EXPLORATORY DATA ANALYSIS RETAIL

THE SPARK FOUNDATION

(USING POWER BI AND MICROSFT EXCEL)

SAMPLE SUPERSTORE USA DATASET

NAME - PRIYESH DIXIT
POSITION - DATA SCIENCE AND BUSINESS ANALYST INTERN

Exploratory Data Analysis – Retail
(Level – Beginner)

- Perform 'Exploratory Data Analysis' on dataset 'SampleSuperstore'

- As a business manager, try to find out the weak areas where you can work to make more profit.

- What all business problems you can derive by exploring the data?

- You can choose any of the tool of your choice (Python/R/Tableau/PowerBI/Excel/SAP/SAS)

- **Dataset:** https://bit.ly/3i4rbWl

- **Beginner Level** - Create dashboards. Screen-record along with your audio explaining the charts and interpretations.

- Task submission:
  1. Create the dashboards and/or storyboard and record it
  2. Upload the recording either on YouTube or LinkedIn
  3. Create a LinkedIn post as suggested in FAQs

#3

---OBJECTIVES---

➡ **To find Top 3 and Bottom 3 Cities and States in terms of highest Profit and Sales.**

➡ **To find out which is the Weakest Performing Category.**

➡ **To find most usage of Ship mode and Top Performing Segment.**

➡ **To find out Discount Percentage by Region and Category and how it effects overall Sales and Profit.**

➡ **To find out Top and Bottom Performers in Sub-Category in terms of Sales and Profit.**

➡ **To find out Percentage Profit contribution by each Category.**

SAMPLE SUPERSTORE (USA)

2.30M	286.40K	28.66	38K	1.56K
SALES	PROFIT	AVERAGE OF PROFIT	QUANTITY	DISCOUNT

Region
- ☐ Central
- ☐ East
- ☐ South
- ☐ West
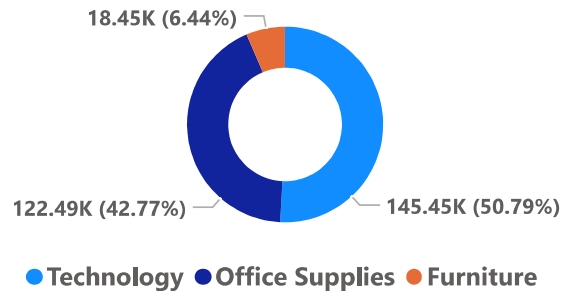
State
All

City
All

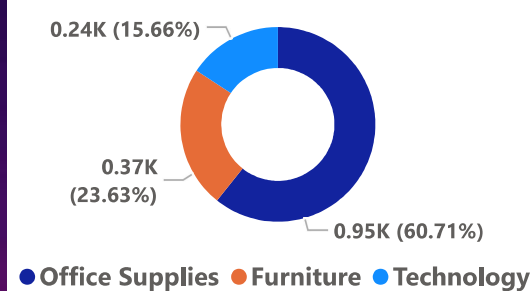## Segment
- ☐ Consumer
- ☐ Corporate
- ☐ Home Office

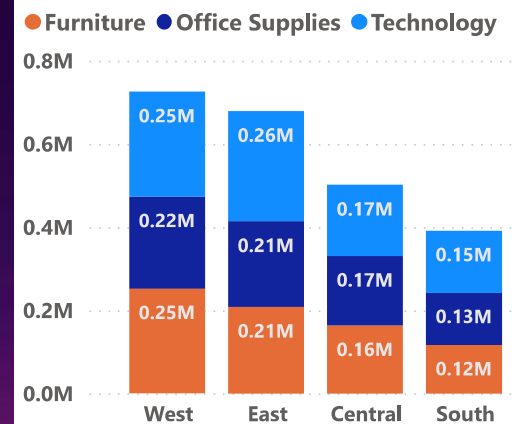## Category
- ☐ Furniture
- ☐ Office Supplies
- ☐ Technology

Profit by Category
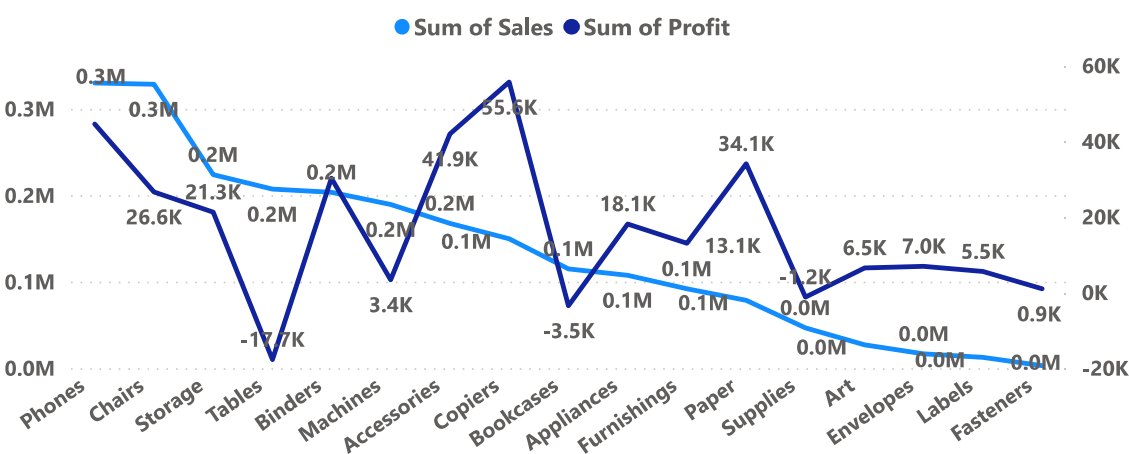- 18.45K (6.44%)
- 145.45K (50.79%)
- 122.49K (42.77%)

● Technology ● Office Supplies ● Furniture

Discount by Category
- 0.24K (15.66%)
- 0.37K (23.63%)
- 0.95K (60.71%)

● Office Supplies ● Furniture ● Technology

Sales by Region and Category
● Furniture ● Office Supplies ● Technology

	West	East	Central	South
Technology	0.25M	0.26M	0.17M	0.15M
Office Supplies	0.22M	0.21M	0.17M	0.13M
Furniture	0.25M	0.21M	0.16M	0.12M

Sales and Profit by Sub-Category
● Sum of Sales ● Sum of Profit
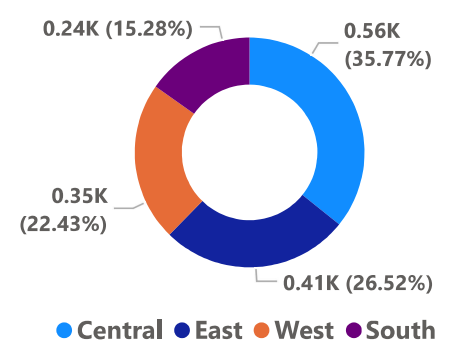
Phones 0.3M, 55.6K, 0.3M, 0.3M, 0.2M, 21.3K, 26.6K, 0.2M, 0.2M, -17.7K, 3.4K, 47.9K, 0.2M, 0.1M, 0.1M, -3.5K, 18.1K, 0.1M, 13.1K, 34.1K, 0.1M, 0.1M, -1.2K, 6.5K, 7.0K, 5.5K, 0.0M, 0.0M, 0.0M, 0.9K

Phones, Chairs, Storage, Tables, Binders, Machines, Accessories, Copiers, Bookcases, Appliances, Furnishings, Paper, Supplies, Art, Envelopes, Labels, Fasteners

Discount by Region
- 0.24K (15.28%)
- 0.56K (35.77%)
- 0.35K (22.43%)
- 0.41K (26.52%)

● Central ● East ● West ● South

SAMPLE SUPERSTORE (USA)

2.30M	286.40K	28.66	38K	1.56K
SALES	PROFIT	AVERAGE OF PROFIT	QUANTITY	DISCOUNT

Region
- ☐ Central
- ☐ East
- ☐ South
- ☐ West

State
All ▾
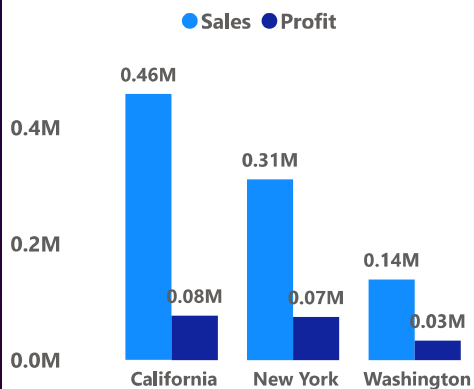
City
All ▾
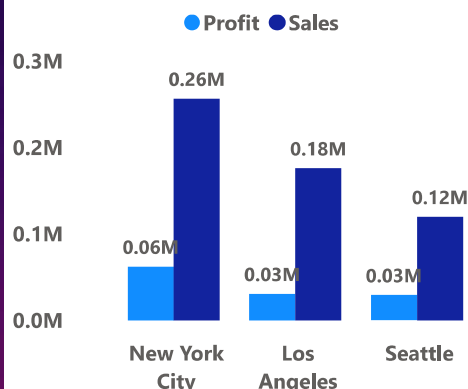
Segment
- ☐ Consumer
- ☐ Corporate
- ☐ Home Office

Category
- ☐ Furniture
- ☐ Office Supplies
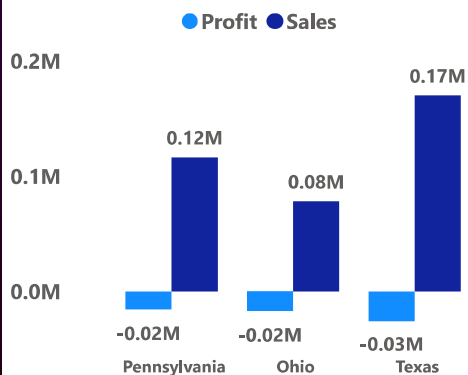- ☐ Technology

TOP 3 State in terms of Profit
● Sales ● Profit

- California: 0.46M / 0.08M
- New York: 0.31M / 0.07M
- Washington: 0.14M / 0.03M

TOP 3 City in terms of Profit
● Profit ● Sales

- New York City: 0.06M / 0.26M
- Los Angeles: 0.03M / 0.18M
- Seattle: 0.03M / 0.12M

Sales and Profit by SEGMENT
● Sales ● Profit

- Consumer: 1.16M / 0.13M
- Corporate: 0.71M / 0.09M
- Home Office: 0.43M / 0.06M
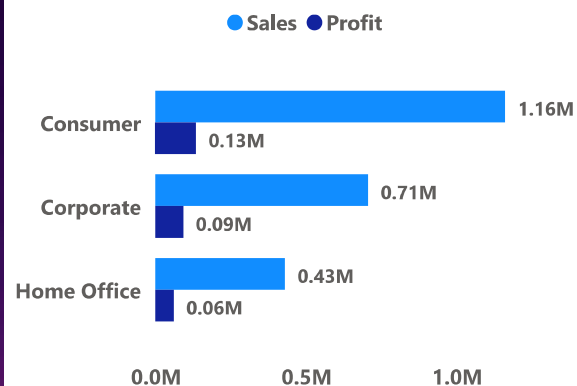
BOTTOM 3 State in terms of Profit
● Profit ● Sales

- Pennsylvania: -0.02M / 0.12M
- Ohio: -0.02M / 0.08M
- Texas: -0.03M / 0.17M

BOTTOM 3 City in terms of Profit
● Sales ● Profit

- Philadelphia: 109K / -14K
- Houston: 65K / -10K
- San Antonio: 22K / -7K
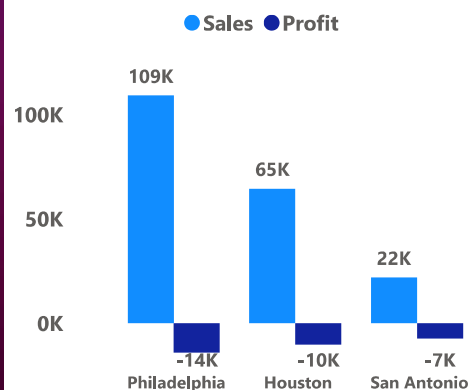
Sales and Profit by SHIP MODE
● Profit ● Sales

- Standard Class: 0.2M / 1.4M
- Second Class: 0.1M / 0.5M
- First Class: 0.0M / 0.4M
- Same Day: 0.0M / 0.1M
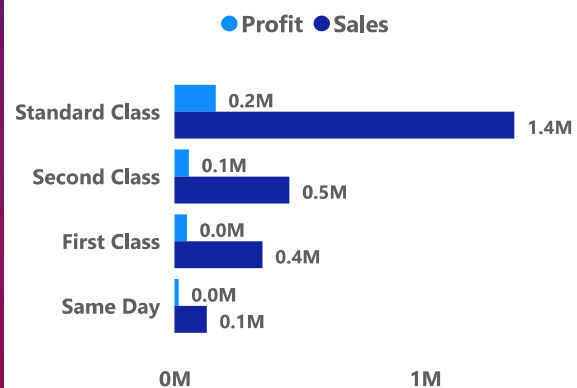
BUSINESS INSIGHTS

I- After doing comparison of all category, it is clearly visible that furniture category is not performing up to the marks we can improve the marketing strategy and product quality to increase the cells and profit.

II- In term of region south and Central are not performing that will for south reason we can provide more discount and for Central reason we can focus more on marketing experts.

III- Copiers and phone are our stars are categories whereas art envelope levels fasteners are poor performer.

IV- Shipment mode standard class generate highest sales and profit where's first and second class nearly yelled some result so we can stop second class and keep only first class as this will be give premium experience to customer and will help us to retain them in future.