

Data Visualization: Adidas Business Report

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Abstract— Data visualization is a powerful tool for representing complex information in an intuitive and accessible way. In the commercial world, it has become an important tool for decision-making and understanding relationships within data. Adidas, a multinational sportswear company, is leveraging the power of data visualization to gain insights into its sales and profit growth. A team of business analysts, executives, and marketing professionals at Adidas used data visualization to create interactive graphs and charts to observe the growth trends and make informed decisions. The project used a two-step process that involved formulating a brief and working with the data, resulting in the creation of a dashboard with multiple visualizations. These visualizations provide valuable insights that can be used to forecast future sales and profit growth for the company.

Keywords—data visualization, Tableau, artefacts, curiosities, dashboards

I. INTRODUCTION

Data visualization refers to the graphical representation of information and data. It involves creating charts, graphs, maps, and other types of diagrams to help communicate insights and patterns in data. It is utilised to assist individuals in comprehending complicated information and relationships found in data, as well as in making decisions based on the insights obtained from the graphical representation of the information.[1]. Data visualisations are widely used in many fields, from business and science to politics and public education, due to the general nature of them being effective communication tools especially for large amount of data.

Adidas is a worldwide corporation with its headquarters in Germany that specialises in the design and production of sports and leisure footwear, apparel, and accessories [2]. The company's products can be found in more than 100 countries across the world. The company first began operating in 1949, and in the seven decades that have passed since then, it has developed into one of the most well-known and prosperous sportswear brands in the entire world [2]. The company produces a wide range of goods suitable for participation in a number of sports as well as activities related to everyday life. The company Adidas is well-known for its trademark stripes emblem and its tagline "Impossible is Nothing."

II. FORMULATING THE BRIEF

A. Curiosities

There are four curiosities to be solved in this project:

- What are the sales and profit figures for each state and city?
- Which retailer achieved the highest number of sales?

- What are the sales and profit figures achieved according to product category?
- What is the most popular sales method monthly?

B. Circumstance

Circumstances are the key factors that will affect the critical thinking and ambitions of the projects. There are five important aspects to consider:

1) People

People refers to the audience which includes individuals who are interested in using data to make informed decisions and communicate insights. In this project, Adidas' executives, sales analysts, and marketing team are the main audience that will benefit the most from the insights in the visualizations.

The executives at Adidas who are in charge of making strategic decisions for the company will benefit a lot from the insights as it will help them to identify trends and patterns in their data, which will then enable them to make more informed decisions.

Sales analysts play a crucial role in every company by keeping tabs on sales trends and boosting productivity [3]. By comparing and identifying which items are successful and which are not, analysts can use the dashboard to provide insights into the success of particular goods and markets and make recommendations for the development of future products.

The marketing team at Adidas may improve the company's performance by allocating marketing funds in accordance with the visualizations of profit and sales statistics, which reveals where sales are greatest and where there may be possibilities for growth.

2) Constraint

Constraint refers to pressure or rules set on the project. For this project, there are no specific rules that need to be followed. Therefore, the data chosen for this project is mainly based on how many visualizations can be made from the data.

3) Consumption

Consumption refers to the frequency or setting the upper ups set for the data to be visualized and presented to see the performance. For this project, it is a one-off project, therefore, it is not related to any other visualizations.

4) Deliverables

Deliverables refers to the quantity of the visualizations made or the format the project is presented with. This project is presented in digital copy and there are a total of 12 artefacts created using the data.

5) Resources

Resources refers to the skills and technology needed for the project. The tools used to process and visualize the data are Excel, Python and Tableau.

C. Purpose

Defining the project's purpose in data visualization is crucial in creating effective and meaningful visual representations of data. Good data visualization helps tell or narrate the data stories by curating data into a form that is easier to understand, highlighting the trends and outliers. A good visualization tells a story, removing the noise from data and highlighting useful information [1].

In this study, the artifacts will be produced based on the curiosities stated in the earlier phase, involving two major components: sales and profit. At this project's end, a dashboard consisting of sales and profits reports will be produced as the outcome. The artifacts and dashboard that will be developed will benefit the audience as it provides clear and concise representations of important sales and profit information, allowing the audience, which are the executive, business analyst, and marketing department.

The artifacts' best visual representations consist of the line chart, maps, packed bubble chart, multiple line chart, donut pie chart, and tree maps. All of these artifacts will then be compiled into an interactive dashboard where the audience can use the interactive features to explore the dashboard based on the needs of each audience. For example, the business department can use the region's sales to effectively identify which region is the marketing work.

By clearly defining the purpose of a data visualization project, it can ensure that the outcome, artifact, and dashboard are effective, meaningful, and relevant to the audience. This will result in a visual representation of data that is aesthetically pleasing and useful in achieving specific goals and making informed decisions. Hence, the purpose of this project are as follows:

- To visualize the sales figures for each state and region
- To visualize the top retailer with the highest number of sales and profit gained.
- To observe the sales and profit figures achieved according to product category.
- To determine the most popular sales method monthly.

D. Purpose Map

Data visualization plays a crucial role in helping the audience understand the solution being presented. This is achieved by providing an explanatory, exhibitory and exploratory experience. In the explanatory part, the project highlights all the key findings and annotates everything in the artefacts and dashboard. The exhibitory part displays the visualization, allowing the audience to see the data in a clear

and concise way. In the exploratory part, the project enables the audience to find their own insights by providing filters such as year, location, and region. However, this data project is not a contribute or participate type, as the audience is not allowed to edit or participate in the visualization.

The data is precise and efficient as it only captures the reading elements and not the feeling elements, as the data is not interpreted in terms of video but is only visualized as artefacts and dashboards.

Table 1 Purpose Map

PURPOSE MAP						
		EXPLANATORY (Highlight key findings)		EXHIBITORY (in between)	EXPLORATORY (Help the audience to find their own insight)	
		Sequence / drama	Annotate / describe	Display	Manipulate / interrogate	Participate / contribute
READING	Efficient / precision		✓	✓	✓	
FEELING	Emotive / big picture					

E. Ideas and Inspiration

The ideas and inspirations behind creating the Adidas sales and profit dashboard come from the desire for a clean, organized, and visually appealing representation of the company's sales and profit data. Growth, performance, trends, and profitability keywords guide the design. The aim is to provide a comprehensive overview of the company's financial status, including total sales, profit margins, sales by region, and product line performance. The dashboard may include interactive elements such as filters for deeper data analysis. The ultimate goal is to create an informative and user-friendly dashboard that provides key insights into the company's financial performance and assists decision-making.

The idea of the dashboard design in this project was created from the source that display trendlines, line charts, percentages, and more.

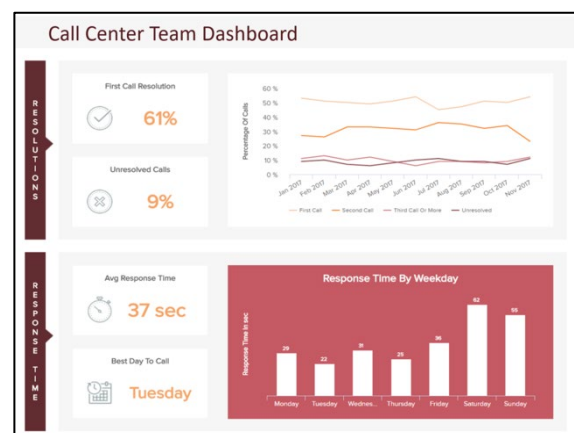


Figure 1 Call Center Team Dashboard [4]

The main color palette used to construct the dashboard is based on Adidas' color theme: black & white. With the addition of the blue, it will make the artefacts and the

dashboard appear attractive. The visualizations made will follow the data visualizations techniques which are interactivity, annotation, colour and the composition. Three main principles involved in this project which are trustworthy, accessible and elegance. Below are the sketches for the dashboards.

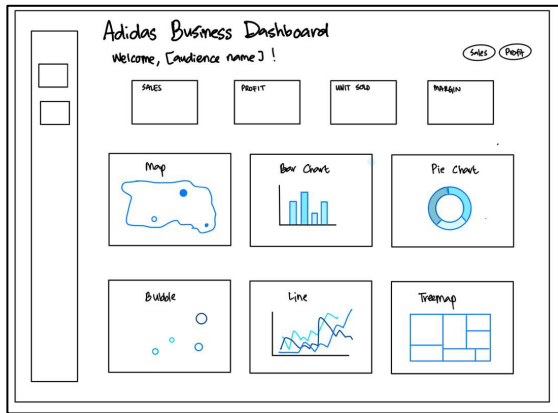


Figure 2 Sketches for the Dashboard

III. WORKING WITH THE DATA

Gathering the data would be the first step to initiate the process of working with data in a data visualization process. Working with data is a crucial step in visualization as it ensures the reliability of the data acquired. Additionally, it is important to prepare the data prior to the visualizing process to avoid any inaccuracies or biased outcome that can influence the visualization made. This subtopic discusses the activities carried out during the process of working with data in this project, including data acquisition, data examination, data transformation and exploratory data analysis.

A. Data Acquisition

Data acquisition involves obtaining data from different origins using various methods. For this project, the data is acquired from Kaggle, using this link (<https://www.kaggle.com/datasets/heemalichaudhari/adidas-sales-dataset>). This data is created in January 2023 and includes the sales dataset of Adidas Sales in United States from 2020 to 2021.

B. Data Examination

After acquiring data, the next step involves examining it thoroughly. Data examination analyses the various elements that determine the structure, scope and quality of the data, which would be important for visualizers to familiarize with the primary properties of the data. Understanding the information, the data is withholding, the quantity and the types of attribute as well as its format is all part of examining the data.

This dataset contains 9648 rows and 13 attributes and information such as the number of units sold, the total sales revenue, the location of the sales, the type of product sold and any other relevant information. There are 7 nominal attributes and 6 numerical attributes. The table below shows the description of the attributes of this dataset.

Table 2 Description of the Data

Attributes (Columns)	Data Type	Example values
Retailer	String	Foot Locker
Retailer ID	Integer	1185732
Invoice Date	Date	23/07/2020
Region	String	Northeast
State	String	New York
City	String	New York
Product	String	Women's Footwear
Price per Unit	Float	\$40.00
Units Sold	Integer	950
Total Sales	Integer	\$380,000
Operating Profit	Integer	\$133,000
Operating Margin	Percentage	35%
Sales Method	String	Outlet

C. Data Transformation

A better understanding of the data is acquired by completing the data examination, hence, assisting visualizers to perform the necessary steps to be performed in the data to ensure its trustworthiness to be visualized. Any changes or improvements to the data should be reported and possibly explained to the audience to maintain the integrity of the design. The data transformation involved in this project are cleaning the data, by checking for missing values and handling outliers. Outliers can be described as extreme values that differs significantly from the overall pattern in the dataset. The data cleaning process in this project is carried out using Python in Jupyter Notebook. Initially, important Python libraries are imported into the notebook.

```

import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

```

Figure 3 Imported Python Libraries

The data is retrieved into the notebook and the first five samples are displayed to see the overview of the dataset.

	Retailer	Retailer ID	Invoice Date	Region	State	City	Product	Price per Unit	Units Sold	Total Sales	Operating Profit	Operating Margin	Sales Method
0	Foot Locker	1185732	01/01/2020	Northeast	New York	New York	Men's Street Footwear	50	1200	600000	300000	0.50	In-store
1	Foot Locker	1185732	02/01/2020	Northeast	New York	New York	Men's Athletic Footwear	50	1000	500000	150000	0.30	In-store
2	Foot Locker	1185732	03/01/2020	Northeast	New York	New York	Women's Street Footwear	40	1000	400000	140000	0.35	In-store
3	Foot Locker	1185732	04/01/2020	Northeast	New York	New York	Women's Athletic Footwear	45	850	382500	133875	0.35	In-store
4	Foot Locker	1185732	05/01/2020	Northeast	New York	New York	Men's Apparel	60	900	540000	162000	0.30	In-store

Figure 4 Sample of the Dataset

Each data is then displayed along with its data type, to observe the type of data value in each attribute. The shape of data is also presented,

Retailer	object
Retailer ID	int64
Invoice Date	object
Region	object
State	object
City	object
Product	object
Price per Unit	int64
Units Sold	int64
Total Sales	int64
Operating Profit	int64
Operating Margin	float64
Sales Method	object
dtype:	object

Figure 5 Data Types for Each Attribute

(9648, 13)

Figure 6 Dimension of Dataset

It can be observed that this dataset has 7 nominal attributes and 6 numerical attributes consists of 9648 observations (rows) and 13 attributes (columns).

Next, the dataset is checked for missing values. Two outputs were presented to analyse the presence of missing values, one displays the Boolean value for each attribute, where True implies there are missing values and False implies there are no missing values, while the other output displays the sum of missing values in each attribute (if there is any).

Retailer	False	Retailer	0
Retailer ID	False	Retailer ID	0
Invoice Date	False	Invoice Date	0
Region	False	Region	0
State	False	State	0
City	False	City	0
Product	False	Product	0
Price per Unit	False	Price per Unit	0
Units Sold	False	Units Sold	0
Total Sales	False	Total Sales	0
Operating Profit	False	Operating Profit	0
Operating Margin	False	Operating Margin	0
Sales Method	False	Sales Method	0
dtype: bool		dtype: int64	

Figure 7 Checking for Missing Values

Based on these outputs, it can be inferred that this dataset contains no missing values. The next process includes checking for outliers in numerical attributes. A figure containing the boxplots for numerical attributes are displayed to see the distribution of each boxplot.

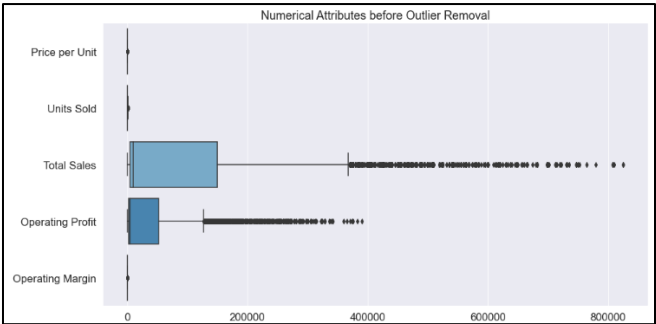


Figure 8 Numerical Attributes before Outlier Removal

Based on the figure above, it can be inferred that there are outliers residing in these attributes. So, it would be essential to remove them to prevent any redundancy in the dataset. The first attribute chosen to remove the outlier is the “Price per Unit”. The image below shows the boxplot before removing the outlier for this attribute and after removing the attribute, for comparison.

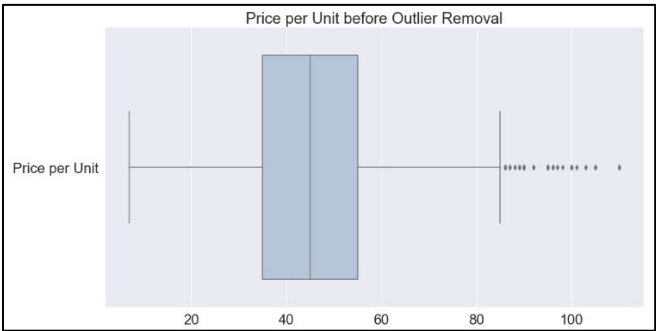


Figure 9 Price per Unit before Outlier Removal



Figure 10 Price per Unit after Outlier Removal

From the comparison made for “Price per Unit”, it can be seen that there are no outliers that can be seen after removal as compared to the image before removal. To confirm this, the dataset rows has been reduced from 9648 to 9567.

The second attribute chosen to remove the outlier is the “Units Sold”. The image below shows the boxplot before removing the outlier for this attribute and after removing the attribute, for comparison.

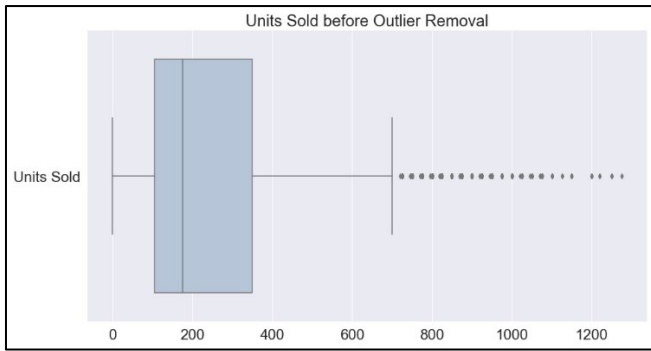


Figure 11 Units Sold before Outlier Removal



Figure 12 Units Sold after Outlier Removal

From the comparison made for “Units Sold”, it can be seen that there are no outliers that can be seen after removal as compared to the image before removal. To confirm this, the dataset rows has been reduced from 9567 to 8907.

The third attribute chosen to remove the outlier is the “Total Sales”. The image below shows the boxplot before removing the outlier for this attribute and after removing the attribute, for comparison.

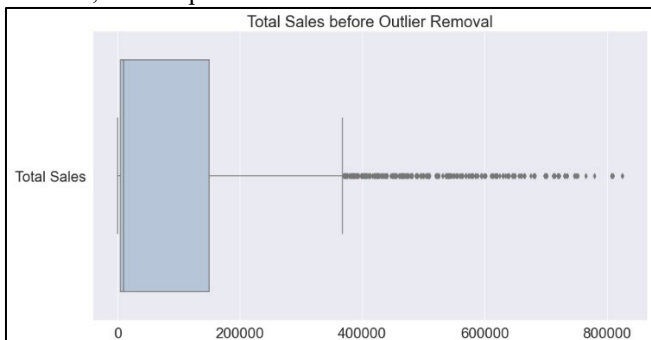


Figure 13 Total Sales before Outlier Removal

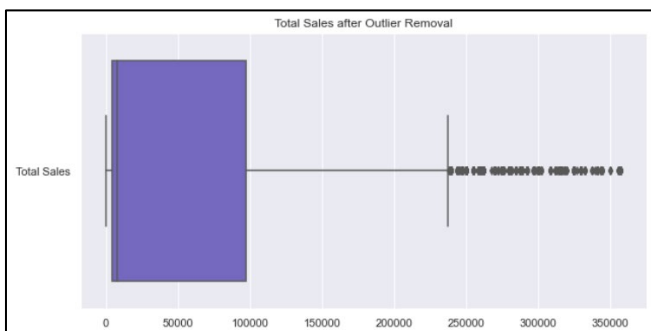


Figure 14 Total Sales after Outlier Removal

From the boxplots generated made for “Total Sale”, it can be seen that the number of outliers has been reduced that can be seen after removal in comparison to the image before removal. To confirm this, the dataset rows has been reduced from 8907 to 8741.

Next, the attributes involved in outlier removal would be the “Operating Profit” attribute. Two boxplots were generated to compare the attribute’s boxplot before removing the outlier for this attribute and after removing the attribute.

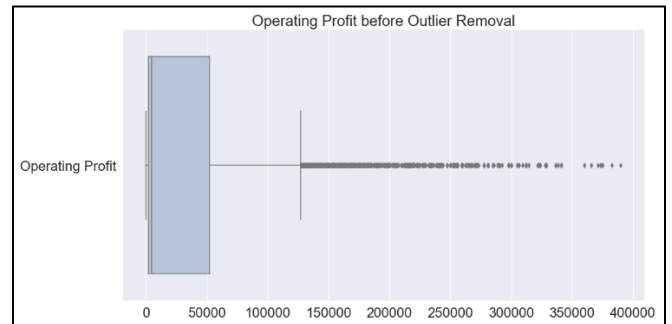


Figure 15 Operating Profit before Outlier Removal

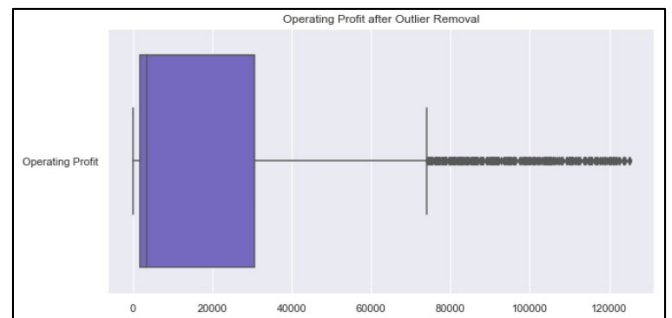


Figure 16 Operating Profit after Outlier Removal

Based the boxplots generated made for “Operating Profit”, it can be observed that the number of outliers has been reduced that can be seen after removal in comparison to the image before removal. To confirm this, the dataset rows has been reduced from 8741 to 8610.

“Operating Margin” is the last attribute to perform outlier removal. Two boxplots were created to visualize the distribution of the attribute before removing the outliers and after removing the outliers.

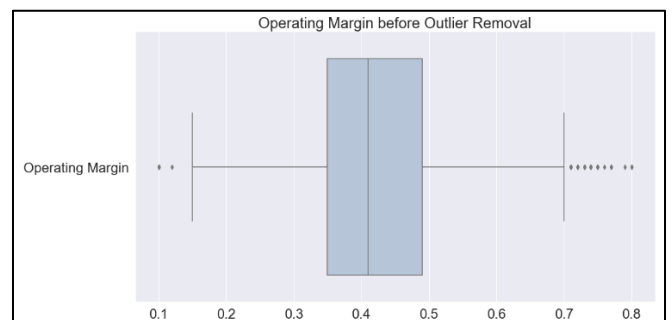


Figure 17 Operating Margin before Outlier Removal

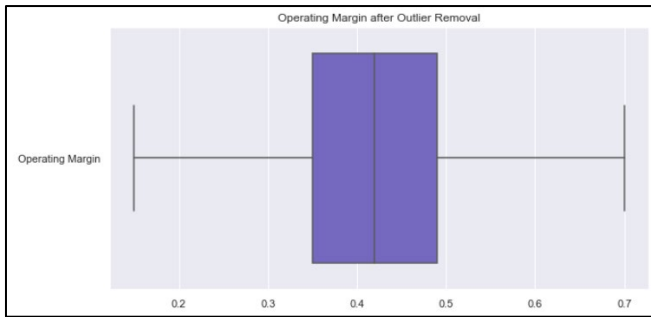


Figure 18 Operating Margin after Outlier Removal

From the boxplots generated made for “Operating Margin”, it can be seen that the number of outliers has been reduced that can be seen after removal in comparison to the image before removal. To confirm this, the dataset rows has been reduced from 8741 to 8570.

By checking for missing values and handling outliers, the dataset is cleaned and can be used for visualization. It can be ensured that there is no redundancy in the visualizations made since there are no missing value and outliers.

D. Data Exploration

Data exploration is the process of further examining the data so that visualizers have every chance of learning any prospective insights and qualities to comprehend what the data may offer. The significance of data exploration prior to applying visualization tools is that it complements statistical procedures highlighted in data exploration as a way to learn more about the properties and insights concealed in the data. For this project, the Exploratory Data Analysis (EDA) is made using other attributes based on the total units sold and the visualizations are constructed using Tableau.

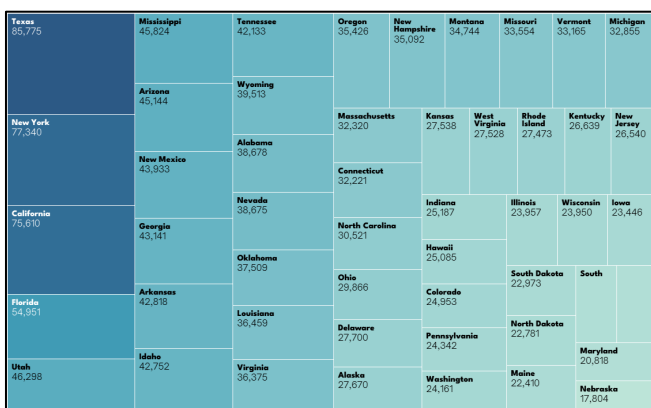


Figure 19 Units Sold by State

The figure above shows a tree map chart representing the total of units sold according to each state from 2020 to 2021. The darker the shade implies higher units sold in that state. Based on the tree map chart, it can be indicated that the Texas state has the highest units sold compared to other states, with a total of 86,775. The second highest units sold can be seen in New York, followed by California, Florida and Utah.

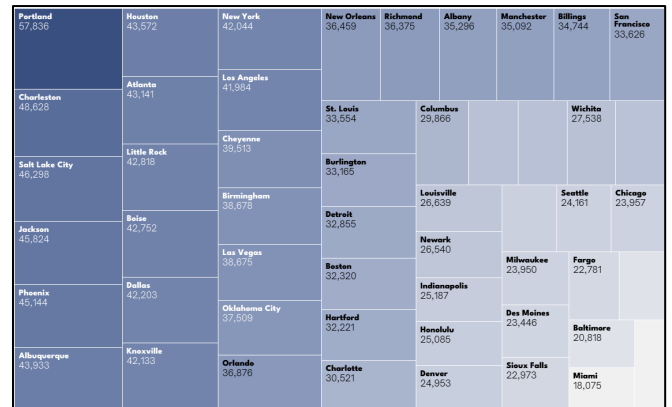


Figure 20 Units Sold by City

The figure above shows a tree map chart representing the total of units sold according to each city from 2020 to 2021. The darker the shade implies higher units sold in that state. Based on the tree map chart, it can be indicated that the city of Portland has the highest units sold compared to other cities, with a total of 57,836. The second highest units sold can be seen in Charleston, followed by Salt Lake City, Jackson and Albuquerque.

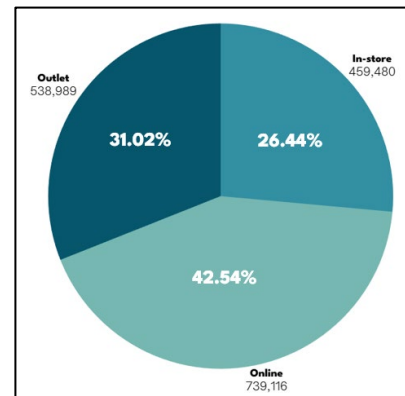


Figure 21 Units Sold by Sales Method

The pie chart represents the percentage of the units sold according to the sales method. The *Online* sales method has the highest total of units sold, with a value of 739,116, incorporating 42.54% of the total units sold. The second highest sale method is *outlet*, while the lowest is the *in-store* sales method.

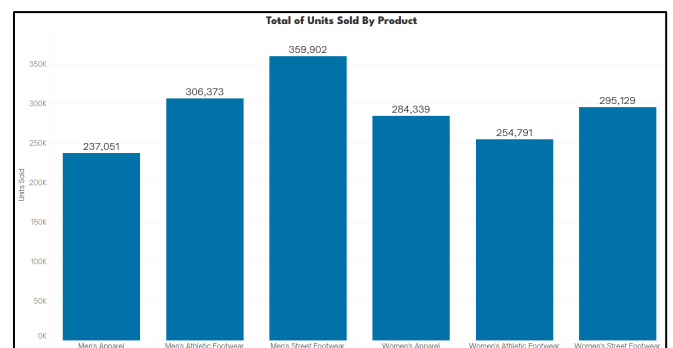


Figure 22 Units Sold by Products

The bar chart above represents the total of units sold according to products. It can be observed that the highest unit sold resides in Men's Street Footwear, with a total of

359,902. Meanwhile, the lowest unit sold resides in Men's Apparel, with a total of 237,051.

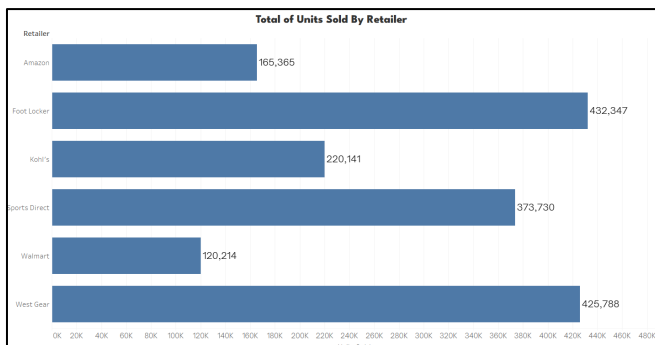


Figure 23 Units Sold by Retailer

The distribution of units sold by retailer is constructed using a horizontal bar chart. From the chart above, it can be inferred that Foot Locker has the highest total of units sold, incorporating 432,347 units. However, Walmart has the lowest units sold, with a total of 120,214.

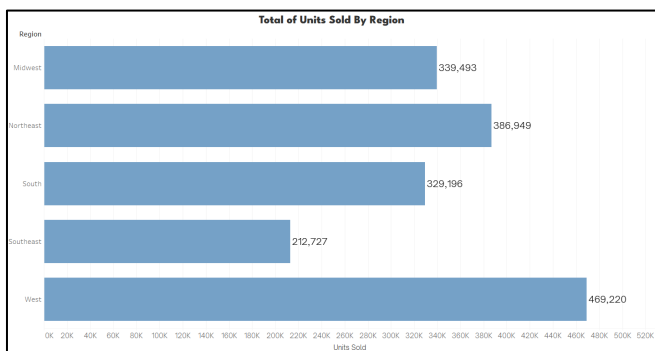


Figure 24 Units Sold by Region

The distribution of units sold according to region is constructed using a horizontal bar chart. From the chart above, it can be inferred that the West region has the highest total of units sold, incorporating 469,220 units. However, the Southeast region has the lowest units sold, with a total of 212,727.

By visualizing the attributes in EDA, the patterns and distribution of the total of Adidas units sold from 2020 to 2021 according to other attributes can be determined. By performing data exploration, visualizers can obtain more insights on the data that can contribute to the creation of dashboard.

IV. ARTEFACTS

A. Sales

1) Sales by Location

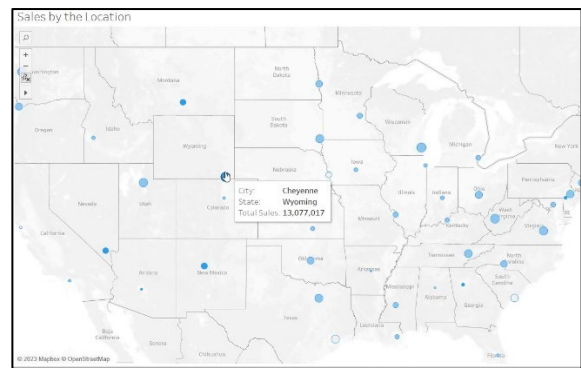


Figure 25 Sales by Location

The number of sales by the location also represented in the chart with the use of the map in the United States. By hovering through the map, It shows the city, state and the total number of sales. The darkest colour of the shade, the highest the number of the sales.

2) Sales by Product

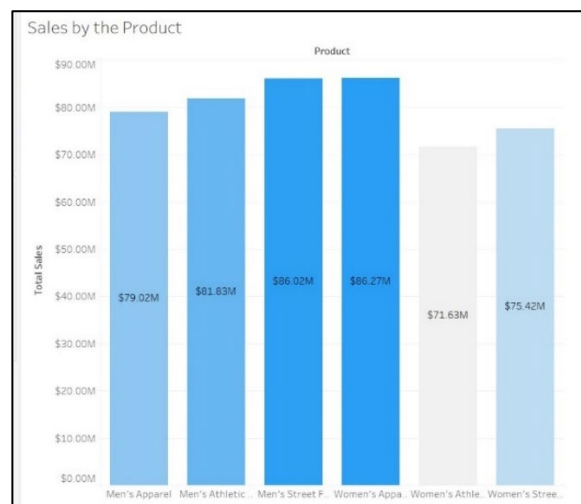


Figure 26 Sales by Product

The Sales by Product bar graph in the Sales dashboard allows the audience to view the total sales of each product represented by a blue gradient color, with the darkest shade representing the highest sales. Women's apparel had the highest total sales of 86.27% while women's athletic footwear had the lowest with \$71.63M. By hovering over the chart, the audience can filter other visualizers in the dashboard based on the selected product.

3) Sales Percentage by Sales Method

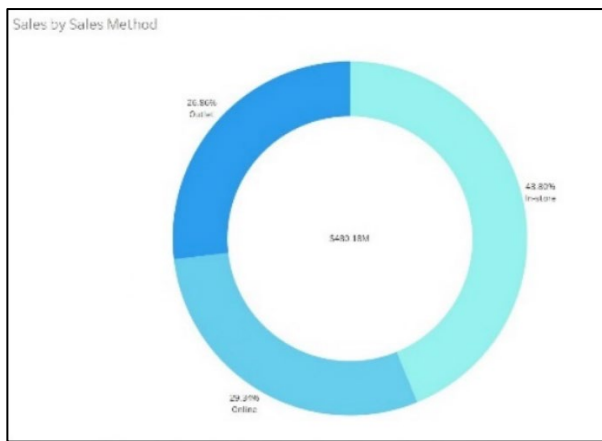


Figure 27 Percentage of Sales by Sales Method

The Number of Sales by Sales Method represented by the donut pie chart in the Sales dashboard allows the audience to view the percentage and the total sales of each sales method consist of outlet, online, in-store represented by three shades of blue respectively. The highest sales method is 43.80% in-store while 29.34% for online and 26.86% for outlet. By hovering and click over the chart, the audience can filter other visualizations in the dashboard based on the selected sales method as it automatically updates the whole dashboard.

4) Sales by Region

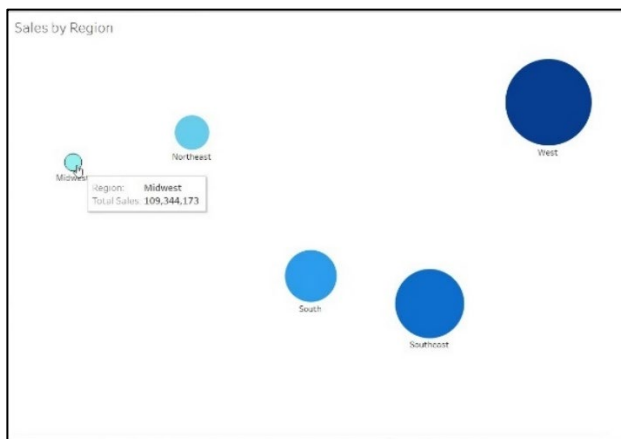


Figure 28 Sales by the Region

Next, the packed bubble chart consist of the region represents the number of sales by the region. It is visualized with the colour and the size of the bubble. The bigger and the darker the size of the bubbles, the highest the sales are. Thus, West is the highest number of sales and the lowest is Midwest.

5) Sales by Monthly Sales Method

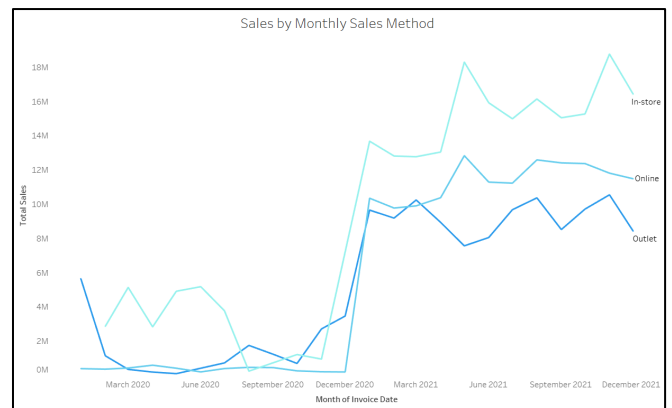


Figure 29 Sales by Monthly Sales Method

The visualization above represents the Sales by Monthly Sales method chart included in the Sales dashboard. Each line in the chart represents the sales method. It can be observed that the three methods have a similar pattern of decrease from March 2020 to December 2020 and a similar pattern of increasing around December 2020. The highest total sales can be seen in the *In-store* sales method from December 2020 to December 2021.

Using this visualization, audience can filter the other visualizations in the dashboard according to the value of Sales Method. For example, users can click on the *Online* line in the chart to filter the values in other charts to show the *Online* sales by location, product, region or retailer.

6) Sales by Retailer

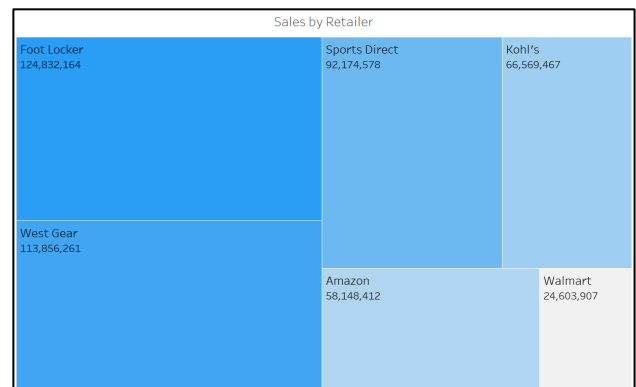


Figure 30 Sales by Retailer

The figure above represents the Sales by Retailer visualization, which is represented as a tree map chart in the dashboard. For this visualization, the darker the shade indicates that the retailer has a higher sales amount. It can be deduced that *West Gear* has the highest sales from 2020 to 2021, with a total of \$4,745,000. However, the lowest sales can be observed in *Kohl's* with a total of \$1,611,250.

The audience can filter the other visualizations in the dashboard according to the value of Retailer using this visualization. For example, users can click on the *Foot Locker* section in the tree map chart to filter the values in other charts to show the *Foot Locker* total sales by location, product, region or sales method.

B. Profit

1) Profit by Location

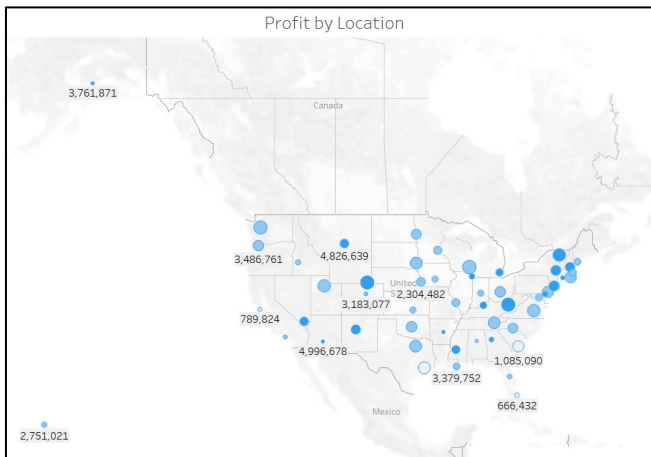


Figure 31 Profit by Location

The map visualization in the dashboard represents the profit accumulated according to location, which consists of city and state. For this visualization, each circle represents a location and the darker the shade indicates that the location has a higher profit amount. It can be observed that Phoenix, Arizona has the highest operating profit from 2020 to 2021, with a total of \$4,996,678. The second highest operating profit can be seen in Billings, Montana, with a total of \$4,826,639.

Using this visualization, audience can filter the other visualizations in the dashboard according to the value of Location. For example, users can click on the circle representing Phoenix, Arizona in the map chart to filter the values in other charts to show the profit generated by product, region, sales method or retailer.

2) Profit by Product

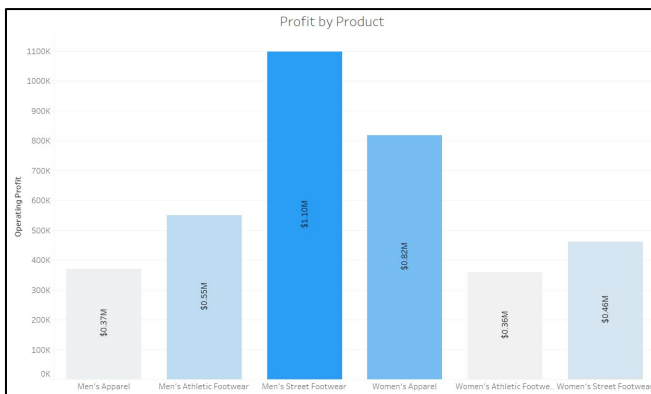


Figure 32 Profit by Product

The figure above represents the Profit by product visualization, which is represented as a bar chart in the dashboard. For this visualization, the darker the shade indicates that the product has a higher amount of profit. It can be observed that *Men's Street Footwear* has the highest profit from 2020 to 2021, with a total of \$1.10 million. However, the lowest amount of profit can be observed in *Women's Athletic Footwear* with a total of \$0.36 million.

The audience can filter the other visualizations in the dashboard according to the value of Product using this visualization. For example, users can click on the *Women's Apparel* column in the bar chart to filter the values in other charts to show the *Women's Apparel* total profit by location, region, sales method or retailer.

3) Profit by Sales Method

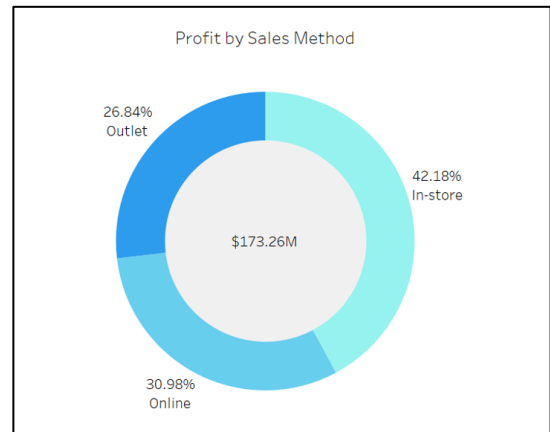


Figure 33 Profit by Sales Method

The pie chart visualizes the profit gained for three different sales method. Each of the sales method is represented by the size of the segment, in which the bigger the segment, the higher the profit gained. In-store method apparently has the highest profit which is 42.18% from the total profit of \$173.26M.

The audience can use this visualization to filter the other charts on the dashboard based on the profit by Sales Method. By selecting the *In-store* slice of the pie chart, for instance, users can filter out all the data presented in the other dashboard visualizations based to *In-store*.

4) Profit by Region

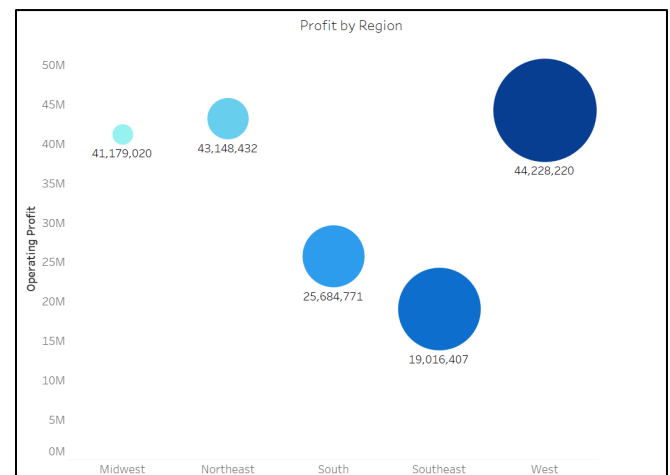


Figure 34 Profit by Region

The bubble chart visualizes the profit gained for each region. Each of the region is represented by different shades of blue. From the chart, it can be seen clearly that West region tops the performance of the total profit with \$44,228,220. However, *Midwest* and *Northeast* regions are not far behind

with only a difference of one to two million compared to *West* region.

The audience can use this visualization to filter the other charts on the dashboard based on the profit by region. By selecting the *West* bubble on the chart, for instance, users can filter out all the data presented in the other dashboard visualizations based to *West* region.

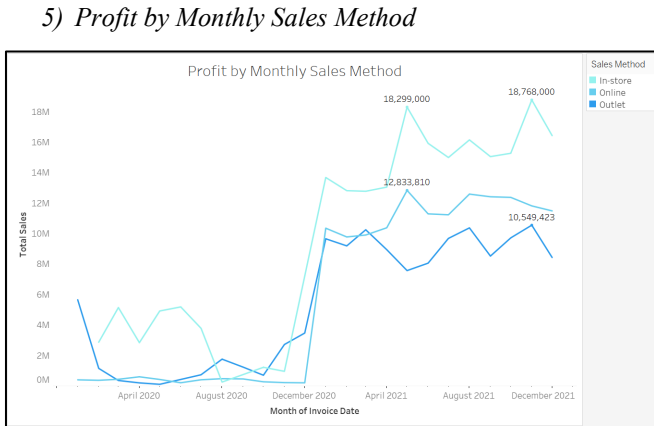


Figure 35 Profit by Monthly Sales Method

The line chart visualizes the profit gained by Adidas based on monthly sales method. Each of the region is represented by different sales method which are *In-store*, *Online* and *Outlet*. The legends for the colors are shown at the side of the chart to avoid confusion for the users. From the chart, In-store sales method managed to dominate the chart for most of the months with the highest being \$18,768,000 meanwhile Outlet sales method shows an unstable performance from month ot month.

The audience can use this visualization to filter the other charts on the dashboard based on the profit of monthly Sales Method. By selecting one of the points on the chart, users can filter out all the data presented in the other dashboard visualizations based to the profit on the exact month.

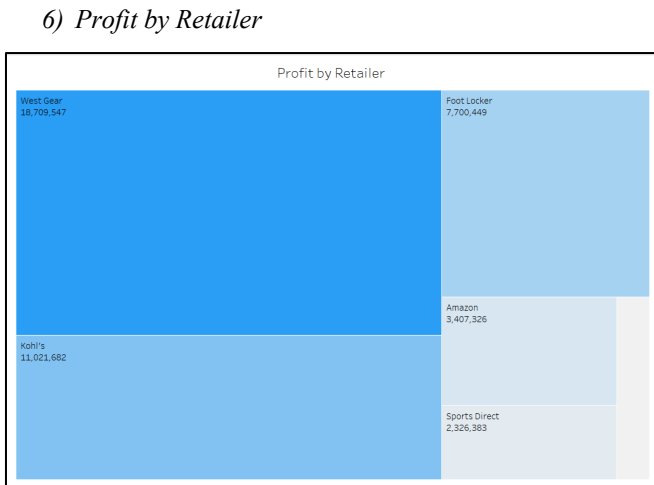


Figure 36 Profit by Retailer

The tree map visualizes the profit gained by each retailer. Six retailers in the dataset which are Foot Locker, West Gear,

Sports Direct, Amazon, Kohl's and Walmart are represented by different shades of blue. The value of profit for each retailer is represented by the size of the box. The bigger the box, the higher is the total profit the retailer gained. From the visualization, Foot Locker retailer gained the highest profit of \$18,709,547 compared to other retailers. The difference of their profits can be clearly observed by the significant size difference the boxes.

The audience can use this visualization to filter the other charts on the dashboard based on the profit by Retailer. By selecting the *Foot Locker* box on the tree map, for instance, users can filter out all the data presented in the other dashboard visualizations based to *Foot Locker* retailer.

V. DASHBOARD

Adidas dashboards are interactive data visualization tools that present the data in an organized and easy-to-understand manner. The dashboards typically consist of a home page, sales dashboard, profit dashboard, and an overview table.

A. Home page

The home page serves as an entry point where the user needs to navigate by clicking into "Click Here to Enter" to browse the dashboards.

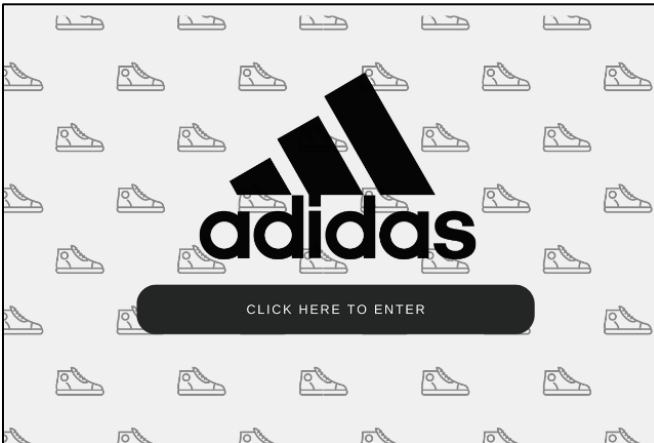


Figure 37 Home Page

B. Sales dashboard

The dashboard features an overview on the top of the page displaying sales, profits, unit sold, and margin, with a total of 6 interactive artefacts that can be filtered by the audience as per their requirements, and allows users to navigate between the profit dashboard, overview table, and homepage with ease by clicking the navigation button.

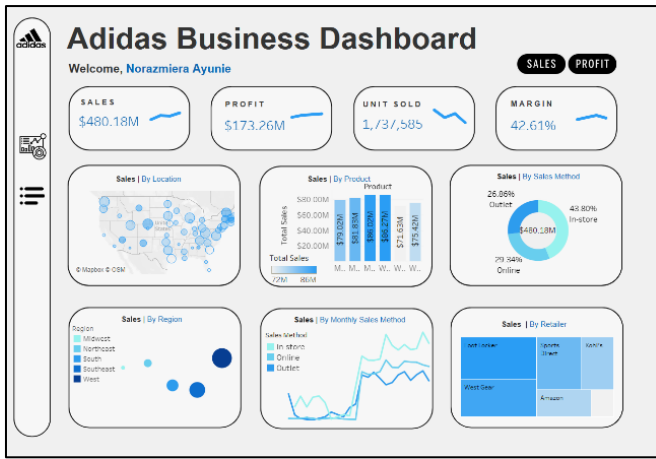


Figure 38 Sales Dashboard

C. Profit dashboard

The same dashboard features and functions are available in the profit dashboard. It also allows the audience to navigate between the sales dashboard, overview table, and homepage with ease by clicking the navigation button.

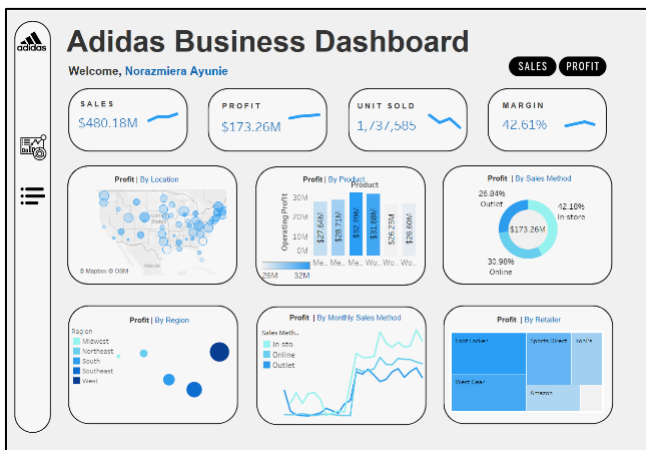


Figure 39 Profit Dashboard

D. Overview table

The overview of the data where it contains the products based on the retailer and region. User can navigate to the home page by clicking the “Back” button.

Overview of the Products based on the Retailer & Region					
Product	Retailer	Region	Sales Method	Total Sales	Operating Profit
Men's Apparel	Amazon	Midwest	Online	1,829,561	648,467
			In-store	3,052,500	986,064
		Northeast	Online	1,200,659	52,597
			Outlet	1,591,370	434,495
	Foot Locker	Southwest	Online	1,089,772	364,159
			Outlet	44,658	15,894
		West	Online	1,546,250	386,565
			Outlet	2,366,250	910,001
	Kohl's	Midwest	Online	1,319,104	452,727
			Outlet	2,077,500	702,878
		Northeast	Online	2,962,500	940,000
			Outlet	216,797	93,793
Women's Apparel	Amazon	Midwest	Online	1,908,598	609,429
			Outlet	1,016,685	348,980
		Northeast	Online	32,257	13,026
			Outlet	850,000	340,000
	Foot Locker	Southwest	Online	1,512,678	662,064
			Outlet	65,379	28,259
		West	Online	342,500	109,500
			Outlet	2,022,152	622,588
	Kohl's	Midwest	Online	770,295	125,486
			Outlet	918,717	328,322
		Northeast	Online	1,075,000	645,000
			Outlet	1,511,250	453,375
Kids' Apparel	Amazon	Midwest	Online	48,765	29,833
			Outlet	534,451	188,830
		Northeast	Online	12,654	5,206
			Outlet	2,460,000	788,000
	Foot Locker	Southwest	Online	2,545,087	812,570
			Outlet	1,017,695	353,226
		West	Online	2,243,750	872,375
			Outlet	502,876	169,859
	Kohl's	Midwest	Online	2,845,000	763,001
			Outlet	70,551	29,477
		Northeast	Online	49,606	16,027
			Outlet	885,566	316,708
Home Goods	Amazon	Midwest	Online	7,406,474	2,689,825
			Outlet	202,500	81,000
		Northeast	Online	2,845,000	763,001
			Outlet	70,551	29,477
	Foot Locker	Southwest	Online	49,606	16,027
			Outlet	885,566	316,708
		West	Online	2,243,750	872,375
			Outlet	502,876	169,859
	Kohl's	Midwest	Online	2,845,000	763,001
			Outlet	70,551	29,477
		Northeast	Online	49,606	16,027
			Outlet	885,566	316,708

Figure 40 Overview Table

VI. CONCLUSION

The visualizations made in a project can provide valuable and insightful knowledge that can provide answers regarding the curiosities made by a certain target audience. Since the target audience in this project are the business analyst, executives and the marketing department of Adidas, multiple interactive visualizations were constructed in response to the curiosities created during the initial process. These visualizations can help the target audience to observe the overall sales & profit growth of Adidas, which can assist them in future decision-making as well as performing forecasting on the dataset to determine the future sales & profit growth in the upcoming years.

ACKNOWLEDGMENT

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