# Homework Assignment 4

Developing Performance Dashboards

Task 1

1. Assume you are hired as the new data analyst for the Executive Board. You are asked to prepare information in the form of a dashboard for their upcoming meeting in which the board will discuss the following business questions:

Note: We had to remove 5 records as they had inconsistent values for "Order_Date_Day" (i.e. it showed the date as Feb 29 2021 and such a date can't exist).

• How have sales developed in 2022 - compared to the year before?
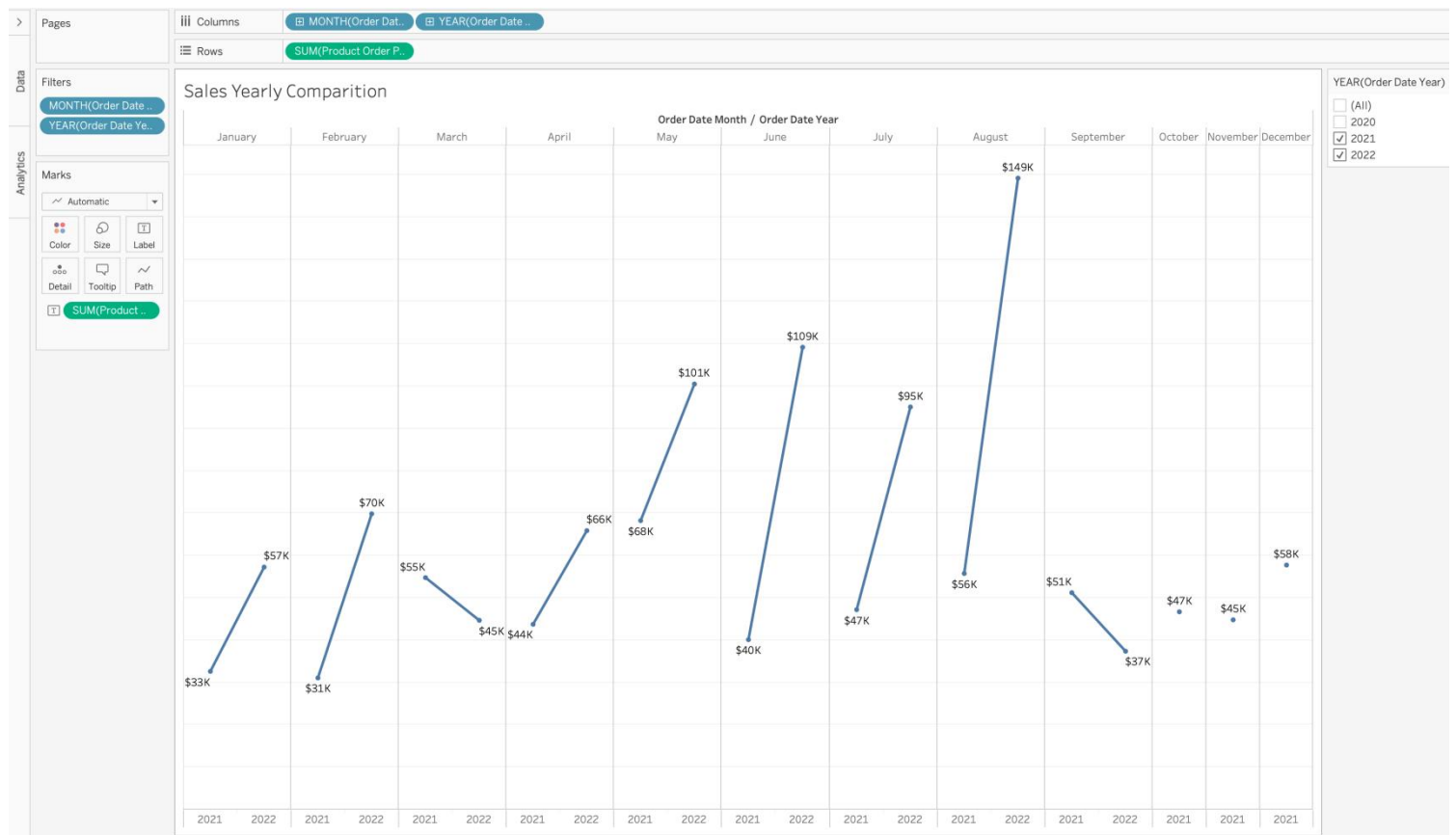
Here we have used "Product_Order_Price_Total" over Month and Year to View the pattern of sales trend. We can see except for a few most of the months show an upward trend in the sales. For October, November and December, we don't have sufficient data for 2022 so we can't compare the sales for these hence we see just the sales for 2021. Only in March and September do we see a downward trend and fall in sales.
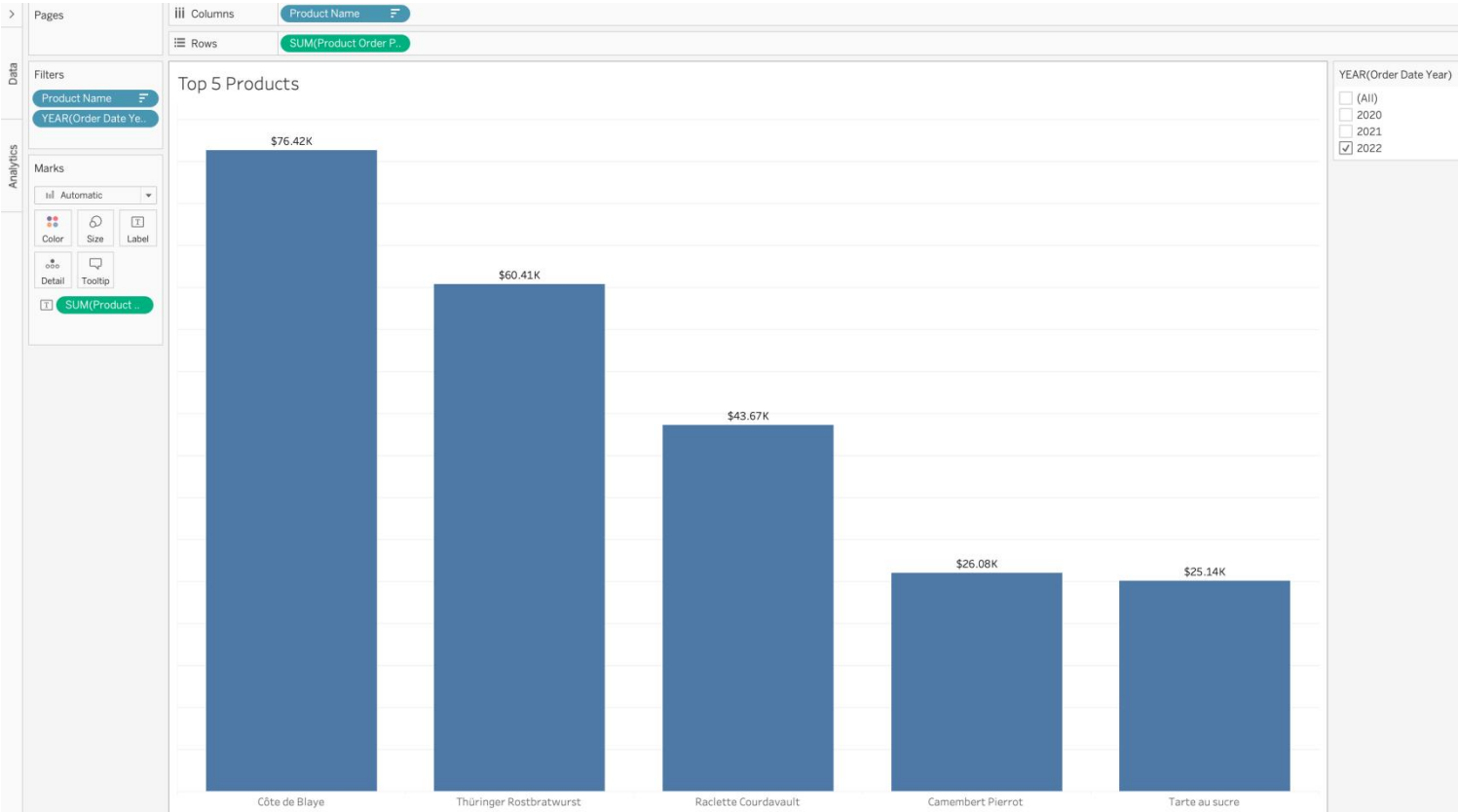
• How were sales distributed over the regions?
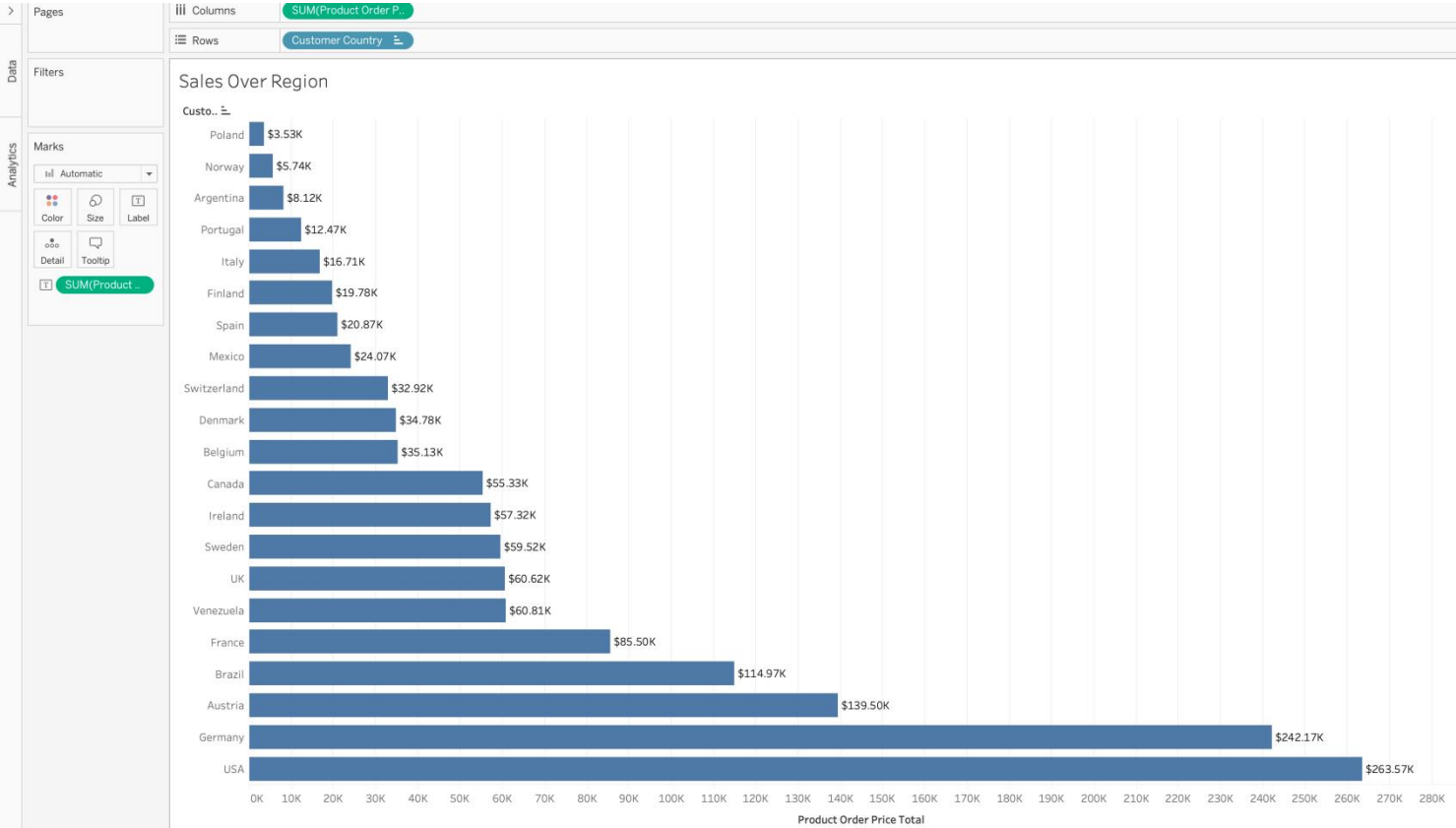
Here we have used "Product_Order_Price_Total" over Customer_Country to view the pattern of sales trend. We have sorted the graph to view the top 3 and bottom 3 countries for sales trends.
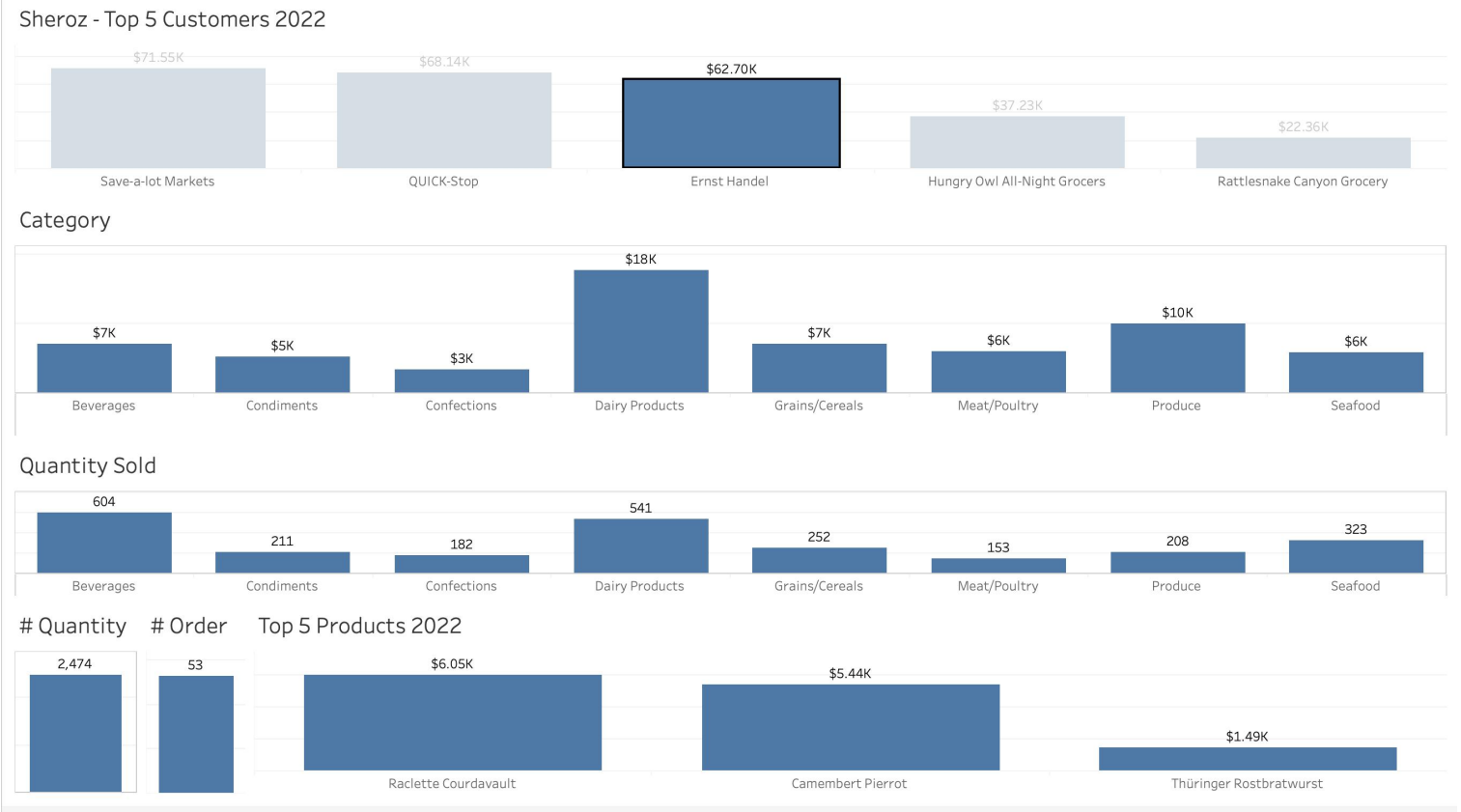
• Who were our top 5 customers in 2022?

Here we have used "Product_Order_Price_Total" over Customer_Name and filtered for Year 2022 to view the pattern of sales trend. Used Customer_Name in the filter to filter the top 5 based on the metric. We have sorted the graph to view the top 5 Customer_Name for sales trends in the year 2022. The reason for choosing the sum of "Product_Order_Price_Total" as a metric is to get an insight into the sales targeting each Customer_Name in the dataset for the year 2022. Using "Order_Price_Total" would have inflated the number to a higher extent as it's the sum of all the orders given for an Order_ID. Using sum for "Order_Price_Total" would create inaccurate values for each Customer_Name as it will multiply the same "Order_Price_Total" with the number of products given for the given Order_ID.

• What were our top 5 products in 2022?

Here we have used "Product_Order_Price_Total" over Product_Name and filtered for Year 2022 to view the pattern of sales trend. Used Product_Name in the filter to filter the top 5 based on the metric. We have sorted the graph to view the top 5 Product_Name for sales trends in the year 2022. The reason for choosing the sum of "Product_Order_Price_Total" as a metric is to get an insight into the sales targeting each Product_Name in the dataset for the year 2022. Using "Order_Price_Total" would have inflated the number to a higher extent as it's the sum of all the orders given for an Order_ID. Using sum for "Order_Price_Total" would create inaccurate values for each Product_Name as it will add the same "Order_Price_Total" for each of the Product_Name given an Order_ID irrespective of their actual contribution in that Order_ID.

2. Final DashBoard

Sheroz - Top 5 Customers 2022

$71.55K	$68.14K	$62.70K	$37.23K	$22.36K
Save-a-lot Markets	QUICK-Stop	Ernst Handel	Hungry Owl All-Night Grocers	Rattlesnake Canyon Grocery

Category

$7K	$5K	$3K	$18K	$7K	$6K	$10K	$6K
Beverages	Condiments	Confections	Dairy Products	Grains/Cereals	Meat/Poultry	Produce	Seafood

Quantity Sold

604	211	182	541	252	153	208	323
Beverages	Condiments	Confections	Dairy Products	Grains/Cereals	Meat/Poultry	Produce	Seafood

Quantity   # Order   Top 5 Products 2022

2,474	53	$6.05K	$5.44K	$1.49K
		Raclette Courdavault	Camembert Pierrot	Thüringer Rostbratwurst

How have the sales, quantity and order counts of the top 5 customers changed over time, what are the predominant categories of sales for each customer and what are the top 5 Products and how do they change for each customer?

The dashboard helps visualize the trends for the top 5 customers for the year 2022 for all the parameters such as sales, quantity sold and number of orders received by the customer. It provides a comprehensive view of the sales performance of the top 5 customers over time, highlighting the most popular product categories and the growth in order count and quantity sold. It can be used to inform business strategies and optimize sales efforts.

Top 5 Customers 2022: This graph shows the total sales for each of the top 5 customers in the year 2022. "Save-a-lot Markets" has the highest sales at $71.55K, followed by "QUICK-Stop" at $68.14K, "Ernst Handel" at $62.70K, "Hungry Owl All-Night Grocers" at $37.23K, and "Rattlesnake Canyon Grocery" with the lowest at $22.36K.

Category: This graph breaks down these total sales into different categories for each customer. The categories include Beverages, Condiments, Confections, Dairy Products, Grains/Cereals, Meat/Poultry, Produce, and Seafood. The sales values for these categories range from $3K (Confections) to $18K (Dairy Products).

Quantity Sold: This section provides information on the quantity sold per category for the above-mentioned categories. The quantities range from 182 (Confections) to 604 (Beverages).

 # Order and # Quantity: These two bar graphs depict the total orders and quantity requested by the Customer in the year 2022.

Top 5 Products 2022: This graph breaks down these total sales into different product names for each customer. The products include Raclette Courdavault, Camembert Pierrot and Thüringer Rostbratwurst. The sales values for these products range from $1.5K (Thüringer Rostbratwurst) to $6K (Raclette Courdavault).