

SuperStore Data Analysis Dashboard

Project Report: SuperStore Sales Data Analysis Dashboard

1. Introduction

This report details a data analysis project focused on a company's historical SuperStore sales data. The primary objective was to analyze the data to identify key revenue drivers and seasonal trends. The insights gained were then used to create an interactive dashboard to suggest actionable improvements for the business.

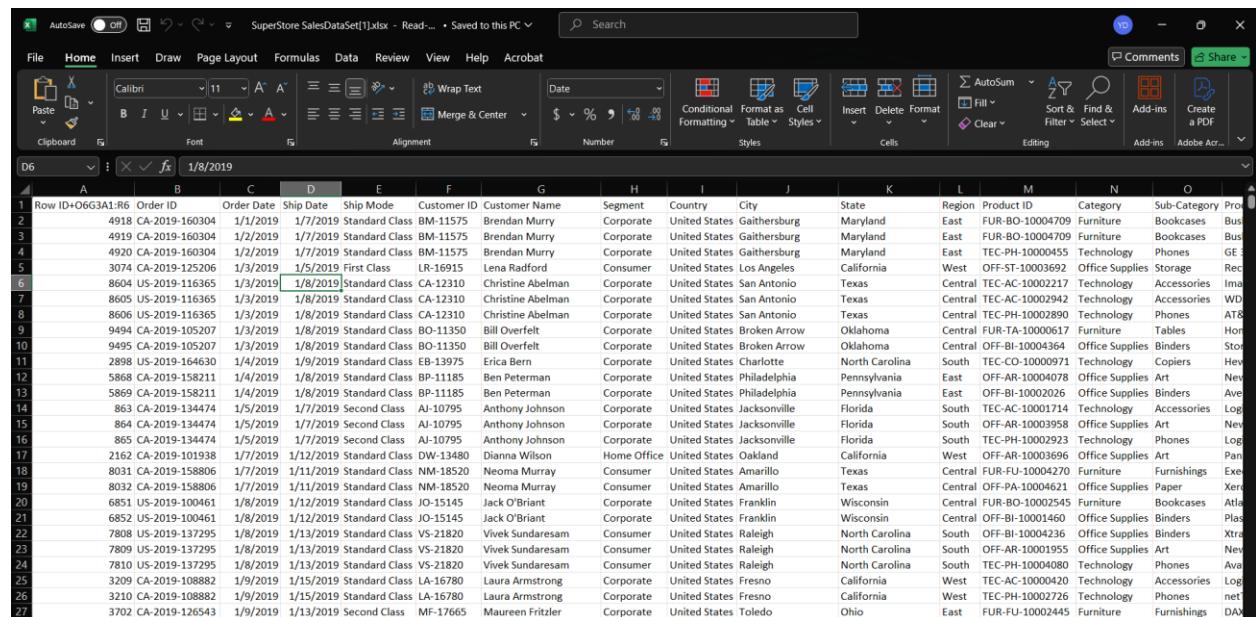
2. Problem Statement

The project addressed the challenge of analyzing the company's historical sales data to identify key revenue drivers, seasonal trends, and suggest actionable improvements. The final report would visualize these insights through interactive dashboards. The report focuses on identifying major Key Performance Indicators (KPIs) such as Total Sales By Month and Total Revenue By Month. It also includes creative dashboards with cards for Total Sales, Revenue, and visualizations of total sales by Location, Brand, Product Name, and Month.

3. Methodology

The project followed a systematic, week-by-week plan to ensure all project goals were met.

Week 1: Data Collection and Cleaning



A screenshot of a Microsoft Excel spreadsheet titled "SuperStore SalesDataSet[1].xlsx". The spreadsheet contains a single data sheet with approximately 27 rows of data. The columns represent various attributes of the sales data, including Row ID, Order ID, Order Date, Ship Date, Ship Mode, Customer ID, Customer Name, Segment, Country, City, State, Region, Product ID, Category, Sub-Category, Profit, and several date and time fields. The data shows transactions from various locations and dates, with products categorized into Technology, Office Supplies, Furniture, and other items. The Excel interface shows standard ribbon tabs like Home, Insert, Page Layout, etc., and a toolbar with various tools for data manipulation.

Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	Country	City	State	Region	Product ID	Category	Sub-Category	Profit	
1	Row ID-O6G3A1-R6	4918 CA-2019-160304	1/1/2019	1/7/2019	Standard Class	BM-11575	Brendan Murry	Corporate	United States	Gaithersburg	Maryland	East	FUR-BO-10004709	Furniture	Bookcases	Business
2		4919 CA-2019-160304	1/2/2019	1/7/2019	Standard Class	BM-11575	Brendan Murry	Corporate	United States	Gaithersburg	Maryland	East	FUR-BO-10004709	Furniture	Bookcases	Business
3		4920 CA-2019-160304	1/2/2019	1/7/2019	Standard Class	BM-11575	Brendan Murry	Corporate	United States	Gaithersburg	Maryland	East	TEC-PH-10000455	Technology	Phones	GE Smartphones
4		3074 CA-2019-125206	1/3/2019	1/5/2019	First Class	LR-16915	Lena Radford	Consumer	United States	Los Angeles	California	West	OFF-ST-10003692	Office Supplies	Storage	Recyclable
5		8604 US-2019-116365	1/3/2019	1/8/2019	Standard Class	CA-12310	Christine Abelman	Corporate	United States	San Antonio	Texas	Central	TEC-AC-10002217	Technology	Accessories	Imaging
6		8605 US-2019-116365	1/3/2019	1/8/2019	Standard Class	CA-12310	Christine Abelman	Corporate	United States	San Antonio	Texas	Central	TEC-AC-10002942	Technology	Accessories	WD External
7		8606 US-2019-116365	1/3/2019	1/8/2019	Standard Class	CA-12310	Christine Abelman	Corporate	United States	San Antonio	Texas	Central	TEC-PH-10002890	Technology	Phones	AT&T
8		9494 CA-2019-105207	1/3/2019	1/8/2019	Standard Class	BO-11350	Bill Overfelt	Corporate	United States	Broken Arrow	Oklahoma	Central	FUR-TA-10000617	Furniture	Tables	Hospitality
9		9495 CA-2019-105207	1/3/2019	1/8/2019	Standard Class	BO-11350	Bill Overfelt	Corporate	United States	Broken Arrow	Oklahoma	Central	OFF-BI-10004364	Office Supplies	Binders	Storage
10		2898 US-2019-164630	1/4/2019	1/9/2019	Standard Class	EB-13975	Erica Bern	Corporate	United States	Charlotte	North Carolina	South	TEC-CO-10000971	Technology	Copiers	Heavy Duty
11		5868 CA-2019-158211	1/4/2019	1/8/2019	Standard Class	BP-11185	Ben Peterman	Corporate	United States	Philadelphia	Pennsylvania	East	OFF-AR-10004078	Office Supplies	Art	New
12		5869 CA-2019-158211	1/4/2019	1/8/2019	Standard Class	BP-11185	Ben Peterman	Corporate	United States	Philadelphia	Pennsylvania	East	OFF-BI-10002026	Office Supplies	Binders	Average
13		863 CA-2019-134474	1/5/2019	1/7/2019	Second Class	AI-10795	Anthony Johnson	Corporate	United States	Jacksonville	Florida	South	TEC-AC-10001714	Technology	Accessories	Logitech
14		864 CA-2019-134474	1/5/2019	1/7/2019	Second Class	AI-10795	Anthony Johnson	Corporate	United States	Jacksonville	Florida	South	OFF-AR-10003958	Office Supplies	Art	New
15		865 CA-2019-134474	1/5/2019	1/7/2019	Second Class	AI-10795	Anthony Johnson	Corporate	United States	Jacksonville	Florida	South	TEC-PH-10002923	Technology	Phones	Logitech
16		2162 CA-2019-101938	1/7/2019	1/12/2019	Standard Class	DW-13480	Dianna Wilson	Home Office	United States	Oakland	California	West	OFF-AR-10003696	Office Supplies	Art	Panels
17		8031 CA-2019-158806	1/7/2019	1/11/2019	Standard Class	NM-18520	Neoma Murray	Consumer	United States	Amarillo	Texas	Central	FUR-FU-10004270	Furniture	Furnishings	Executive
18		8032 CA-2019-158806	1/7/2019	1/11/2019	Standard Class	NM-18520	Neoma Murray	Consumer	United States	Amarillo	Texas	Central	OFF-PA-10004621	Office Supplies	Paper	Xerox
19		6851 US-2019-100461	1/8/2019	1/12/2019	Standard Class	JO-15145	Jack O'Brian	Corporate	United States	Franklin	Wisconsin	Central	FUR-BO-10002545	Furniture	Bookcases	Atlanta
20		6852 US-2019-100461	1/8/2019	1/12/2019	Standard Class	JO-15145	Jack O'Brian	Corporate	United States	Franklin	Wisconsin	Central	OFF-BI-10001460	Office Supplies	Binders	Plastic
21		7808 US-2019-137295	1/8/2019	1/13/2019	Standard Class	VS-21820	Vivek Sundaresam	Consumer	United States	Raleigh	North Carolina	South	OFF-BI-10004236	Office Supplies	Binders	Xtraspace
22		7809 US-2019-137295	1/8/2019	1/13/2019	Standard Class	VS-21820	Vivek Sundaresam	Consumer	United States	Raleigh	North Carolina	South	OFF-AR-10001955	Office Supplies	Art	New
23		7810 US-2019-137295	1/8/2019	1/13/2019	Standard Class	VS-21820	Vivek Sundaresam	Consumer	United States	Raleigh	North Carolina	South	TEC-PH-10004080	Technology	Phones	Ava
24		3209 CA-2019-108882	1/9/2019	1/15/2019	Standard Class	LA-16780	Laura Armstrong	Corporate	United States	Fresno	California	West	TEC-AC-10000420	Technology	Accessories	Logitech
25		3210 CA-2019-108882	1/9/2019	1/15/2019	Standard Class	LA-16780	Laura Armstrong	Corporate	United States	Fresno	California	West	TEC-PH-10002726	Technology	Phones	net
26		3702 CA-2019-126543	1/9/2019	1/13/2019	Second Class	MF-17665	Maureen Fritzler	Corporate	United States	Toledo	Ohio	East	FUR-FU-10002445	Furniture	Furnishings	DAW

Data Collection: Collected the SuperStore sales data.

Data Preprocessing: Performed data preprocessing steps, including removing duplicates and ensuring data consistency.

Formatting: Standardized the date format for the Order Date column to prepare the data for time-series analysis.

Week 2: KPI Identification and Initial Visualization

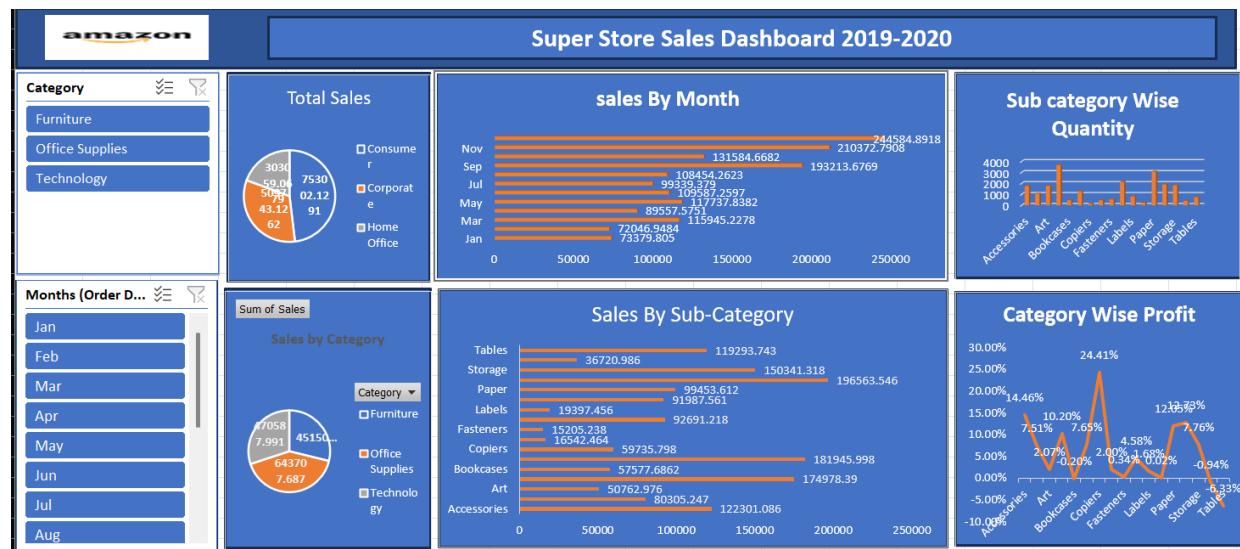
KPIs: Identified key performance indicators, including Total Sales and Total Profit.

Excel Dashboards: Created basic charts in Excel, such as bar charts for sales by sub-category and a line chart for sales by month.

Power BI Basics: Started working with Power BI by importing the sales dataset and building basic reports, including single metric cards for Total Sales and Total Profit, and bar charts for sales by region.

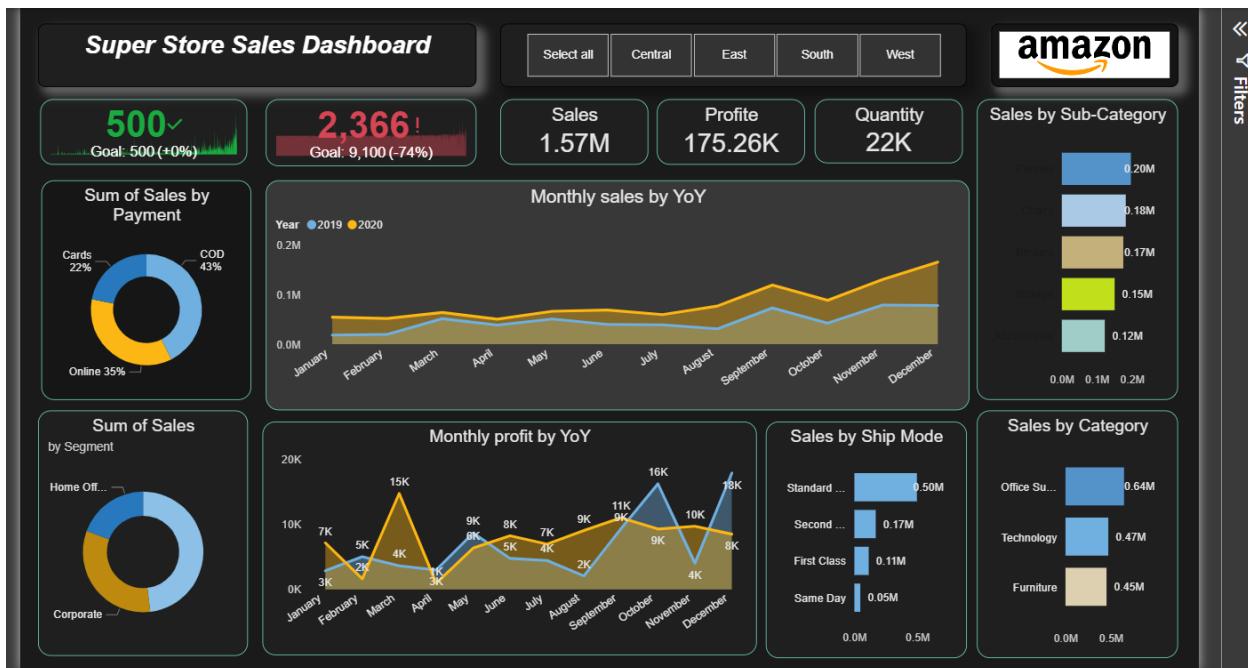
Week 3: Interactive Dashboard Development Using Excel

Dashboard Features: Developed an interactive dashboard in Excel that includes visualizations for total sales by category, month, and region. It also featured cards showing Total Sales and Total Profit. The dashboard incorporated filters for various metrics to allow for detailed analysis.



Week 4: Interactive Dashboard Development Using Power BI

* Dashboard Features: Created a comprehensive and interactive dashboard in Power BI. This dashboard included cards for key metrics like Total Sales and Profit, and visualizations of sales by region, category, and month. It also featured a map visualization showing sales by location.



4. Key Findings and Insights

The dashboard provides an at-a-glance view of the SuperStore's performance through several key charts.

(Place the screenshot of your overall Power BI dashboard here)

a. Key Performance Indicators (KPIs)

The top section of the dashboard highlights the overall performance of the business:

- * Total Sales: This metric shows the combined revenue from all transactions.
- * Total Profit: This metric reveals the overall profitability of the business.
- * Total Quantity: This metric indicates the total number of items sold.

Total Orders: This metric provides a count of the unique transactions.

b. Sales and Profit by Sub-Category

This bar chart is a visual representation of a pivot table with Sub-Category as the rows and Sales and Profit as the values. It reveals top performers and those with high sales but low profit.

(Place the screenshot of your "Sales and Profit by Sub-Category" bar chart here)

c. Sales by Month (in a year)

This line chart visualizes the total sales per month over the recorded years. It helps to identify seasonality in sales.

(Place the screenshot of your "Sales by Month" line chart here)

d. Sales by Region

This geographical map visualizes total sales by Region. It is a powerful way to identify top-performing regions.

(Place the screenshot of your "Sales by Region" map here)

e. Sales by Category

This pie chart provides a percentage breakdown of total sales by product Category. The chart clearly shows which categories are the most dominant in terms of revenue contribution.

(Place the screenshot of your "Sales by Category" pie chart here)

5. Conclusion and Recommendations

This project successfully converted raw sales data into a comprehensive and interactive dashboard, providing valuable insights into SuperStore's performance. The analysis highlights several key areas for strategic focus:

Profitability Optimization: The company should investigate low-profit margins on high-selling sub-categories.

Targeted Marketing: The dashboard confirms that the West and East are the most lucrative regions. The company can leverage this insight by launching targeted marketing campaigns to drive further growth in these areas, while also exploring opportunities for expansion in the underperforming regions.

Seasonal Planning: The clear sales peak in the final quarter of the year can be used to inform inventory management and staffing decisions. The company should ensure it is well-prepared to handle increased demand during this period.

Customer Focus: Further analysis could be done on the different customer segments to understand their purchasing habits and develop specific marketing campaigns for each group.