Brit College of Engineering & Technology (BCET)

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Professional Certificate in Business Data Analytics (Introduction Level)

PORTFOLIO DESIGN, IMPLEMENTATION & EVALUATION

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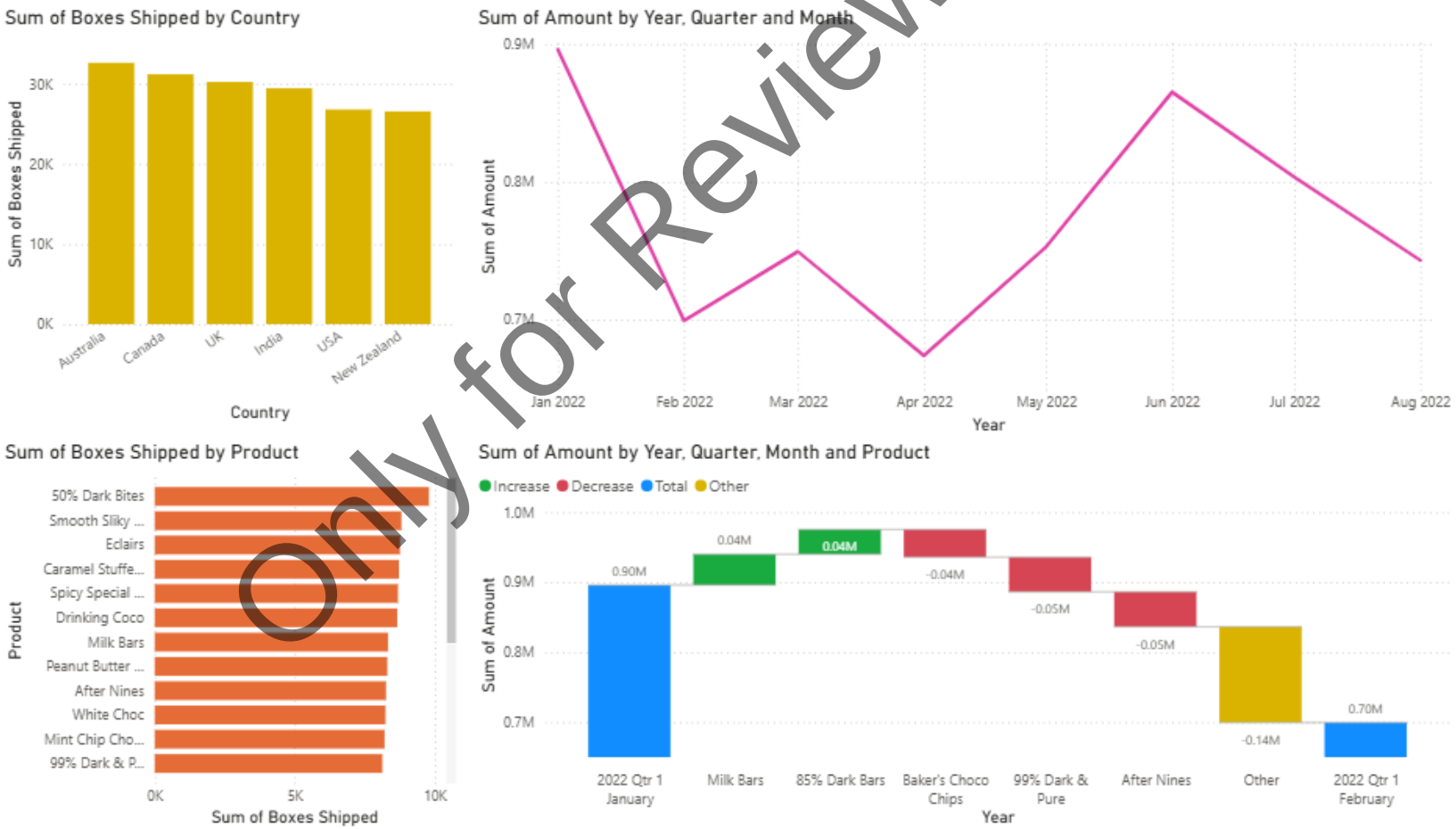
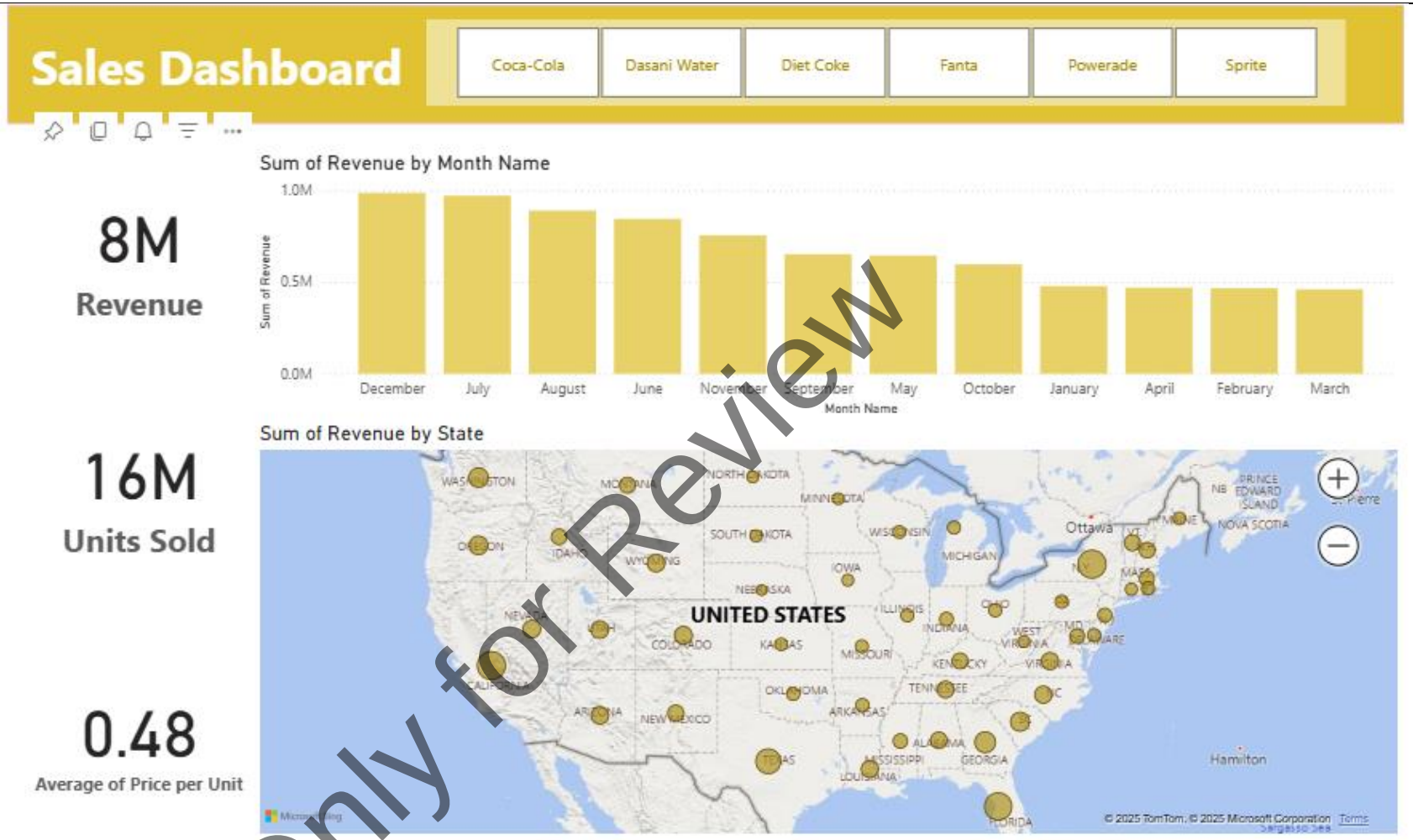
INTRODUCTION	Hello, I'm Md. Al Amin Mridha, a marketing student at Jahangirnagar University with a strong passion for data analytics and visualization. To become a data-driven marketer, I've built intermediate skills in Python, SPSS, Excel, Power BI, and Tableau. I enjoy turning complex data into clear, visual insights that support smart decision-making. With a focus on accuracy, problem-solving, and storytelling, I aim to use data to solve real-world challenges and drive impactful marketing strategies.
RESULTS AND IMPACT (from POWER BI Desktop)	**Task 1: Data Visualization** 

It reveals key insights into the organization's performance. The USA and Canada lead in box shipments, with the USA peaking at 30K units, while New Zealand and India lag, suggesting untapped potential. Top-selling products like "50% Dark Bites" and "Milk Bars" drive nearly 1.0M in revenue, whereas "Drinking Coco" underperforms, indicating a need for repositioning. Sales peaked in Q1 (Jan–Mar) and Q3 (Jul), with a mid-year dip (Apr–Jun), likely due to seasonal trends or campaign gaps. To optimize growth, efforts should focus on high-performing markets, replicate successful strategies in weaker regions, and align promotions with peak demand periods. These findings underscore the direct impact of targeted marketing and administrative decisions on business outcomes.

Task 2: Sales Dashboard

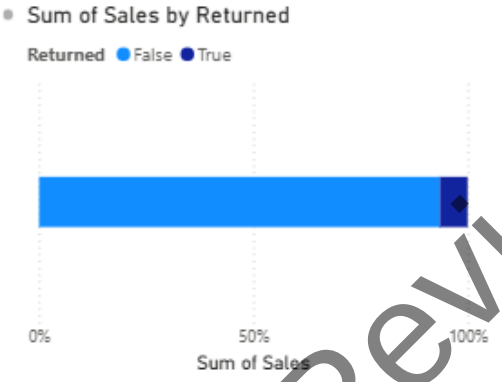


The Sales Dashboard reveals that the organization generated 8 million in revenue and sold 16 million units, demonstrating the success of its marketing and sales strategies. The average price per unit is 0.48, reflecting consistent pricing. Revenue peaked in December, July, and August, indicating effective seasonal promotions or high-demand periods. States like California, Texas, Florida, and New York show the highest revenue contributions, highlighting strong market penetration in key regions. Despite lower sales in early months like

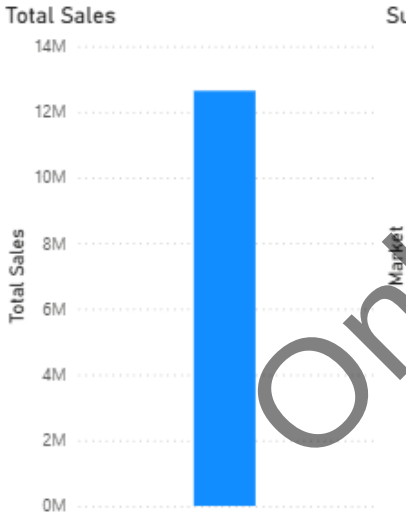
January and February, overall monthly revenue remained stable. The product filter feature allows for brand-specific insights, supporting targeted marketing decisions.

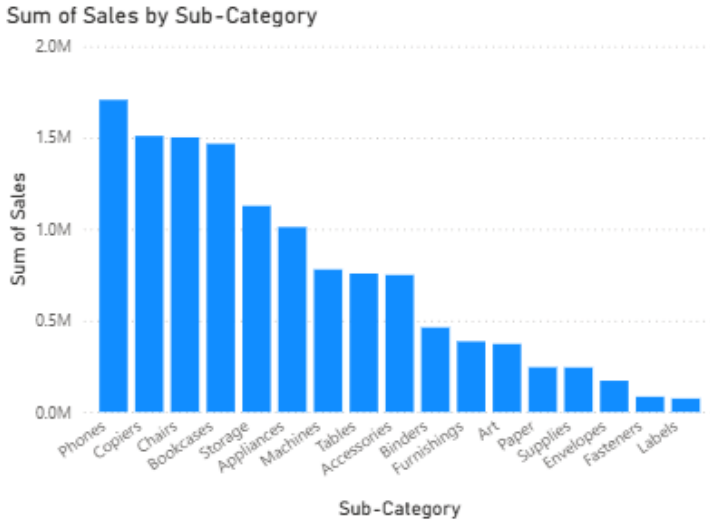
Task 3: Global Superstore Dashboard

Order ID	Returned	Sum of Sales
CA-2011-100762	Yes	508.62
CA-2011-100867	Yes	321.55
CA-2011-102652	Yes	199.99
CA-2011-103373	Yes	779.80
CA-2011-103744	Yes	11.36
CA-2011-103940	Yes	260.79
CA-2011-104829	Yes	21.98
CA-2011-105270	Yes	143.13
CA-2011-108609	Yes	1,421.66
CA-2011-108861	Yes	136.96
CA-2011-109918	Yes	131.84
Total		**12,642,501.91**



Month	2011	2012	2013	2014	Total
January	98,898.49	135,780.72	199,185.91	241,268.56	**241,268.56**
February	91,152.16	100,510.22	167,239.65	184,837.36	**184,837.36**
March	145,729.37	163,076.77	198,594.03	263,100.77	**263,100.77**
April	116,915.76	161,052.27	177,821.32	242,771.86	**242,771.86**
May	146,747.84	208,364.89	260,498.56	288,401.05	**288,401.05**
June	215,207.38	256,175.70	396,519.61	401,814.06	**401,814.06**
July	115,510.42	145,236.79	229,928.95	258,705.68	**258,705.68**
August	207,581.49	303,142.94	326,488.79	456,619.94	**456,619.94**
September	290,214.46	289,389.17	376,619.25	481,157.24	**481,157.24**
October	199,071.26	252,939.85	293,406.64	422,766.63	**422,766.63**
November	298,496.54	323,512.42	373,989.36	555,279.03	**555,279.03**
December	333,925.73	338,256.97	405,454.38	503,143.69	**503,143.69**
Total	**2,259,450.90**	**2,677,438.69**	**3,405,746.45**	**4,299,865.87**	**4,299,865.87**





Here are the measurable outcomes and insights based on the Power BI visualizations and the Excel data:

Total Sales Impact: The organization achieved a total sales figure of $12.6 million, indicating strong market engagement. This reflects successful marketing efforts in driving customer purchases.

Returns Analysis: A small portion of sales was associated with returns, with the majority of sales remaining intact. This indicates high customer satisfaction and effective quality control or fulfillment strategies.

Market Performance: The APAC region led with the highest sales, followed by the EU and US markets. This suggests that marketing campaigns in these regions were more effective or these markets had higher demand.

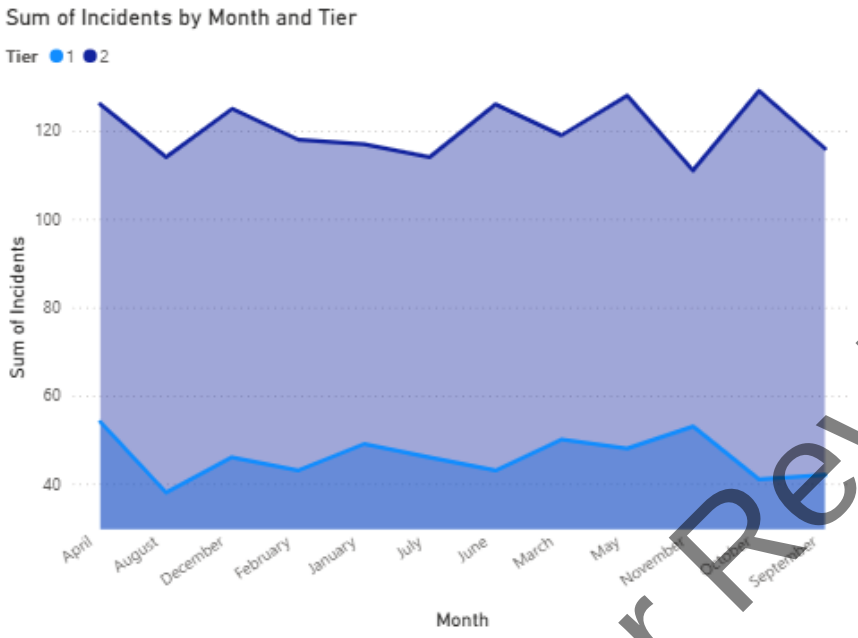
Sales by Sub-Category: Phones, Chairs, and Binders were the top-performing sub-categories, showing that marketing strategies for tech and office furniture were successful. Lesser-performing sub-categories like Copiers and Labels may need reevaluation or targeted promotions.

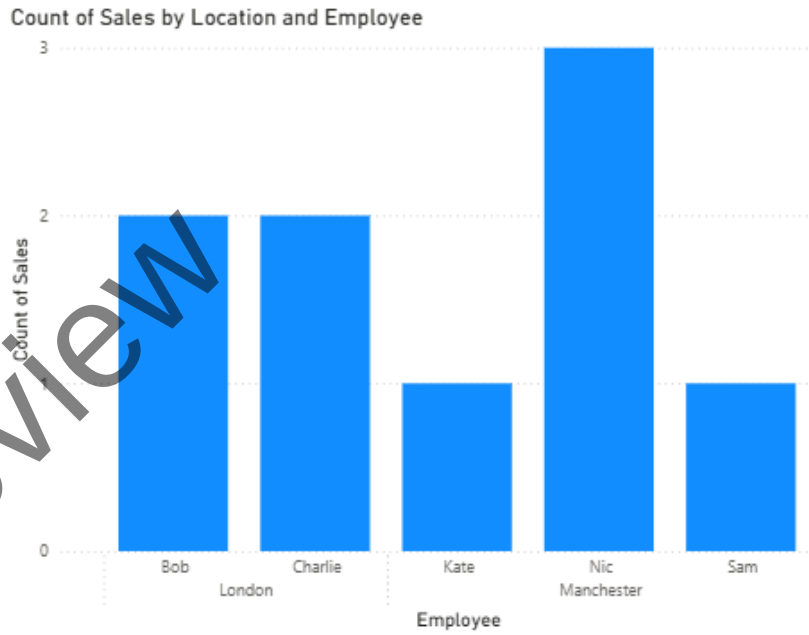
Monthly Trends: Sales consistently increased year-over-year from 2011 to 2014, with the highest total sales in 2014 at nearly $5 million, demonstrating effective long-term administrative planning and campaign management.

Sales Peak Periods: November and December saw peak sales annually, highlighting successful seasonal promotions and year-end campaigns.

These insights demonstrate the effectiveness of both marketing initiatives and administrative strategies in enhancing sales performance, targeting key markets, and ensuring product-category alignment with customer demand.

Task 4: Data Transformation





Here are the key insights from the "Sum of Incidents by Month and Tier" visualization:

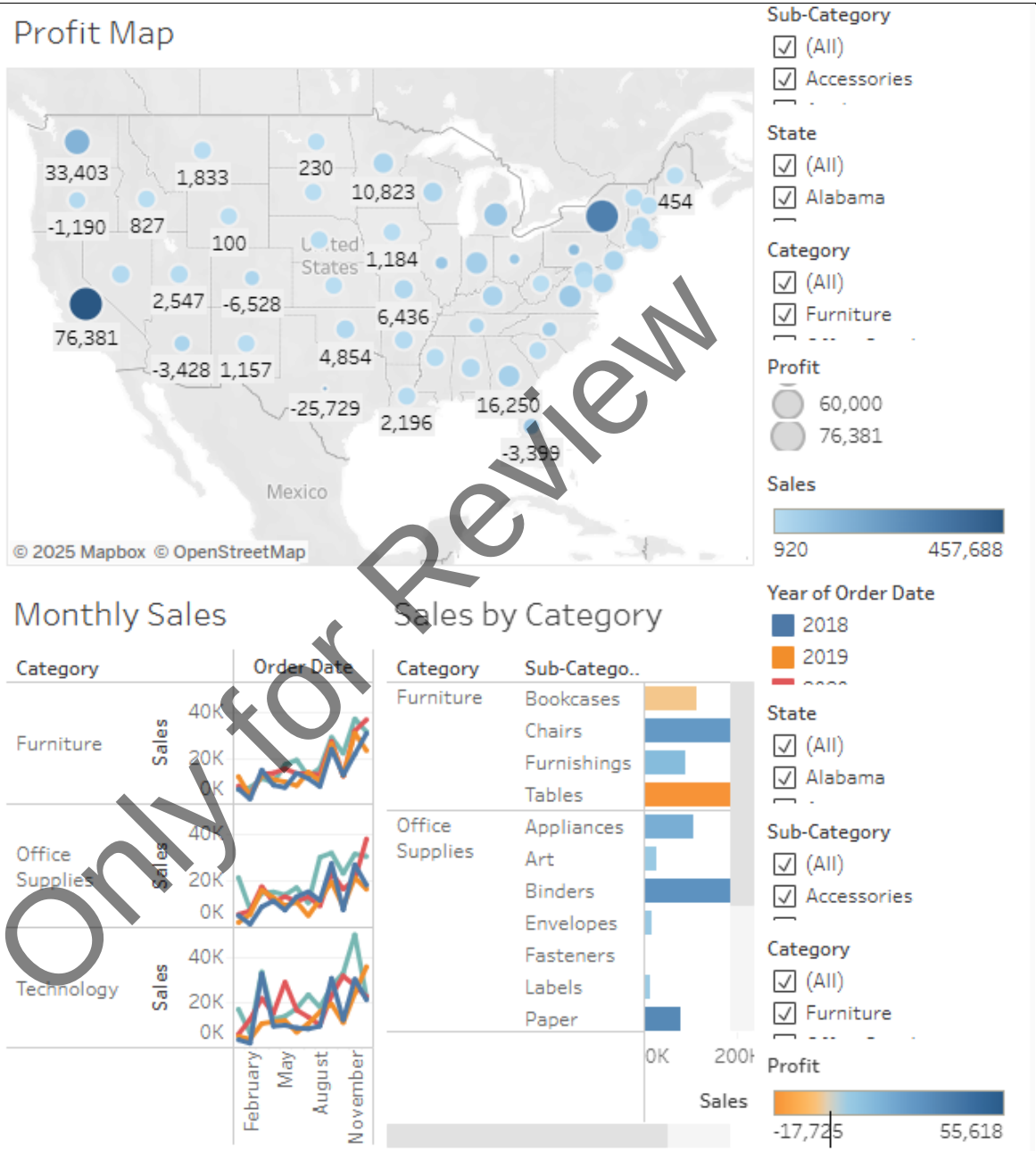
Peak Incident Months: August and December saw the highest incident volumes, likely due to seasonal demand or operational strain, requiring proactive resource allocation.

Critical Issues (Tier 1) Dominance: Tier 1 incidents spiked during peak months, suggesting a need for focused resolution strategies to minimize business disruption.

Employee Involvement: Employees like Bob and Charlie were linked to higher incident counts, indicating either their central role in issue resolution or potential workload imbalances.

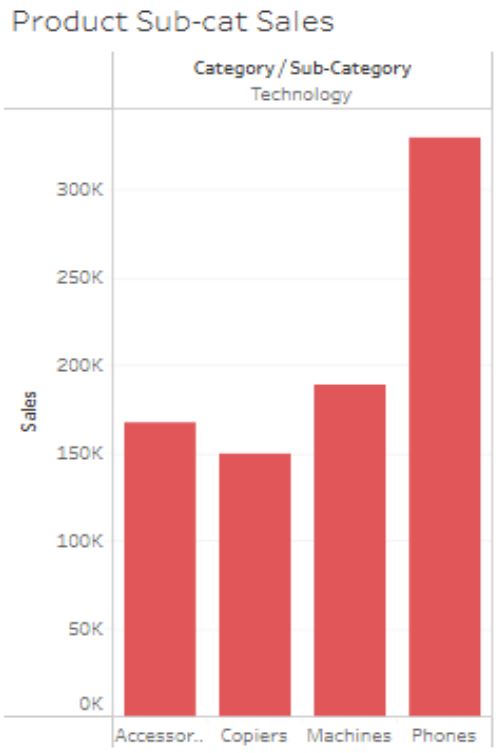
Regional Pattern: Mentions of Manchester hint at location-specific trends, warranting further investigation into regional processes or infrastructure gaps.

	Recommendation: Pair this data with resolution times or cost-per-incident metrics to quantify the operational impact and prioritize improvements.
RESULTS AND IMPACT (from Tableau Desktop)	**Task 1: Sample Superstore Dashboard**



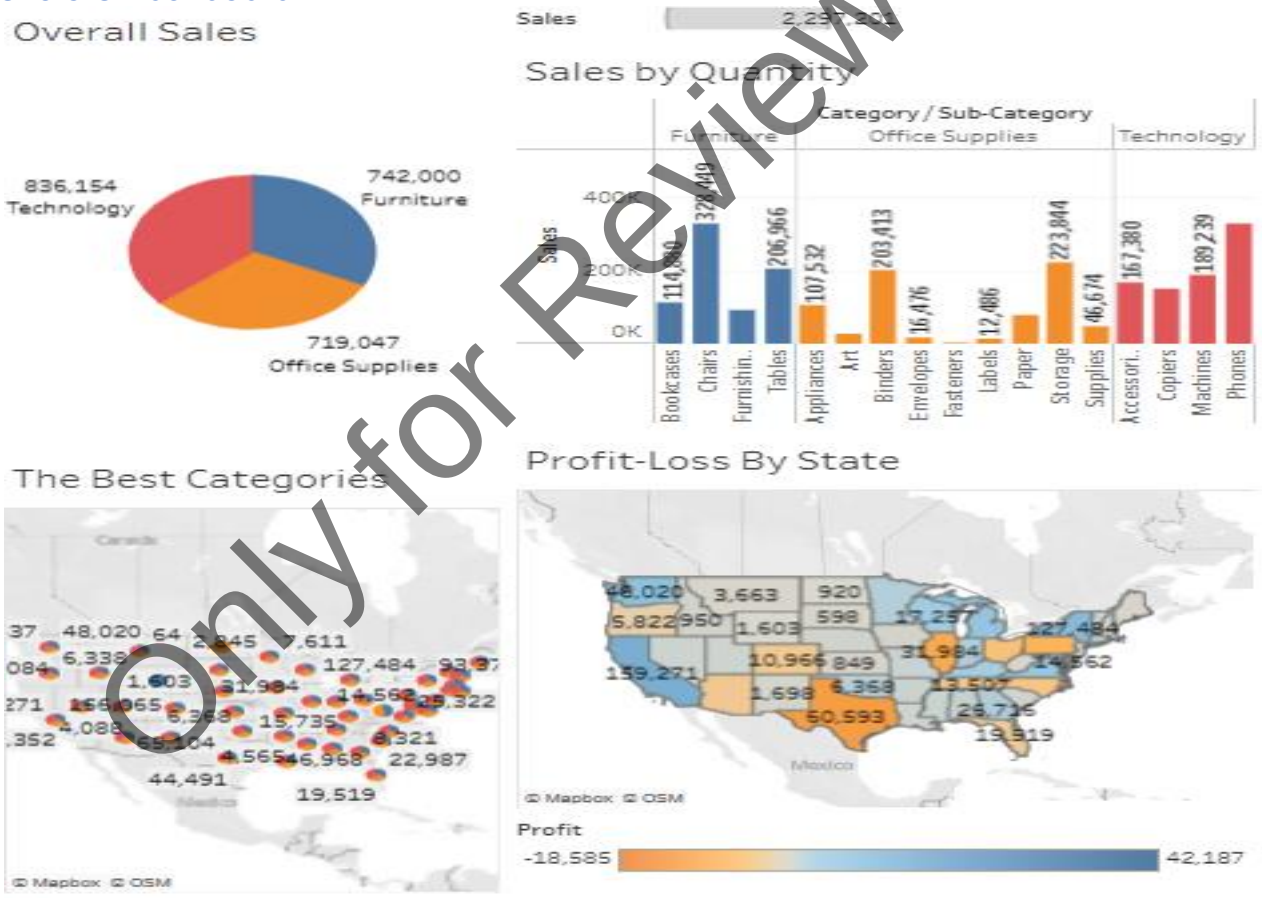
The Profit Map reveals stark regional performance differences, with some states generating profits over 10,000 while others show losses exceeding−25,000, indicating a need for localized strategy adjustments. Monthly sales trends demonstrate consistent performance in Furniture and Office Supplies, while Technology sales fluctuate significantly, suggesting seasonal marketing opportunities. Furniture emerges as the most profitable category at $17,745, with sub-categories like Bookcases and Chairs driving these results. The data highlights that strategic focus on high-performing regions and product categories, combined with corrective measures in underperforming areas, could substantially improve overall profitability. These insights demonstrate how data visualization can pinpoint exactly where marketing and operational efforts should be concentrated for maximum business impact.

Task 2: Super Store - Action Filters



This visualization presents the performance of 'Action Filters'. Using this filter, I have visualized 'Product Category by Sales' and 'Product Sub-Category Sales'. When managers click on any category, they will see the detailed sales amounts of the sub-categories under that category.
In the graph on the right side, the X-axis denotes the supplies by category, and the Y-axis denotes the sales amount of the superstore. After selecting any category, it will display the sub-categories on the X-axis and their corresponding sales amounts on the Y-axis. The graph on the left side shows the outcomes of the action filter.

Task 2: Super Store Dashboard



	The data visualizations reveal several key insights into sales performance and regional profitability. The overall sales total $2,297,201, with Technology contributing the highest revenue at $836,154, followed by Furniture ($742,000) and Office Supplies ($719,047). In terms of sales quantity, Office Supplies dominate, particularly Binders and Paper, suggesting high volume but potentially lower margins. The "Profit-Loss by State" map indicates that some states, such as California and New York, generate high profits (e.g., California at $76,513), while others like Texas and Illinois show significant losses (e.g., Texas at -$50,593), highlighting areas needing strategic reassessment. The "Best Categories" map reinforces that high-performing categories are geographically widespread but concentrated in urban centers. These visual insights can help direct targeted marketing campaigns, improve inventory management, and prioritize high-margin product lines in profitable regions.
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GitHub Profile Link	GitHub Profile: https://github.com/Alamin-19/Business-Data-Analysis
GitLab Profile Link	GitLab Profile: https://gitlab.com/alamin_19-group/Business-Data-Analysis
Conclusions	What I have learned from the 3-day Masterclass sessions: • I gained hands-on experience in building interactive dashboards using Power BI and Tableau. • I learned how to identify key insights from business data, such as top-performing products, peak sales periods, and regional performance gaps. • The use of filters and action features helped me create dynamic reports for deeper data exploration. • I understood how to visualize and interpret profit-loss trends, sales performance, and operational incidents effectively. • Publishing reports on Power BI Service and Tableau Public enhanced my ability to share insights with broader audiences. • Overall, the sessions strengthened my skills in turning raw data into compelling visual stories for informed business decisions.