Rakamin Academy

Case Study - Tableau Part 2

by Regita Ardia

CASE

You will do an analysis on data with 3 main views: Employees, Customers and Products.

Generate your unique analytics dashboard.

Determine the following things before create dashboards:

1. Determine your goals and audience
2. Create a simple mock-up
3. Create and do testing
4. Make sure your dashboard is interactive
5. Apply best practices

Audiences

Manager Level on Marketing and Human Resources

Goals

- Knowing employees who have high and low performance
- Determine what products to maintain or have to increase their sales
- Knowing customers who buy products oftenly, so we can be given interesting offers.

Contents

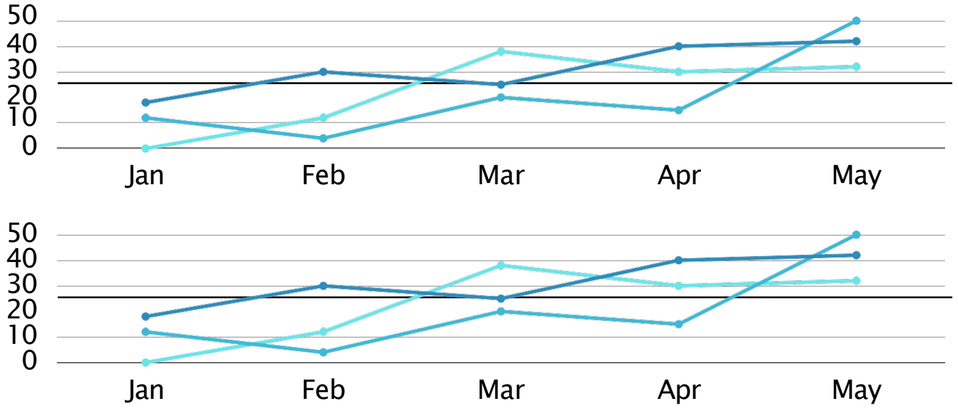
- States map
- Sales summary
- Sales over time
- Revenue by order type
- Employee performances
- Total quantity by product category
- Product sales
- Revenue by customer type
- Top spenders

Mock-up

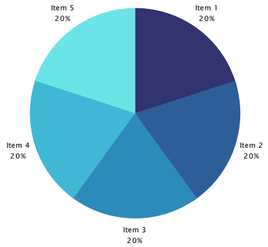
States

Total Order	Total Revenue	Total Quantity

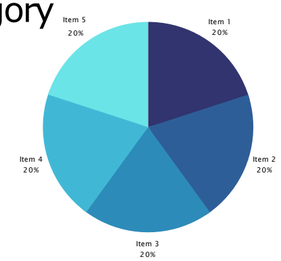
Sales over time



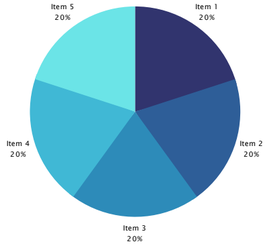
Revenue by Order Type



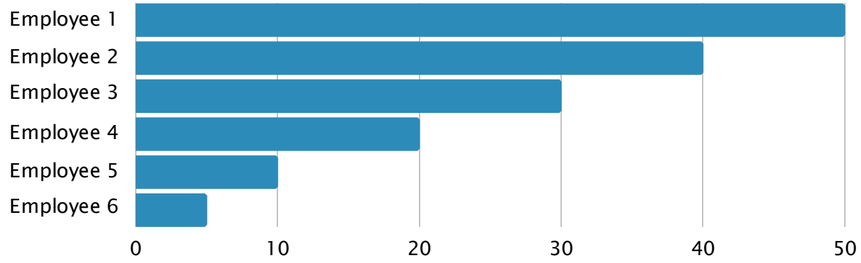
Total Quantity by Product Category



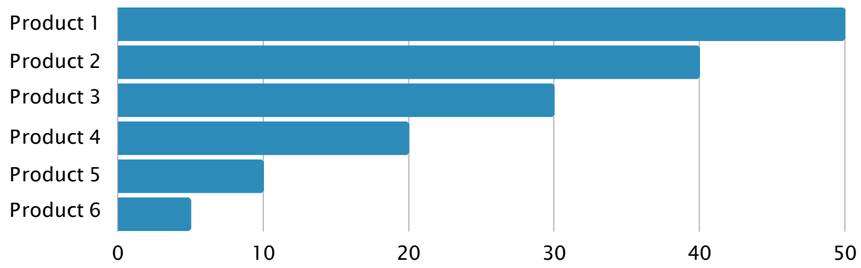
Revenue by Customer Type



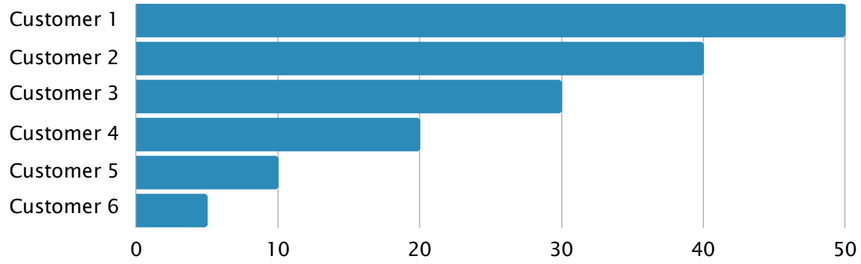
Employee Performances



Product Sales



Top Spenders



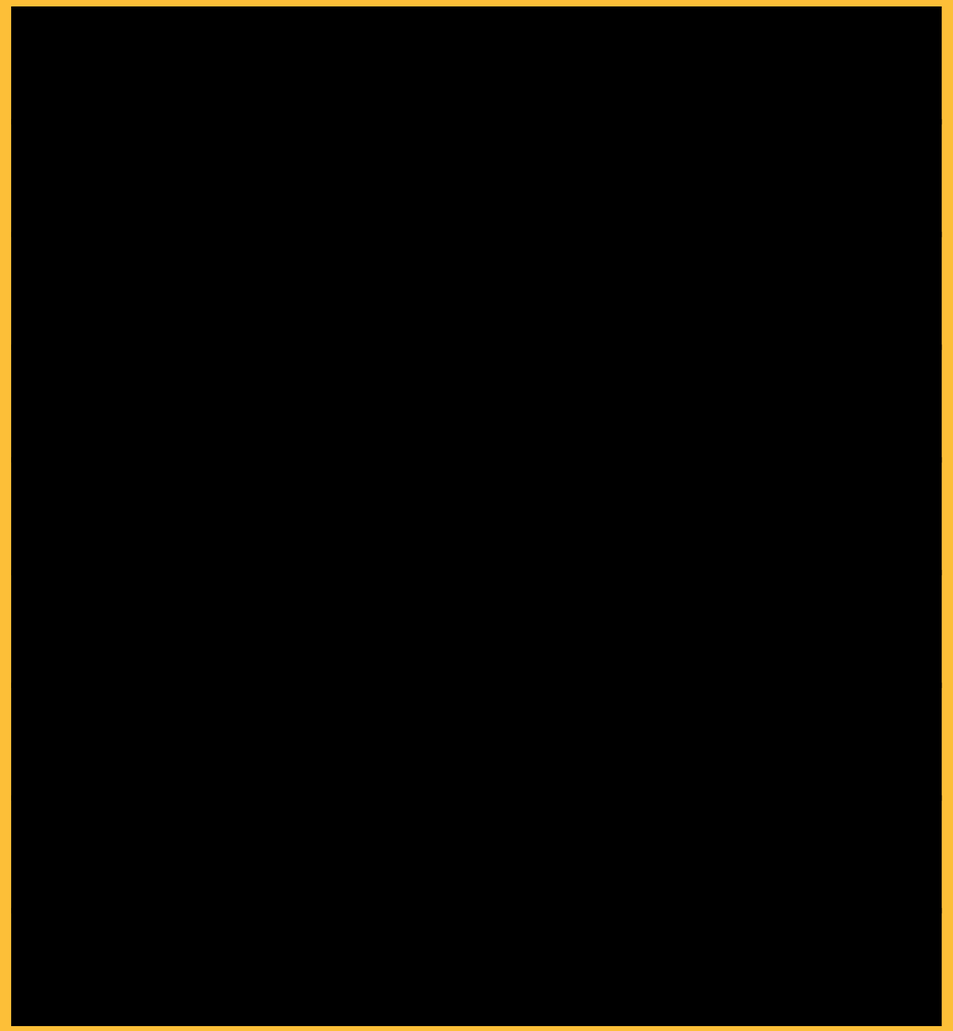
DATA UNDERSTANDING

Given the dataset contains sales records in January 2019 - January 2021. It has 17 fields and 5130 rows.

Sheet1 Order Num	Sheet1 Emp ID	Sheet1 Employee Name	Sheet1 Employee Job Title	Sheet1 Sales Region	Sheet1 Order Date	Sheet1 Order Type	Sheet1 Customer Type
1102935	900019019	Alexandra Kundt	Senior Sales Associate	S Central East	09/02/2019	Retail	Individual
1102976	900019019	Alexandra Kundt	Senior Sales Associate	S Central East	15/02/2019	Retail	Individual
1102988	900019019	Alexandra Kundt	Senior Sales Associate	S Central East	16/02/2019	Retail	Individual
1103012	900019019	Alexandra Kundt	Senior Sales Associate	S Central East	19/02/2019	Wholesale	Business
1103031	900019019	Alexandra Kundt	Senior Sales Associate	S Central East	22/02/2019	Retail	Individual

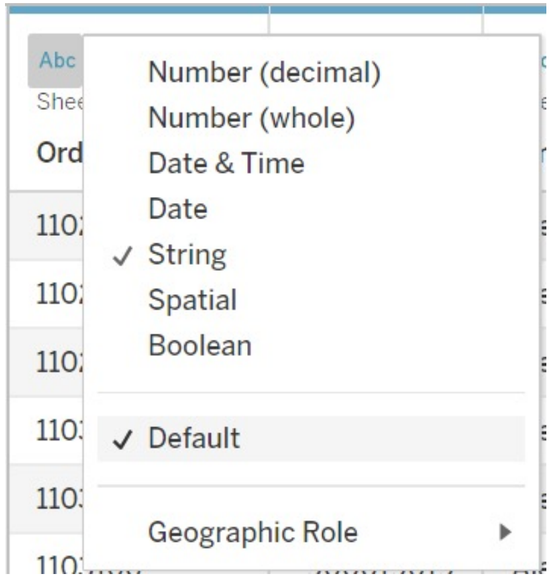
Sheet1 Cust ID	Sheet1 Cust Name	Sheet1 Cust State	Sheet1 Prod Category	Sheet1 Prod Number	Sheet1 Prod Name	Sheet1 Quantity	Sheet1 Price	Sheet1 Order Total
1574	Skipton Fealty	Arkansas	Olive Oil	OO206	Chili Extra Vir...	3	45.000	135.00
1809	Lanni D'Ambr...	Missouri	Gift Basket	GB301	Scented Olive...	1	19.500	19.50
2253	Far Pow	Mississippi	Olive Oil	OO302	Chili Extra Vir...	4	26.000	104.00
4083	Swift Inc	Texas	Olive Oil	OO125	Garlic Extra Vi...	4	234.000	936.00
2678	Carmine Pries...	Texas	Olive Oil	OO128	Chili Extra Vir...	3	234.000	702.00

DATA UNDERSTANDING

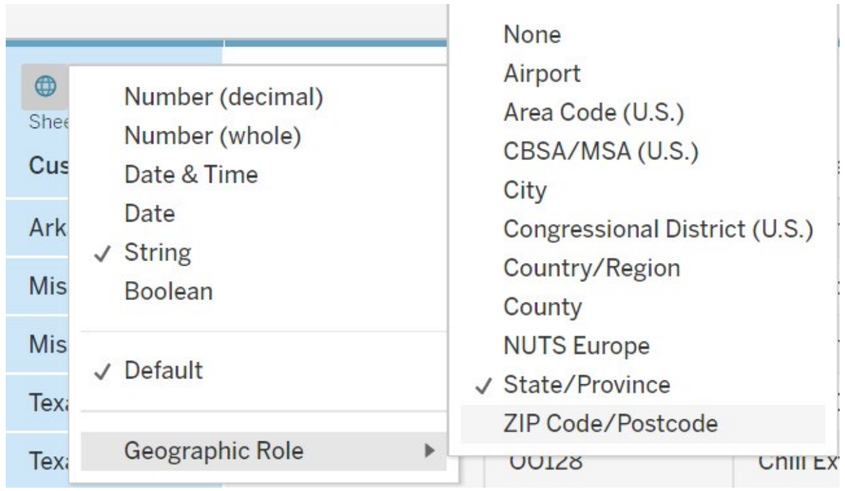


FIELD PREPARATION

We don't need nominal calculations in the Order Num, Emp ID, and Cust ID fields, so we change the data type to string.



Since we want to use a map chart, we have to add Geographic Role on Cust State field, choose State/Province



Total Order field contains the total payment by the customer, we assume that this column is the revenue we get. Rename the field to "Revenue".

# Sheet1 Quantity	# Sheet1 Price	# Sheet1 Revenue
3	45.000	135.00
1	19.500	19.50
4	26.000	104.00

FIELD PREPARATION

To see the Employee Performance and Product Sales, we want to show the top 3 and bottom 3 of revenue earned by employees and total quantity of product sold. So we need an additional field to flag the record whether it is top 3 or bottom 3.

The INDEX() function returns the index of the current row in the partition. The value will adjust according to filter and sort.

The SIZE () function returns the number of cells in the partition. The value will adjust according to filter and sort as well.

So when we want to know the bottom 3 dynamically when using filter and sort, just reverse the index with the following formula:
SIZE() - INDEX() +1

Top and Bottom

```
IF INDEX() <= 3 THEN "Top 3"
ELSEIF SIZE() - INDEX() + 1 <= 3 THEN "Bottom 3"
ELSE "Others" END
```

Illustration:

Employee Name	Top and B..	Index	Reversed ..	Total Rev..
Tanya Tibbets	Top 3	1	10	12,803
Ava Orosco	Top 3	2	9	12,333
Tricia Beaudry	Top 3	3	8	11,128
Constantine Aco..	Others	4	7	7,353
Paul Massimo	Others	5	6	2,219
Nick Chen	Others	6	5	1,854
Kendra Barnbrook	Others	7	4	1,786
Alexandra Kundt	Bottom 3	8	3	561
Dru Clingman	Bottom 3	9	2	558
Christen Barrett	Bottom 3	10	1	305

WORKSHEET 1 : States Map

Pages

Columns: Longitude (generated)

Rows: Latitude (generated)

Filters

YEAR(Order Date)

Marks

Automatic

Color | Size | Label | Detail | Tooltip

Cust State

SUM(Revenue)

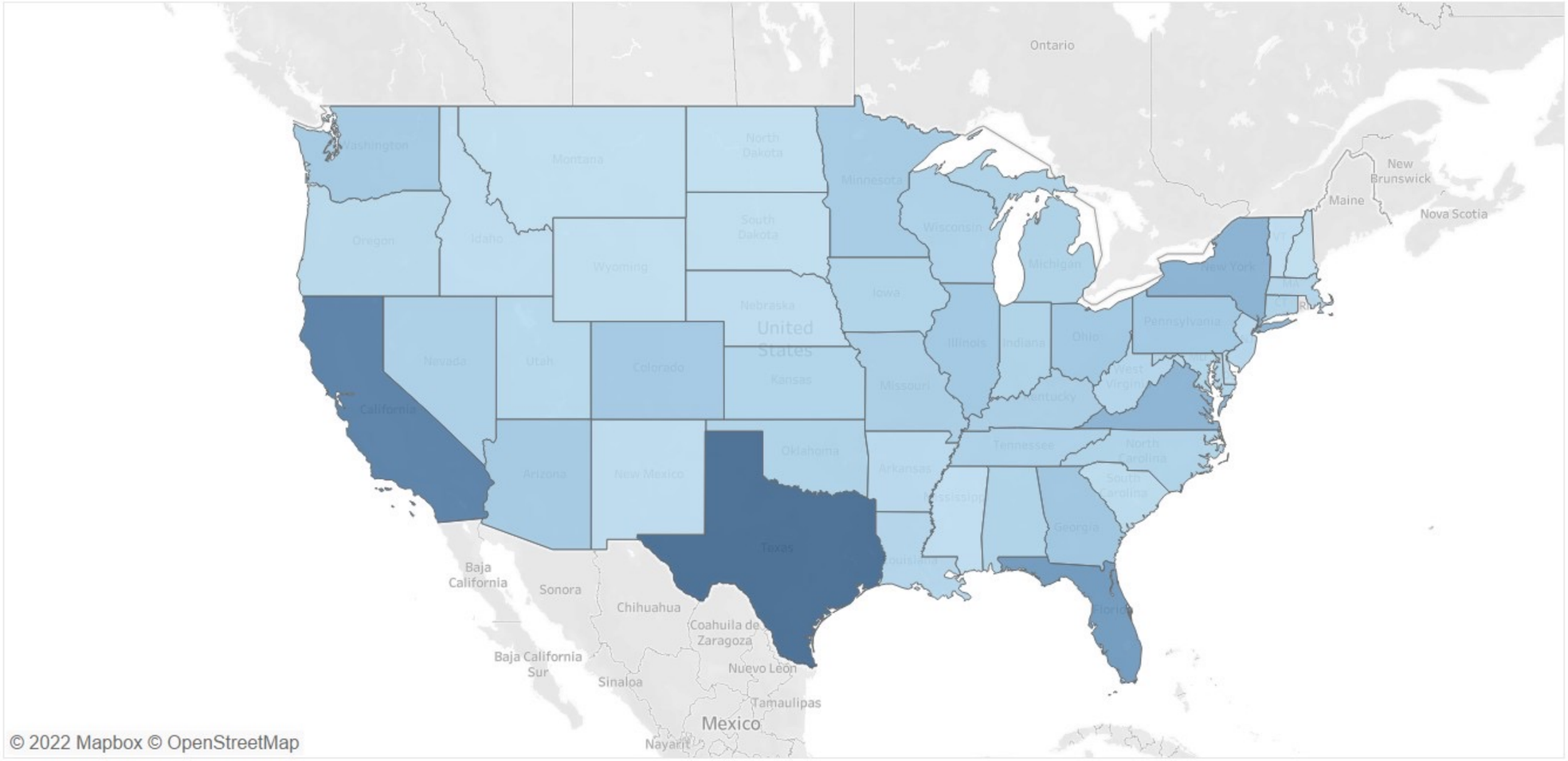
CNTD(Order N..

SUM(Quantity)

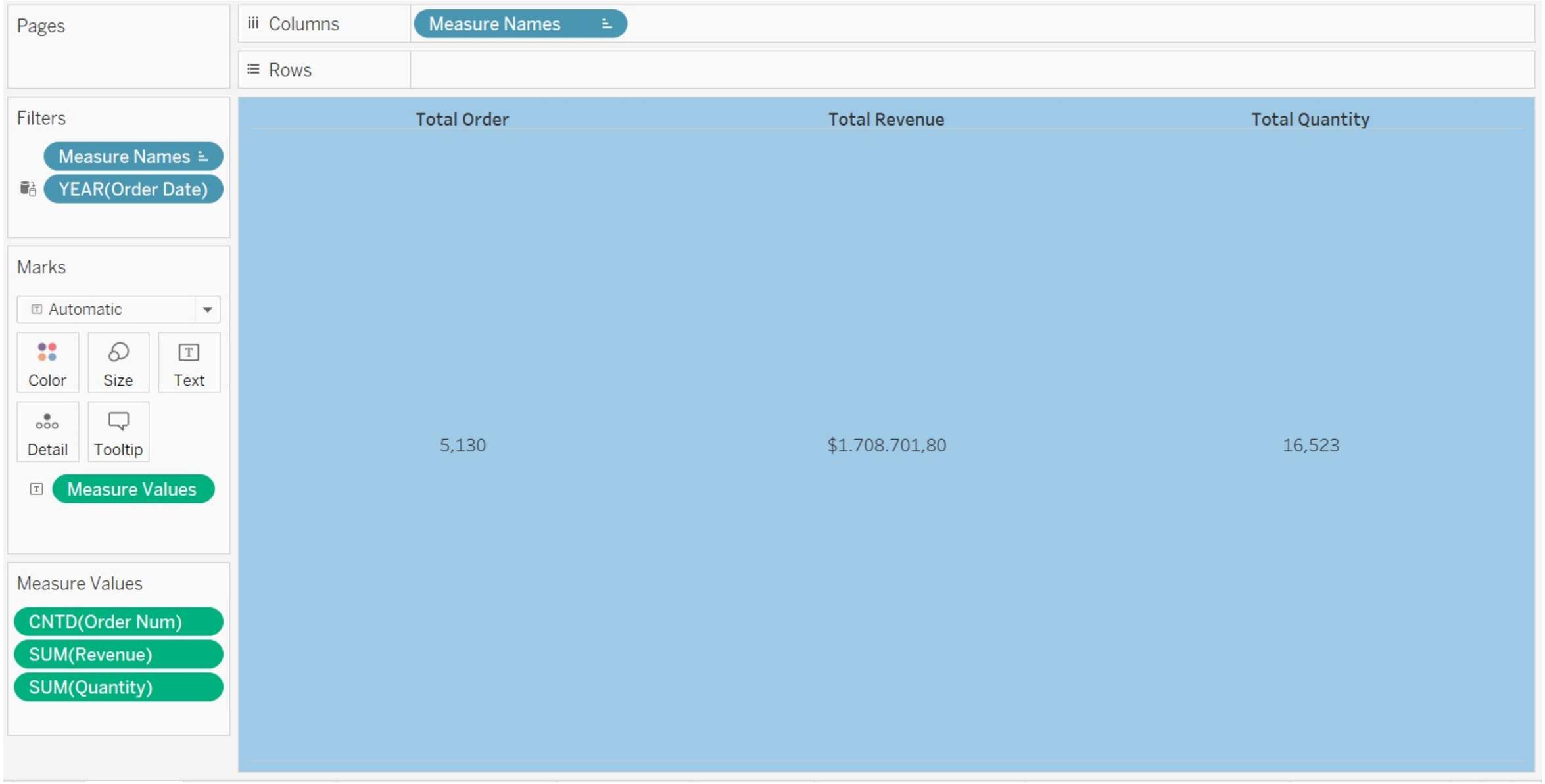
Revenue

$73,47 $234.689,19

States



WORKSHEET 2 : Sales Summary



WORKSHEET 3 : Sales Over Time

Pages

Columns: MONTH(Order Date)

Rows: CNTD(Order Num), SUM(Revenue)

Filters

YEAR(Order Date)

Marks

All

Automatic

Color | Size | Label | Detail | Tooltip | Path

YEAR(Order ..

CNTD(Order Nu...

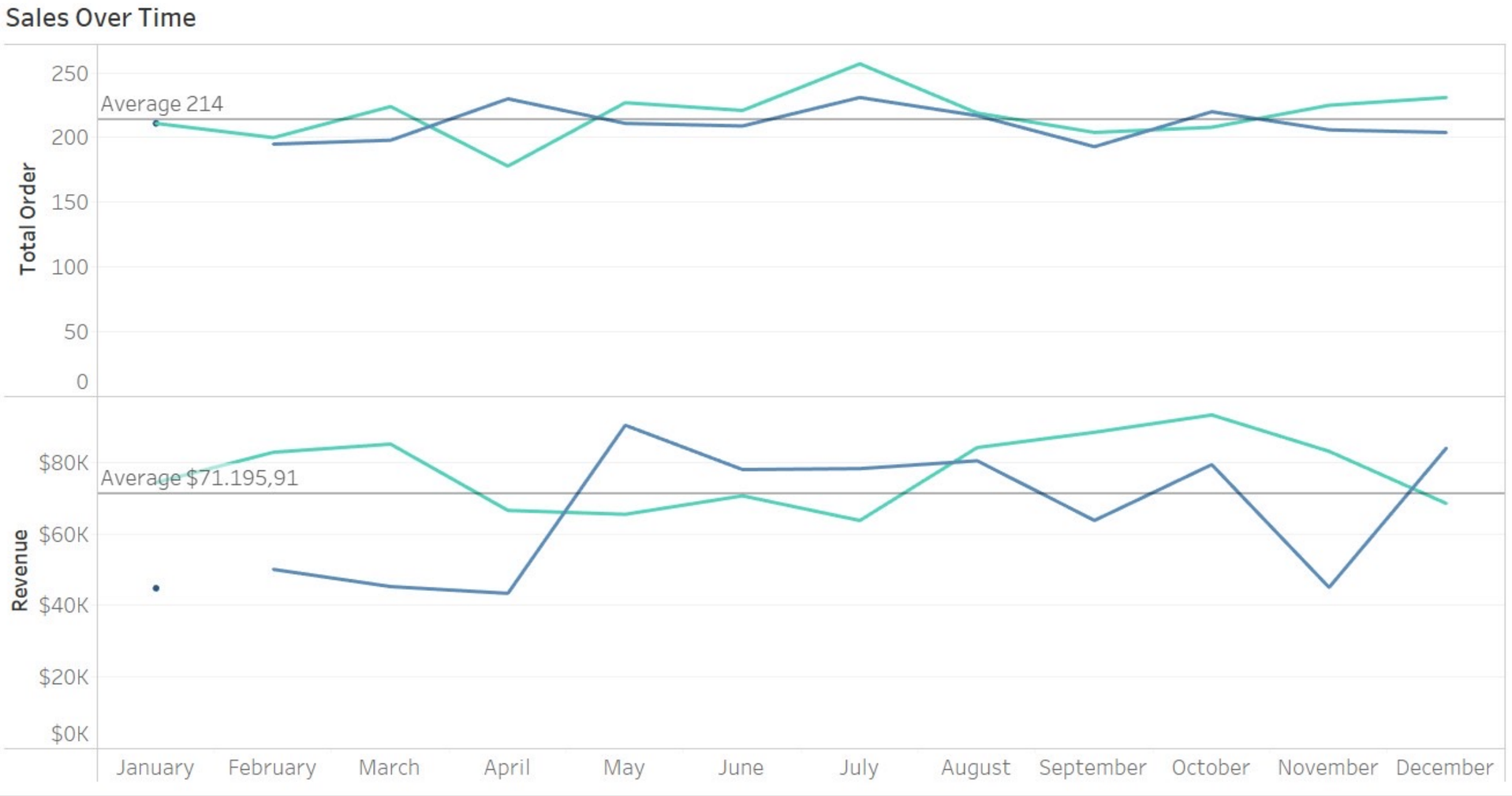
SUM(Revenue)

YEAR(Order Date)

2019

2020

2021



WORKSHEET 4 : Revenue by Order Type

Pages

Columns

Rows

Filters

YEAR(Order Date)

Marks

Pie

Color | Size | Label

Detail | Tooltip | Angle

Order Type

SUM(Revenu.. Δ

SUM(Revenue)

Order Type

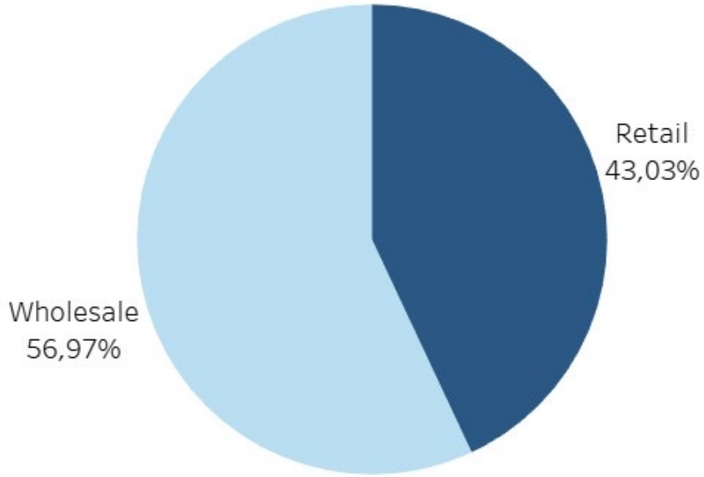
SUM(Revenu.. Δ

Order Type

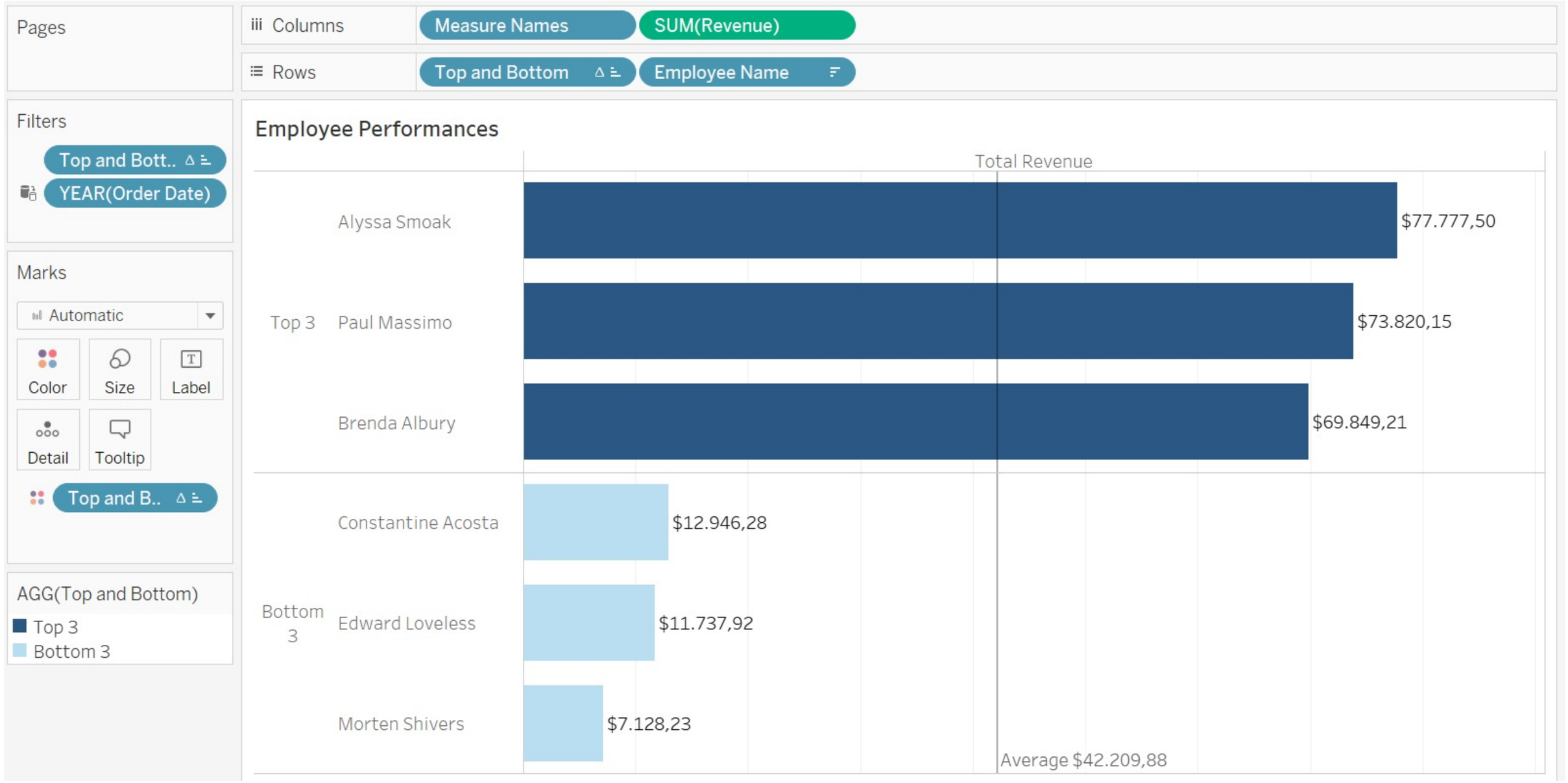
Retail

Wholesale

Revenue by Order Type



WORKSHEET 5 : Employee Performances



WORKSHEET 6 : Total Quantity by Product Category

Pages

Columns

Rows

Filters

YEAR(Order Date)

Marks

Pie

Color | Size | Label

Detail | Tooltip | Angle

Prod Categ..

SUM(Qua..

SUM(Quant..

Prod Categ..

SUM(Qua..

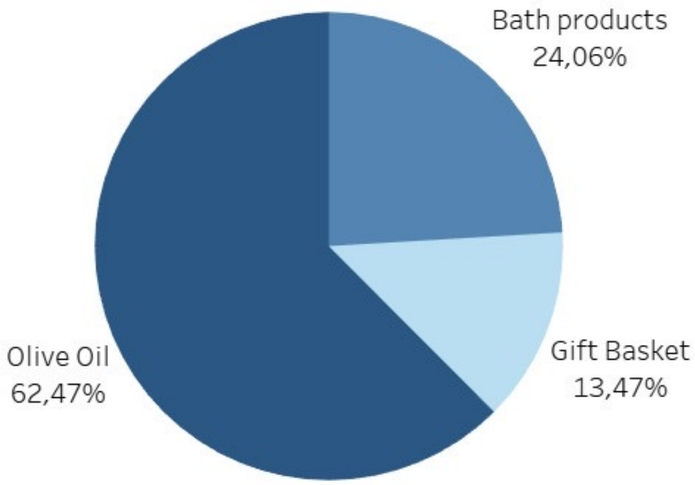
Prod Category

Bath products

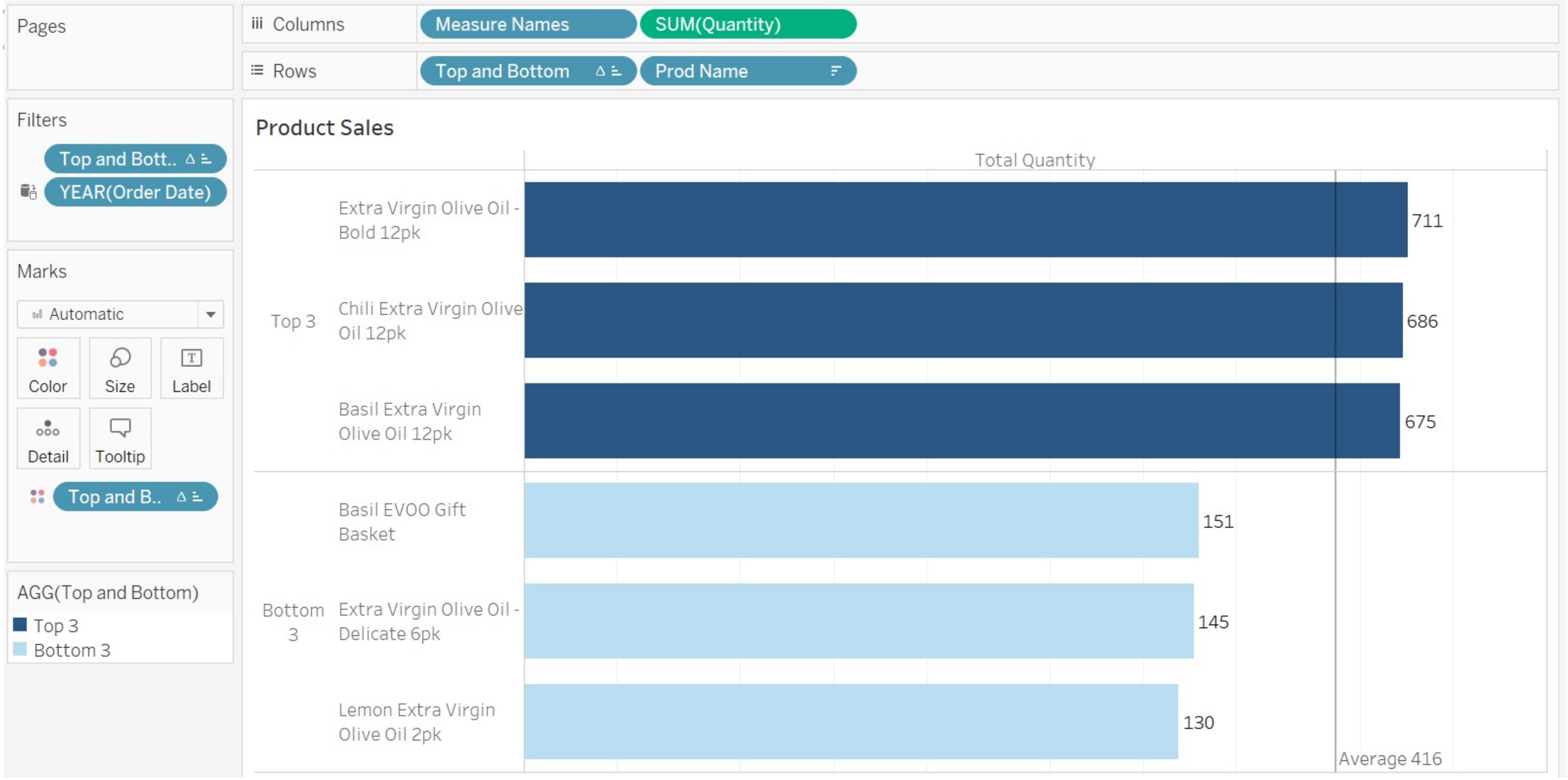
Gift Basket

Olive Oil

Total Quantity by Product Category



WORKSHEET 7 : Product Sales



WORKSHEET 8 : Revenue by Customer Type

Pages

Columns

Rows

Filters

YEAR(Order Date)

Marks

Pie

Color | Size | Label

Detail | Tooltip | Angle

Customer Type

SUM(Revenu.. Δ

SUM(Revenue)

Customer Type

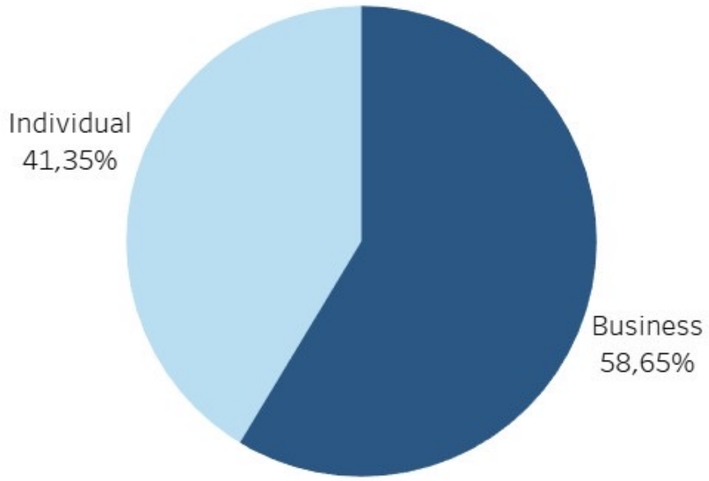
SUM(Revenu.. Δ

Customer Type

Business

Individual

Revenue by Customer Type



WORKSHEET 9 : Top Spender

Pages

Columns SUM(Revenue)

Rows Cust Name

Filters

Index

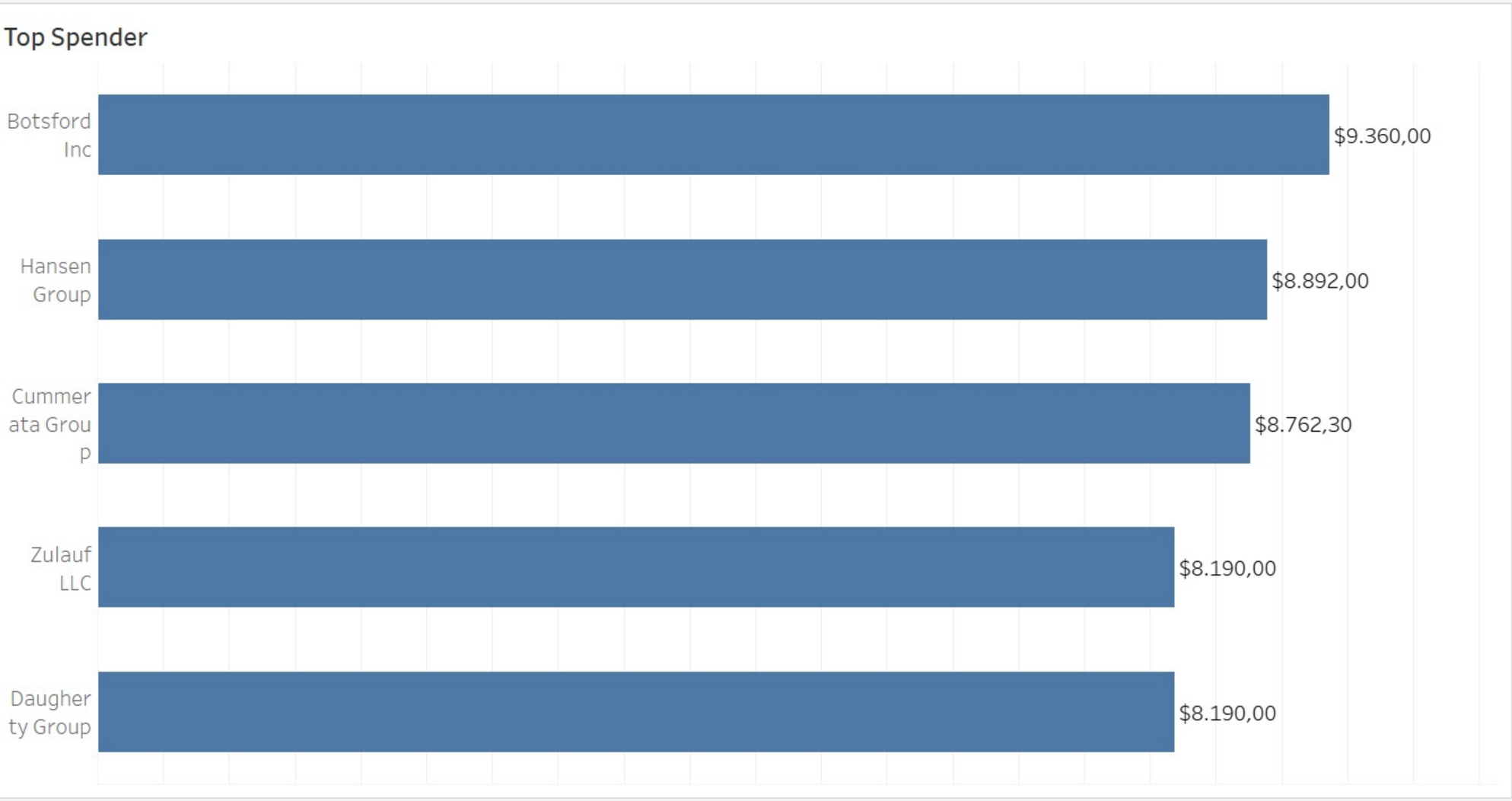
YEAR(Order Date)

Marks

Automatic

Color Size Label

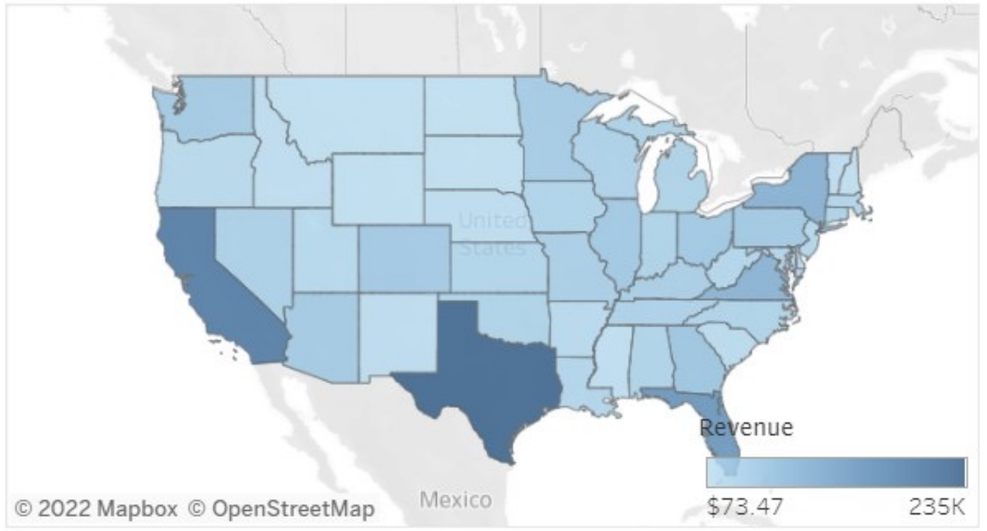
Detail Tooltip



DASHBOARD

Arrange All The Workbooks

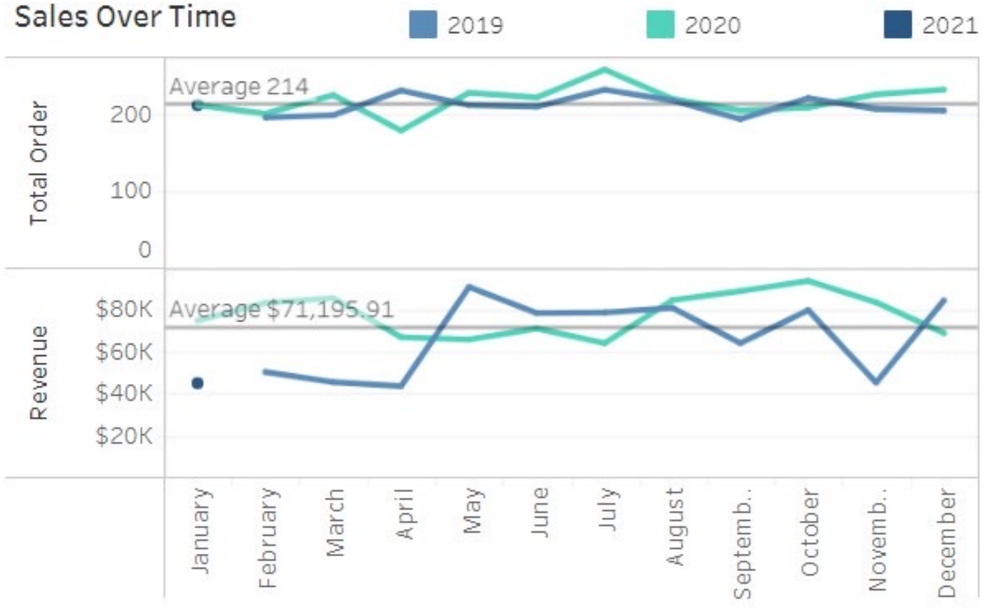
States



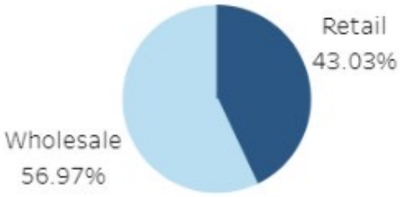
Total Order	Total Revenue	Total Quantity
5,130	$1,708,701.80	16,523

Year (All)

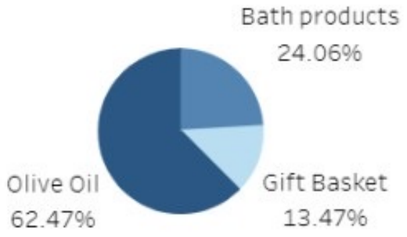
Sales Over Time



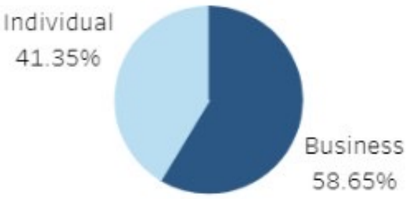
Revenue by Order Type



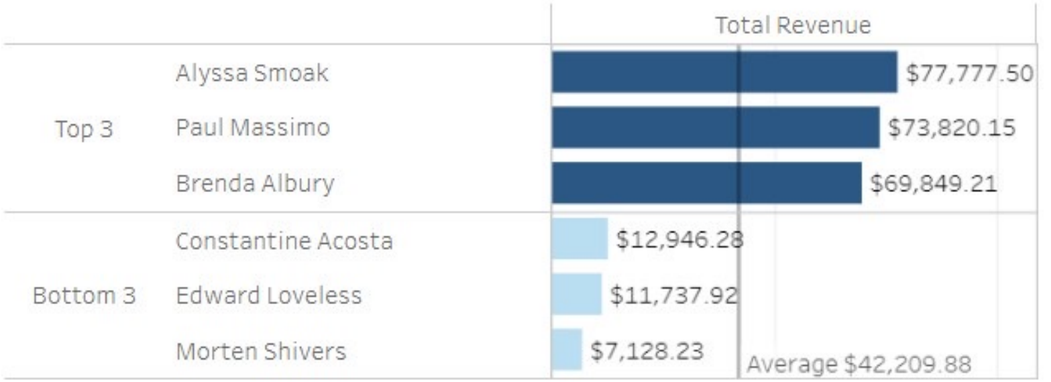
Total Quantity by Product Category



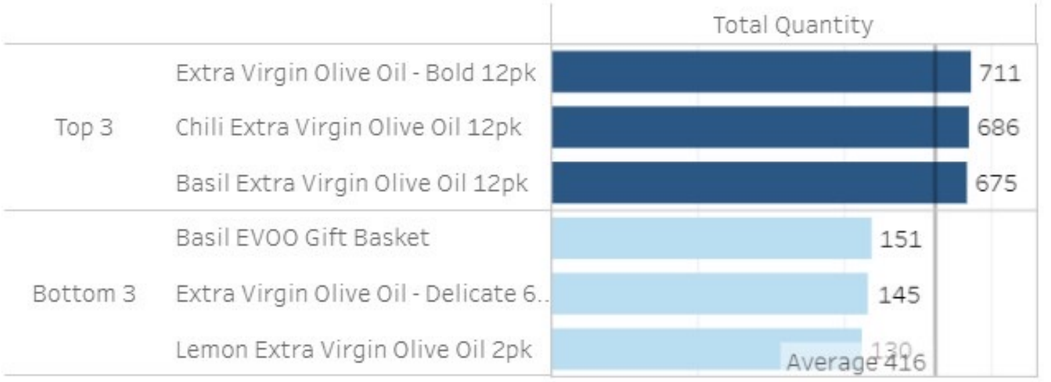
Revenue by Customer Type



Employee Performances



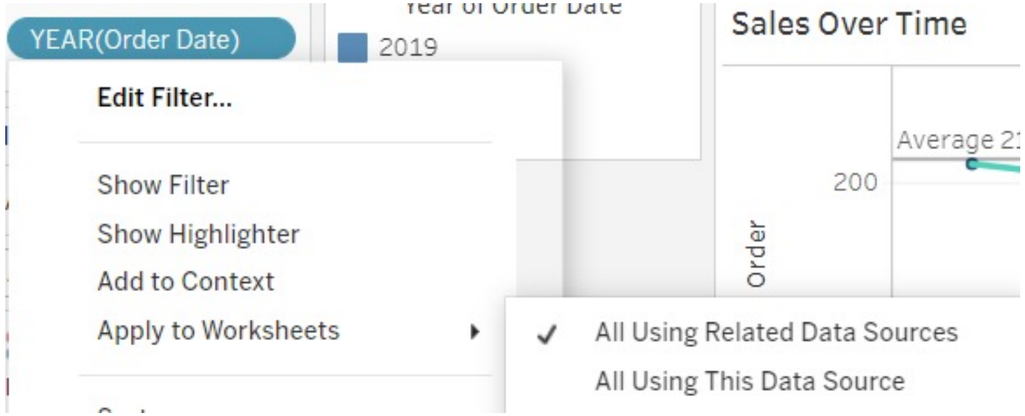
Product Sales



Top Spender

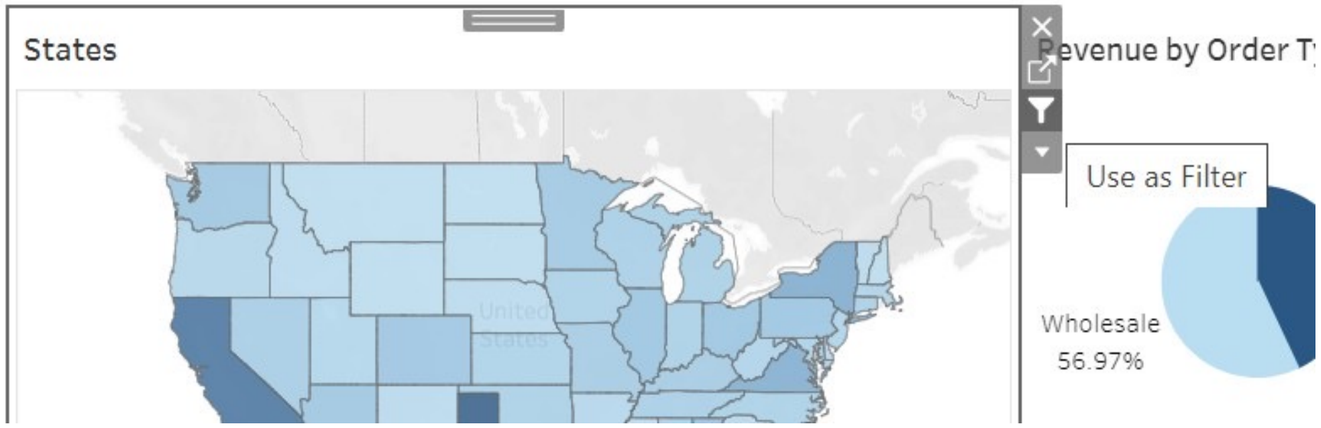
Make It Interactive!

Add Year Filter



- Add filter with Order Date extracted by Year
- Apply to Worksheet -> All Using Related Data Sources

Apply "Use as Filter"

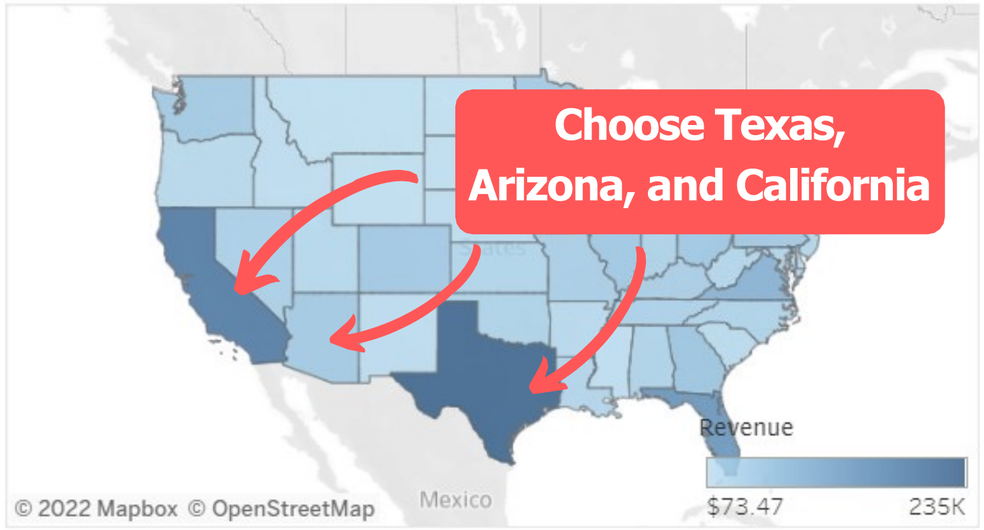


Apply "Use as Filter" to all charts. When we click on a data, that data will be a filter on all other charts.

TESTING 1

Show sales evaluation on Bath Products Category in Texas, Arizona, and California during 2020

States

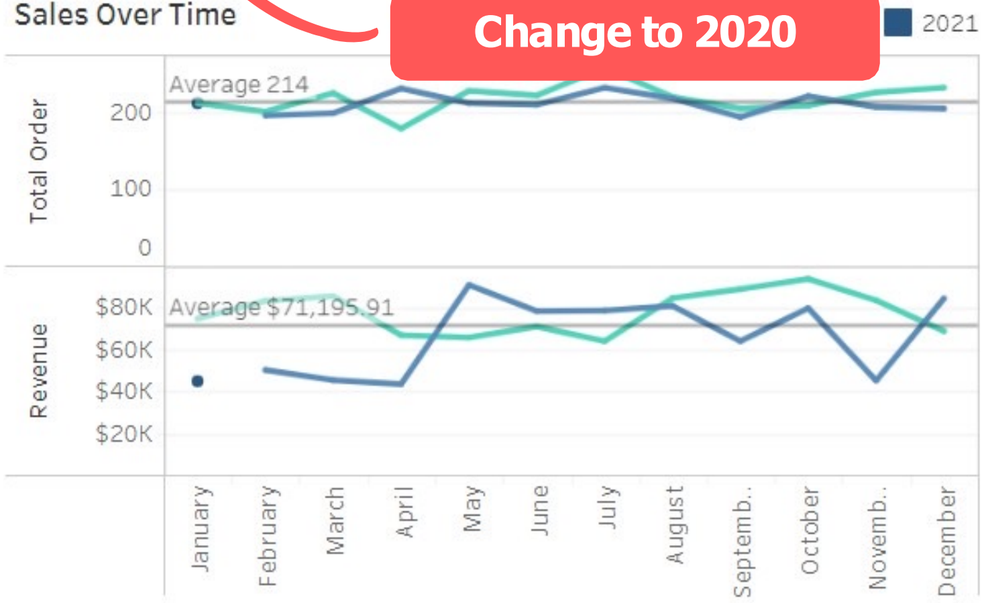


Total Order	Total Revenue	Total Quantity
5,130	$1,708,701.80	16,523

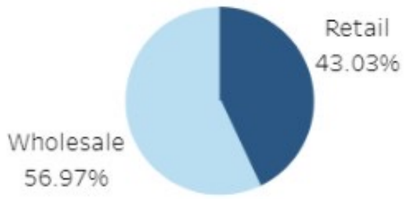
Year: (All)

Sales Over Time

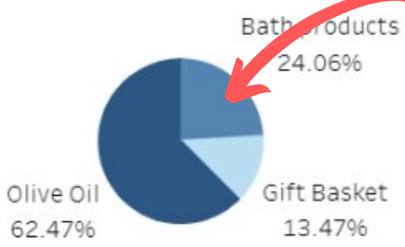
Change to 2020



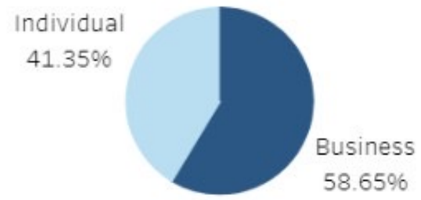
Revenue by Order Type



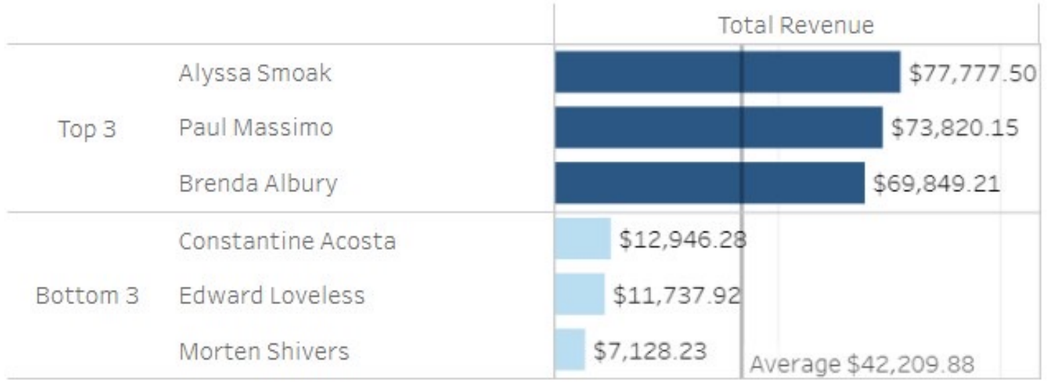
Total Quantity by Product Category



Revenue by Customer Type

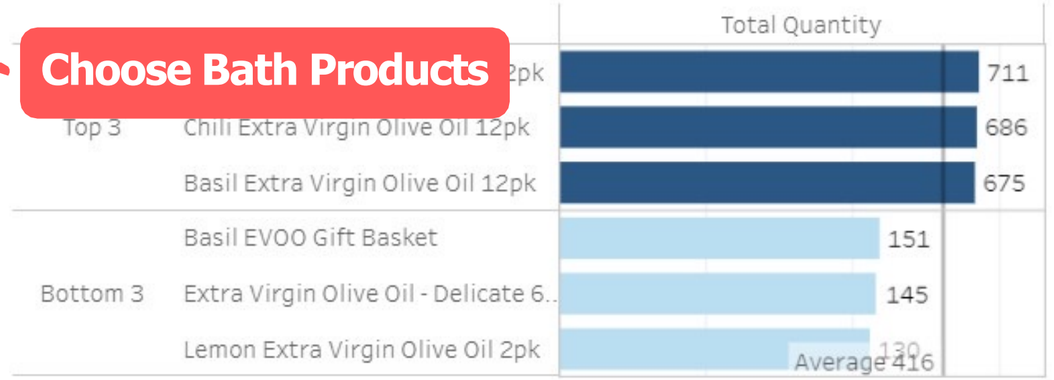


Employee Performances



Product Sales

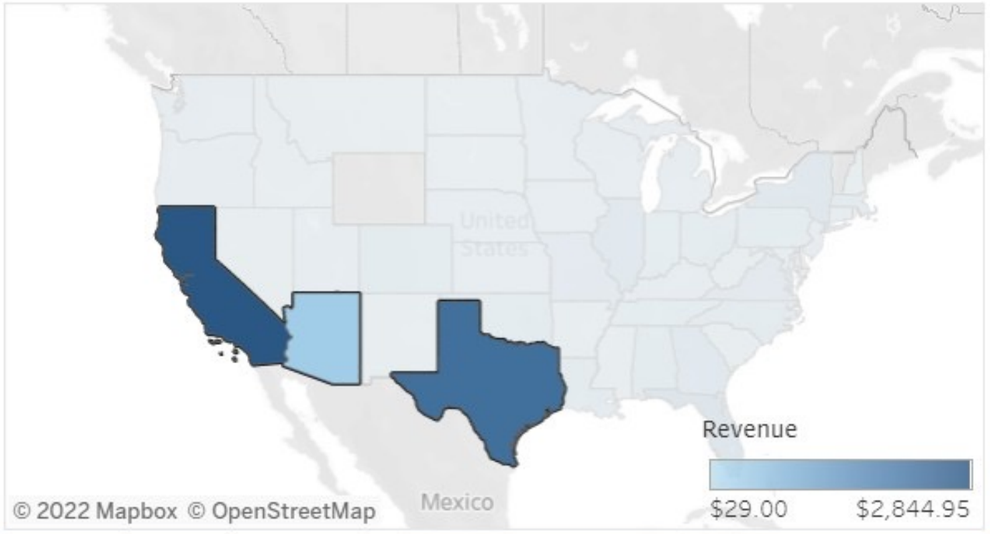
Choose Bath Products



Top Spender

RESULT

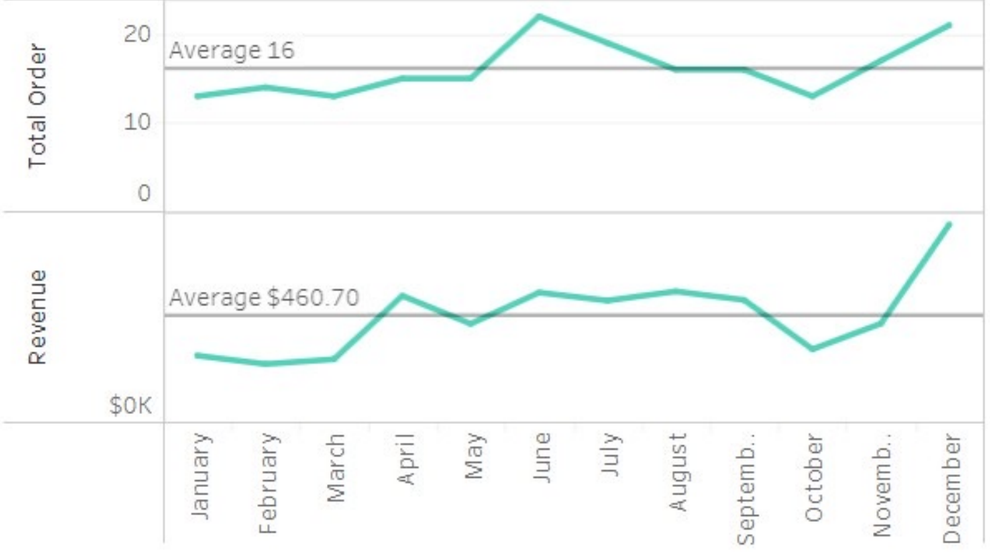
States



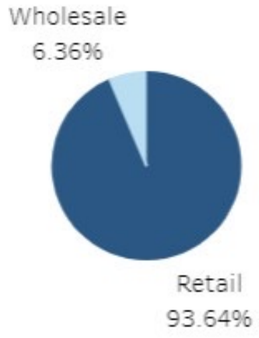
Total Order	Total Revenue	Total Quantity
194	$5,528.43	515

Year: 2020

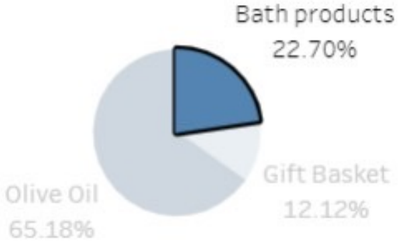
Sales Over Time



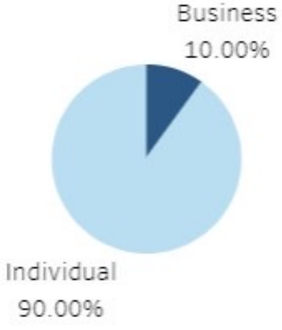
Revenue by Order Type



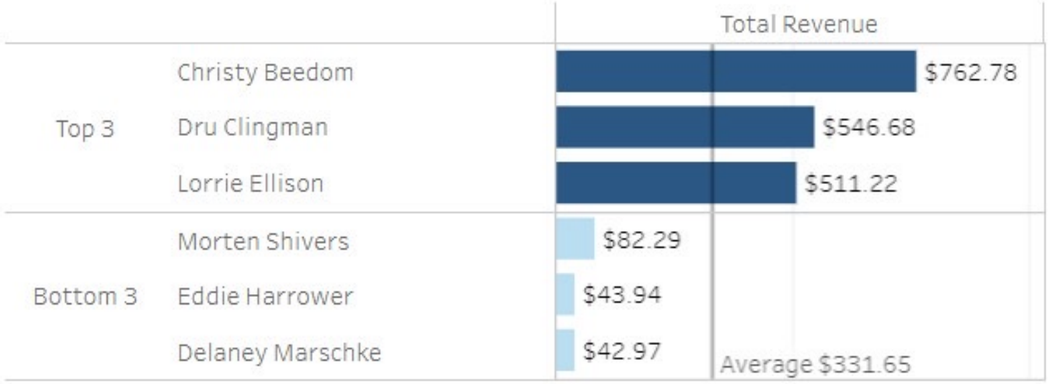
Total Quantity by Product Category



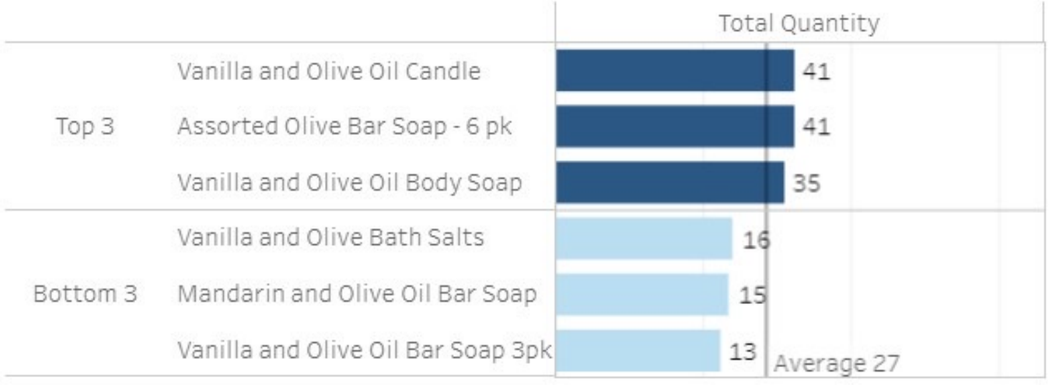
Revenue by Customer Type



Employee Performances

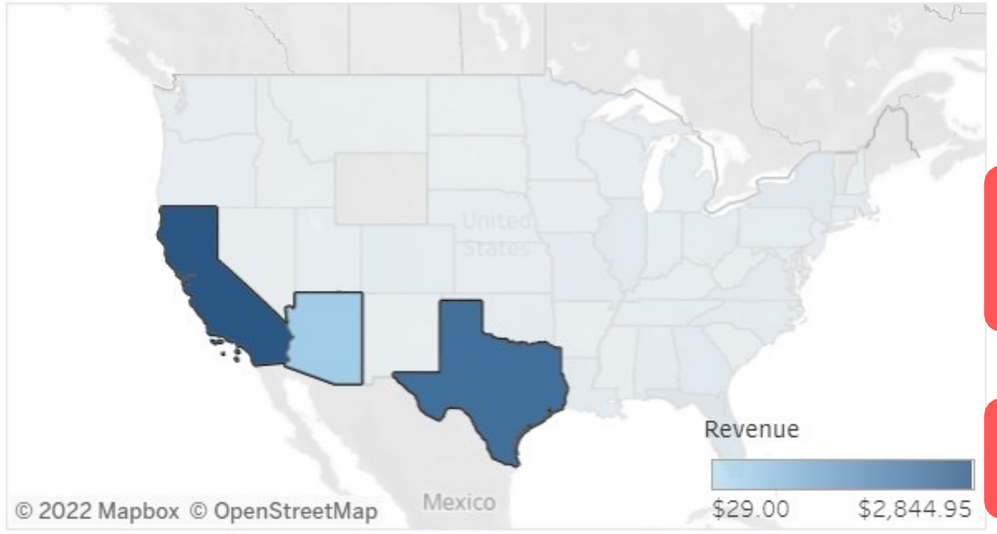


Product Sales



Top Spender

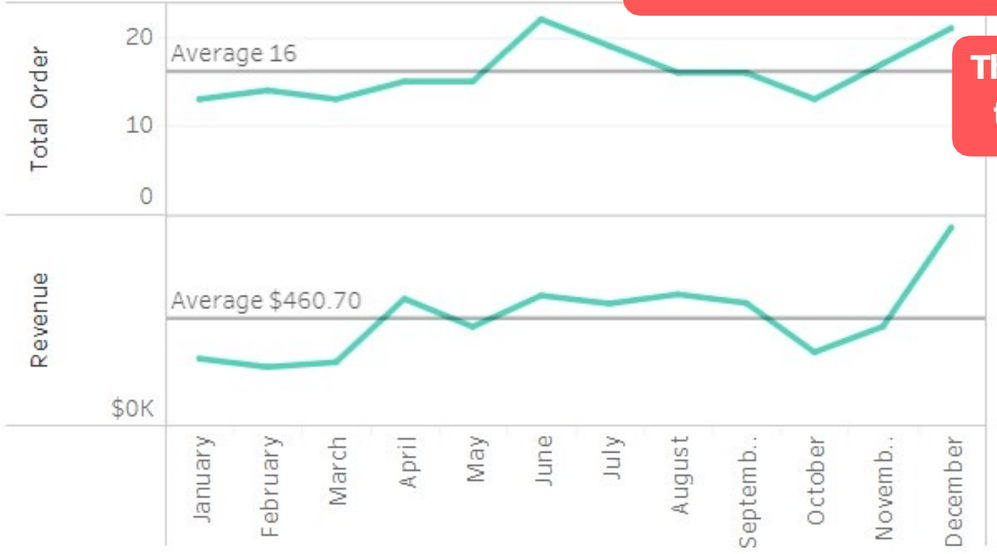
States



Total Order	Total Revenue	Total Quantity
194	$5,528.43	515

Year: 2020

Sales Over Time

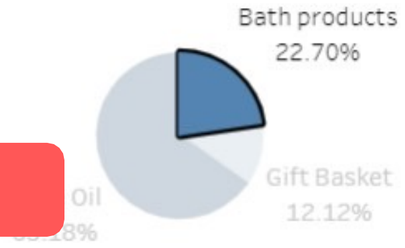


The sales summary

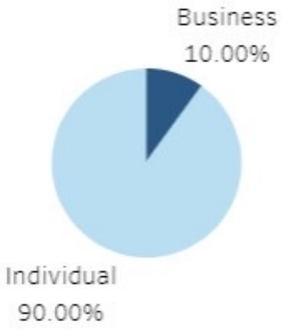
Revenue by Order Type

Christy Beedom is the best employee on Bath Products Sales

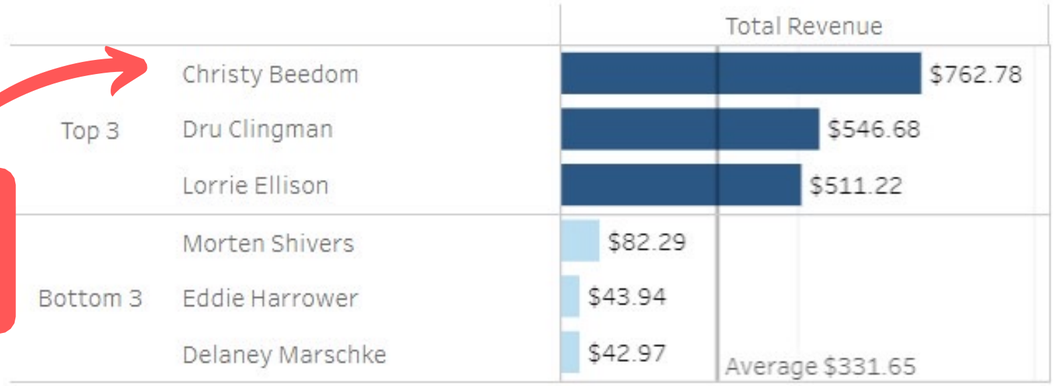
Vanilla and Olive Oil Candle has the most sales



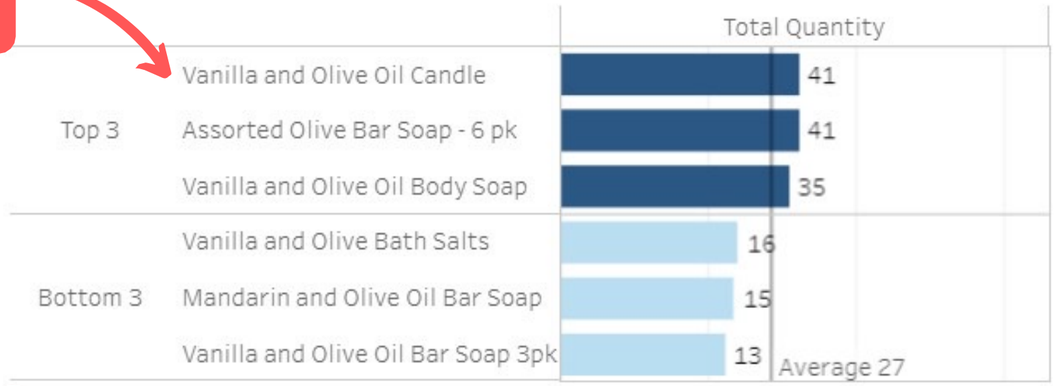
There are 4 top spenders with the same number of orders



Employee Performances



Product Sales

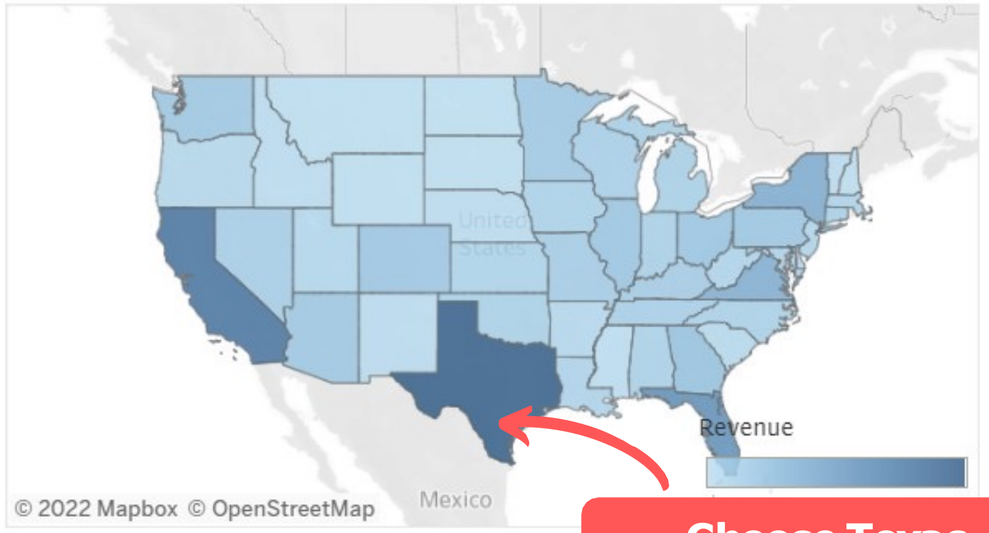


Top Spender

TESTING 2

Show retail summary sales by business customers on Olive Oil category in Texas

States

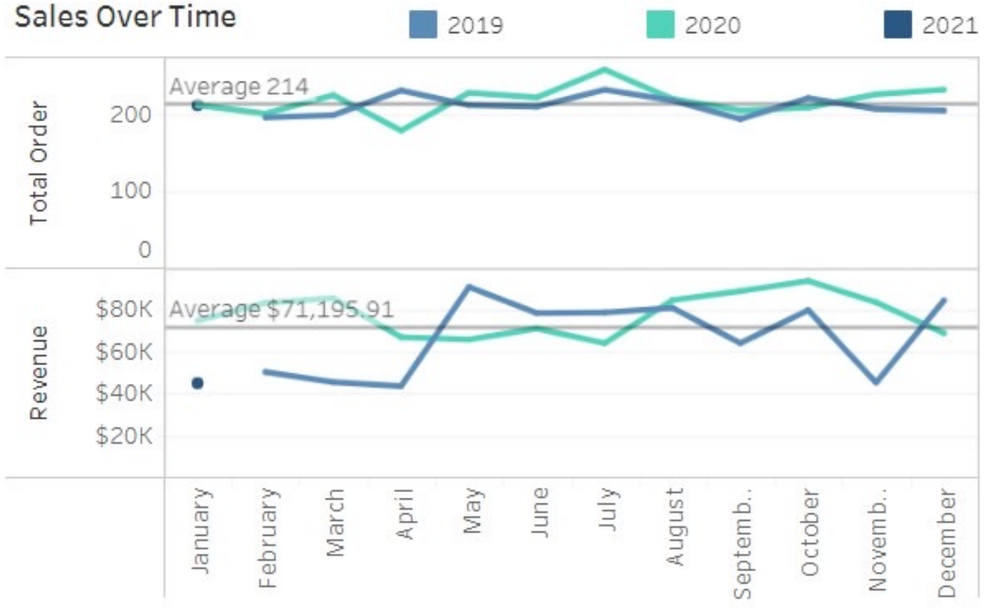


Choose Texas

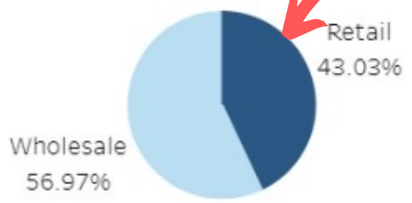
Total Order	Total Revenue	
5,130	$1,708,701.80	16,523

Year (All)

Sales Over Time

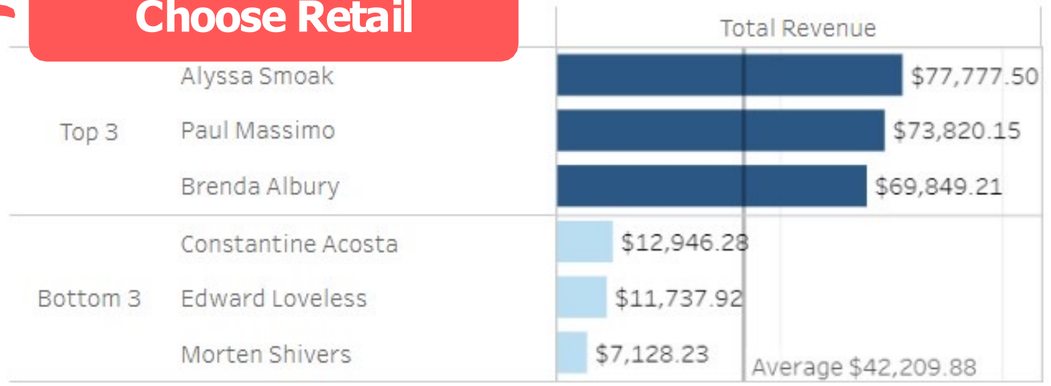


Revenue by Order Type

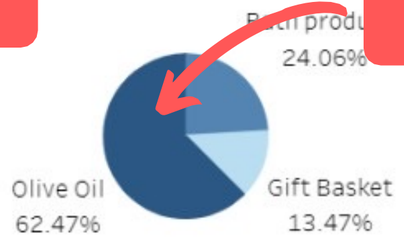


Choose Retail

Employee Performances

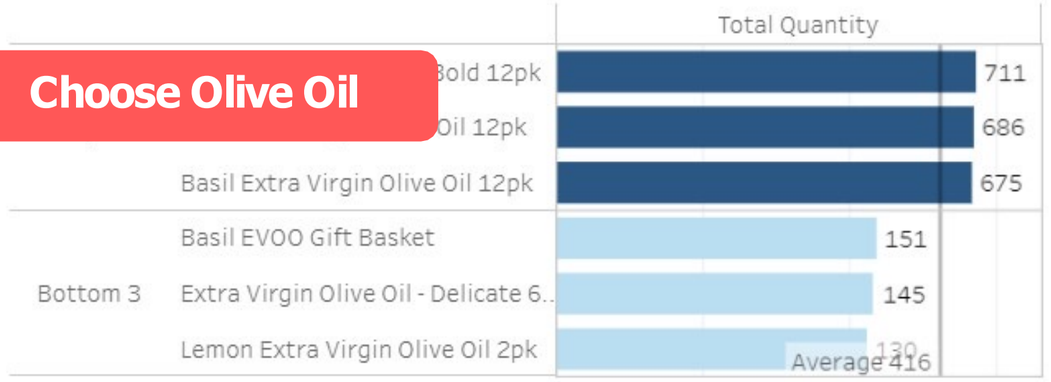


Total Quantity by Product Category

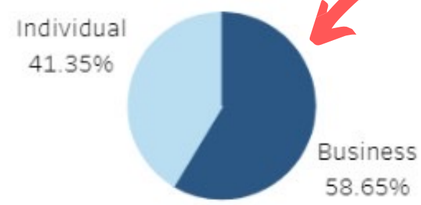


Choose Olive Oil

Product Sales



Revenue by Customer Type

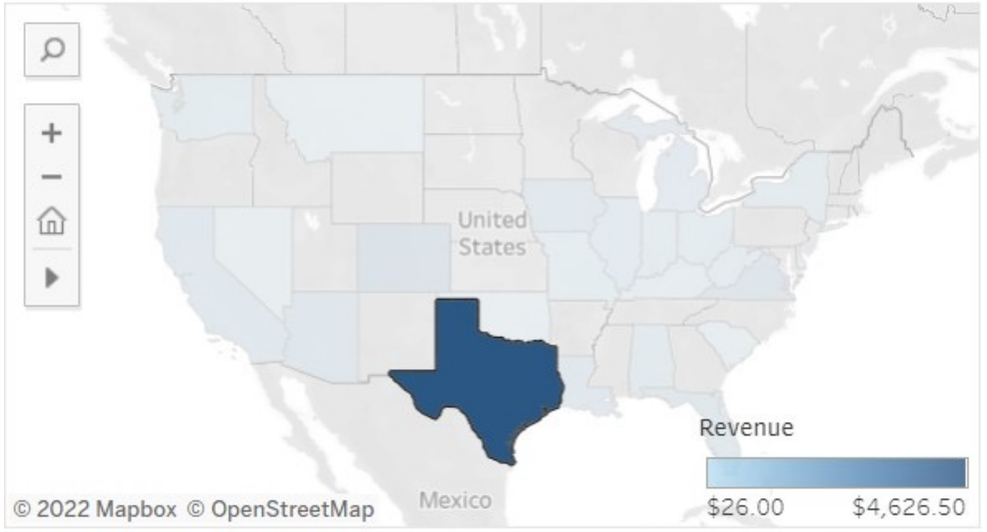


Choose Business

Top Spender

RESULT

States

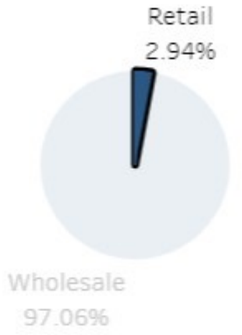


Total Order	Total Revenue	Total Quantity
10	$4,626.50	30

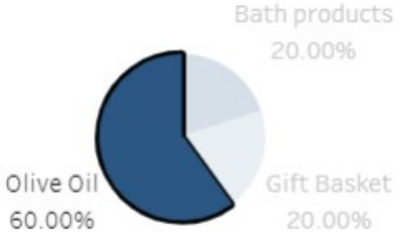
Year (All)

Sales Over Time

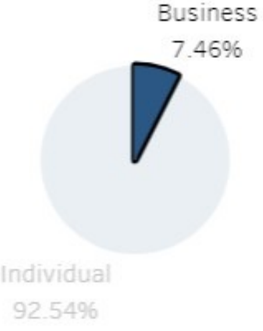
Revenue by Order Type



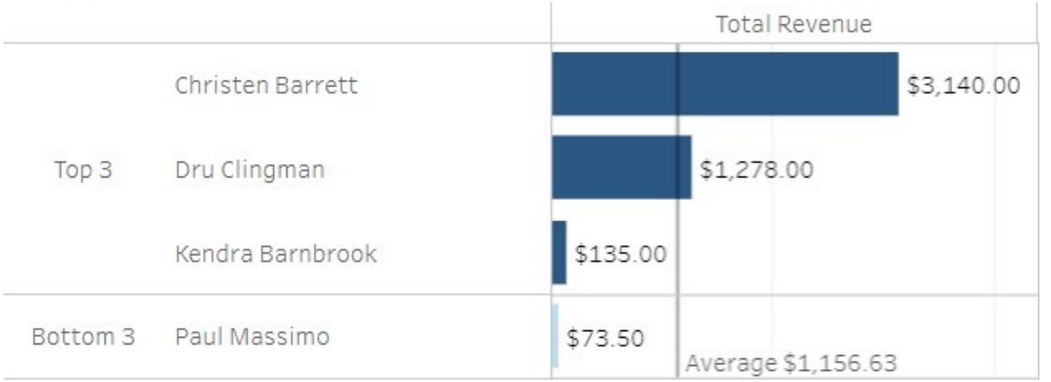
Total Quantity by Product Category



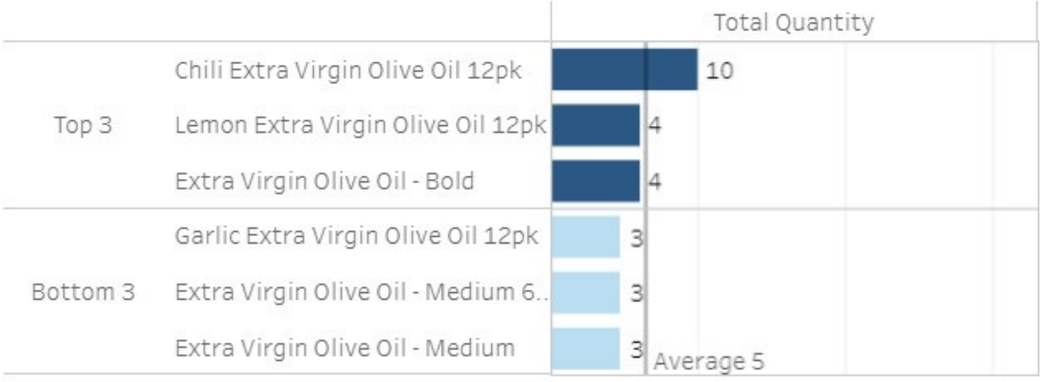
Revenue by Customer Type



Employee Performances

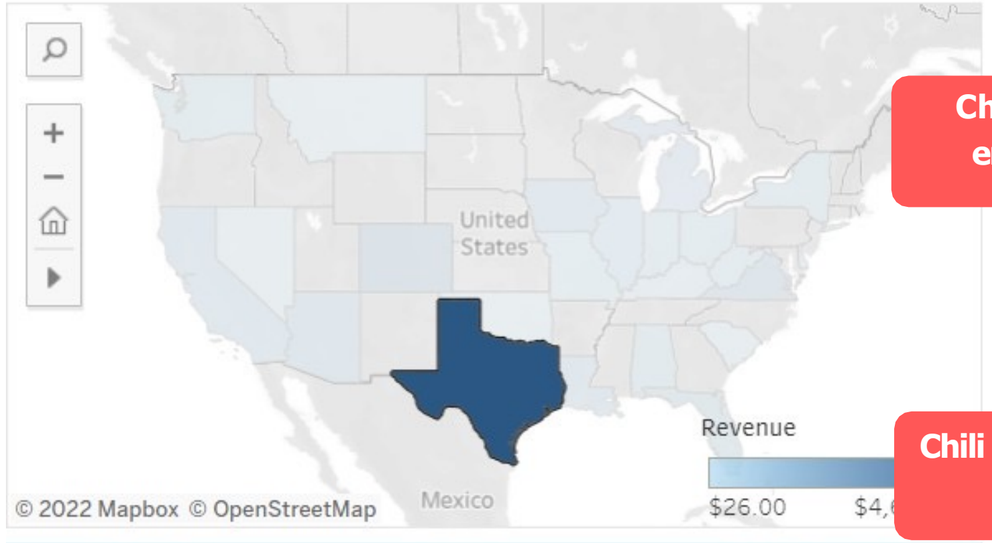


Product Sales

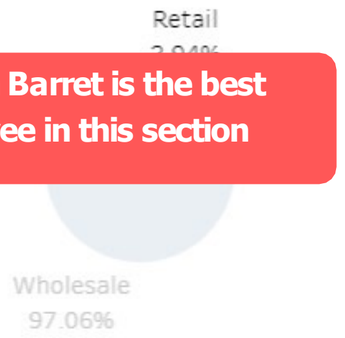


Top Spender

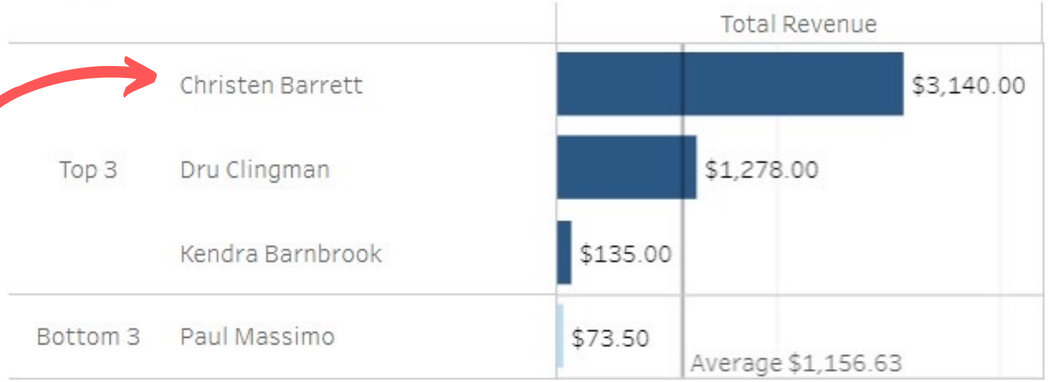
States



Revenue by Order Type



Employee Performances



Christen Barret is the best employee in this section

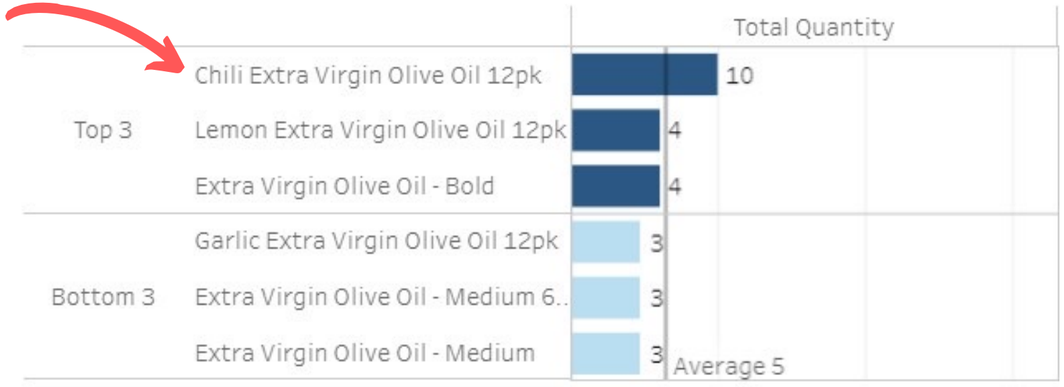
Total Order	Total Re…	Total Quantity
10	$4,62…	

Year (All)

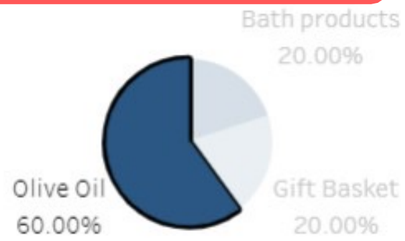
Sales only occur in certain months

Sales Over Time

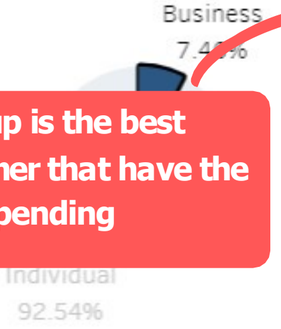
Product Sales



Chili Extra Virgin Olive Oil 12pk has the most sales



Revenue by Customer Type



Hauck Group is the best business customer that have the most spending

Top Spender