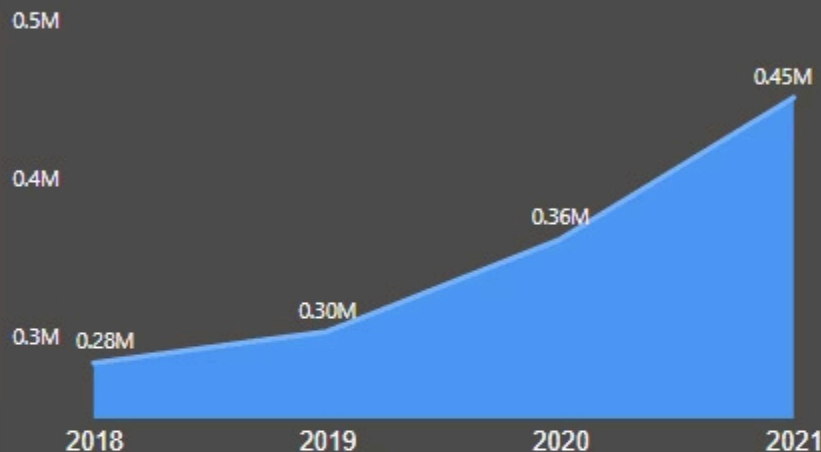
REGION

- Select all
- Central
- East
- South
- West

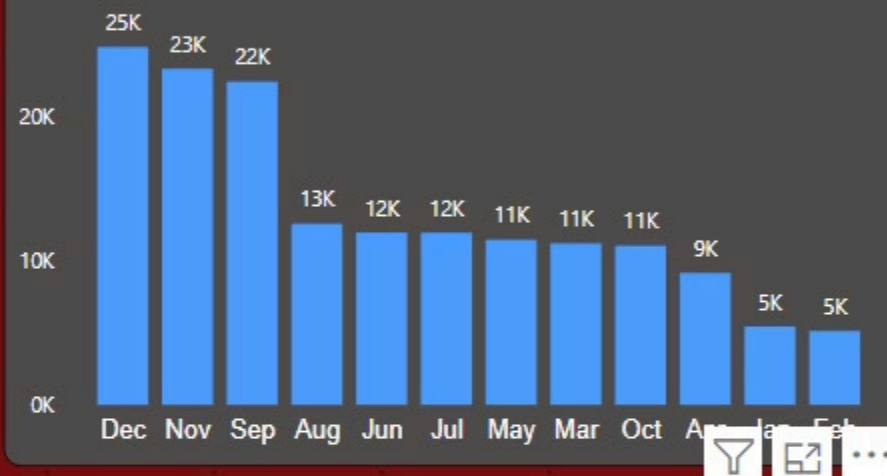
CATEGORY

- Select all
- Furniture
- Office Supplies

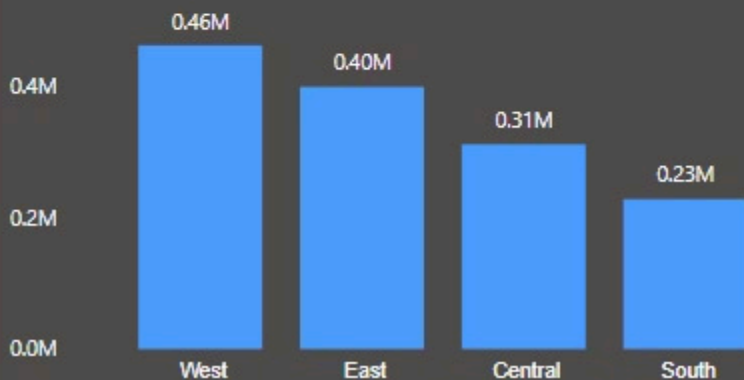
SALES TREND OVER TIME



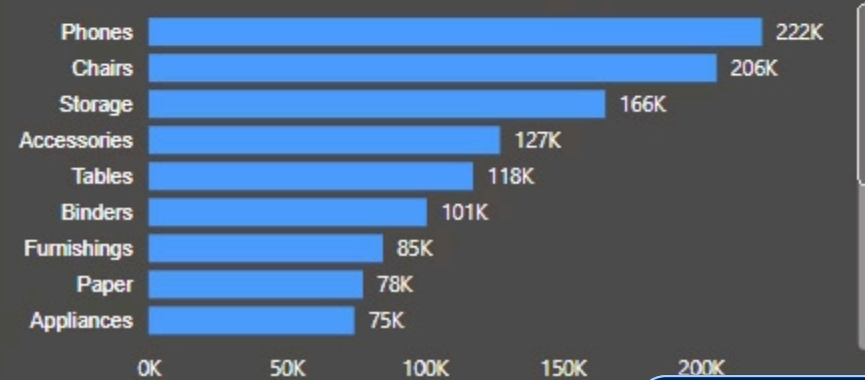
MONTHLY



Sum of Sales by Region



Sales by Sub-Category



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