

# ECOMMERCE SALES DATA

## **DATA VALIDATION**

**OBJECTIVE:** Data Validation of Visuals in Power Bi Dashboard  
of Ecommerce Sales.

### **--Prerequisites and Data cleaning**

**USE** ecommerce;

**SELECT \* FROM** ecommerce\_data;

**DESC** ecommerce\_data;

### **-- Changing datatype for orderdate and ship date**

**SET** sql\_safe\_updates=0;

**UPDATE** ecommerce\_data

**SET** order\_date = date\_format(str\_to\_date(order\_date,'%d-%m-%Y'),'%Y-%m-%d');

**ALTER TABLE** ecommerce\_data

**MODIFY** order\_date DATE;

**UPDATE** ecommerce\_data

**SET** ship\_date = date\_format(str\_to\_date(ship\_date,'%d-%m-%Y'),'%Y-%m-%d');

**ALTER TABLE** ecommerce\_data

**MODIFY** ship\_date DATE;

**-- YTD Sales**

```
SELECT ROUND(SUM( sales_per_order) /1000000,2) AS YTD_Sales  
FROM ecommerce_data  
WHERE YEAR(order_date) = 2022;
```

Output:

	YTD_Sales
▶	10.65

**-- YTD Profit**

```
SELECT ROUND(SUM(profit_per_order ) /1000000,2) AS YTD_Sales  
FROM ecommerce_data  
WHERE YEAR(order_date) = 2022;
```

Output:

	YTD_Profit
▶	1.24

**-- YTD Quantity Sold**

```
SELECT ROUND(SUM(order_quantity ) /1000,1) AS YTD_Sales  
FROM ecommerce_data  
WHERE YEAR(order_date) = 2022;
```

Output:

	YTD_Quantity_sold
▶	99.3

### -- YTD Profit Margin

```
SELECT ROUND((SUM(profit_per_order ) / SUM( sales_per_order)) * 100,2) AS  
YTD_Profit_Margin  
  
FROM ecommerce_data  
  
WHERE YEAR(order_date) = 2022;
```

Output:

	YTD_Profit_Margin
▶	11.67

## MATRIX VISUAL

### -- YTD Sales, PYTD Sales , YOY Sales by Product category

```
WITH ct1 AS (  
  
SELECT category_name AS product_category,  
  
ROUND(SUM( sales_per_order )/1000000,4) AS YTD_Sales  
  
FROM ecommerce_data  
  
WHERE YEAR(order_date) = 2022
```

```
GROUP BY 1),
```

```
ct2 AS (  
  
SELECT category_name AS product_category,  
  
ROUND(SUM( sales_per_order )/1000000,4) AS PYTD_Sales  
  
FROM ecommerce_data  
  
WHERE YEAR(order_date) = 2021
```

```
GROUP BY 1
```

```
ORDER BY 2 DESC)
```

```
SELECT ct1.product_category, ct1.YTD_Sales,ct2.PYTD_Sales ,
```

```
ROUND(((ct1.YTD_Sales-ct2.PYTD_Sales) / ct2.PYTD_Sales )* 100,2) AS YOY_sales
```

```
FROM ct1,ct2
```

```
WHERE ct1.product_category=ct2.product_category
```

```
GROUP BY 1;
```

Output:

	product_category	YTD_Sales	PYTD_Sales	YOY_sales
▶	Office Supplies	6.3116	6.3313	-0.31
	Furniture	2.3476	2.2987	2.13
	Technology	1.9889	1.9913	-0.12

## BAR CHART

### -- Top 5 Products by YTD Sales

```
SELECT product_name, ROUND(SUM(sales_per_order)/1000,0) AS sales
FROM ecommerce_data
WHERE YEAR(order_date) = 2022
GROUP BY 1
ORDER BY 2 DESC
LIMIT 5;
```

Output:

	product_name	sales
►	Staple envelope	55
	Staples	50
	Easy-staple paper	44
	Staples in misc. colors	24
	KI Adjustable-Height Table	22

### -- Bottom 5 Products by YTD Sales

```
SELECT * FROM(
SELECT product_name,ROUND(SUM(sales_per_order),0) AS sales
FROM ecommerce_data
WHERE YEAR(order_date) = 2022
GROUP BY 1
ORDER BY 2 ASC
LIMIT 5 ) AS bottom_sales
ORDER BY sales DESC;
```

Output:

	product_name	sales
►	Lexmark X 9575 Professional All-in-One Color Pri...	270
	Zebra GK420t Direct Thermal/Thermal Transfer ...	251
	Cisco SPA525G2 5-Line IP Phone	250
	Xerox Blank Computer Paper	230
	Rediform S.O.S. Phone Message Books	180

## DONUT CHARTS

### -- YTD Sales by region

```
SELECT customer_region AS region,  
       SUM(sales_per_order) AS sales,  
       ROUND( SUM(sales_per_order)/ (SELECT SUM(sales_per_order) FROM  
ecommerce_data  
WHERE YEAR(order_date) = 2022) *100,0) AS percent_total  
FROM ecommerce_data  
WHERE YEAR(order_date) = 2022  
GROUP BY 1;
```

Output:

region	sales	percent_total
East	3034702	29
Central	2458112	23
South	1729368	16
West	3425888	32

### -- YTD Sales by shipping mode

```
SELECT shipping_type AS mode, SUM(sales_per_order) AS sales,  
       ROUND( SUM(sales_per_order)/ (SELECT SUM(sales_per_order) FROM ecommerce_data  
WHERE YEAR(order_date) = 2022) *100,0) AS percent_total  
FROM ecommerce_data  
WHERE YEAR(order_date) = 2022  
GROUP BY 1;
```

Output:

mode	sales	percent_total
Second Class	1955565	18
Standard Class	6587878	62
First Class	1531082	14
Same Day	573545	5

## MAP VISUAL

### -- YTD Sales by customer\_state

```
SELECT customer_region, customer_state,
       SUM(sales_per_order) AS sales
FROM ecommerce_data
WHERE YEAR(order_date) = 2022
GROUP BY 1,2
ORDER BY 1;
```

Output:

	customer_region	customer_state	sales
▶	Central	Illinois	523141
	Central	Indiana	143458
	Central	Iowa	30355
	Central	Kansas	29956
	Central	Michigan	264561
	Central	Minnesota	97854
	Central	Missouri	73601
	Central	Nebraska	33310
	Central	North Dakota	8448
	Central	Oklahoma	72501
	Central	South Dakota	7790
	Central	Texas	1062973
	Central	Wisconsin	110164
	East	Connecticut	85211
	East	Delaware	102464
	East	District of Colu...	15859
	East	Maine	8260
	East	Maryland	121025
	East	Massachusetts	142265
	East	New Hampshire	29222
	East	New Jersey	135122
	East	New York	1195125
	East	Ohio	513457
	East	Pennsylvania	606865
	East	Rhode Island	63014
	East	Vermont	12287
	East	West Virginia	4526
	South	Arkansas	67427
	South	Florida	410718
	South	Georgia	194229
	South	Kentucky	139176
	South	Louisiana	40398
	South	Mississippi	53993
	South	North Carolina	269482
	South	South Carolina	42638
	South	Tennessee	199448
	South	Virginia	244679
	West	Arizona	233191
	West	California	2154193
	West	Colorado	179289
	West	Idaho	21375
	West	Montana	17789
	West	Nevada	40896
	West	New Mexico	40951
	West	Oregon	137679
	West	Utah	59128
	West	Washington	539787
	West	Wyoming	1610