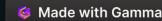
Electronics Product Sales Analysis

This presentation showcases how I successfully combined three disparate data sources using SQL queries, ultimately generating an insightful Power BI dashboard.

--by Gitanjali Pekamwar





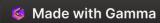
Project Overview and Objectives

Objective

To combine three tables -product data, product sales, and discount data - into a unified dataset for analysis.

Goal

Create a Power BI dashboard that provides a comprehensive view of sales performance, customer trends, and product insights.



Source Tables.

Table Product data Product sales Discount data



```
SELECT * FROM
            product_data as a
     join Product_Sales as b
     on a.product_ID = b.Product
100 % 🔻 🔻
Results Messages
     Product_ID Product
                                      Category
                                                            Cost_Price Sale_Price Brand
                                                                                                                                          lmage_url
    SR1001 MV7
                                       Dynamic Microphone $174 $199
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                                      Audio Interface $118
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     FR10021 Scarlett 2i2
```

```
b.Customer_Type,
b.Discount_Band,
b.Units_Sold,

(REPLACE(Cost_Price, '$', '') * Units_Sold) as Total_Cost,
    (REPLACE(Sale_Price, '$', '') * Units_Sold) as Revenue,
    format(date, 'mm') as Month,
    format(date, 'yyyy') as Year

FROM

product_data as a

100 % 

Messages
```

a.image_uri,

		g											
	and	Date	Description	Cost_Price	Sale_Price	lmage_url	Customer_Type	Discount_Band	Units_Sold	Total_Cost	Revenue	Month	Year
1	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
2	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
3	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
4	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
5	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
6	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
7	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
8	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
9	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
10	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
11	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
12	hure	2023-12-01 00:00:00.00000000	A versatile USB/XLR dynamic microphone ideal for	\$174	\$199	https://absentdata.com/wp-content/uploads/2024/1	Government	None	15	2610	2985	00	2023
13	ode	2023-12-01 00:00:00.00000000	A popular condenser microphone known for its low	\$160	\$229	https://absentdata.com/wp-content/uploads/2024/1	Education	None	6	960	1374	00	2023
14	ode	2023-12-01 00:00:00.00000000	A popular condenser microphone known for its low	\$160	\$229	https://absentdata.com/wp-content/uploads/2024/1	Education	None	6	960	1374	00	2023
15	ode	2023-12-01 00:00:00.00000000	A popular condenser microphone known for its low	\$160	\$229	https://absentdata.com/wp-content/uploads/2024/1	Education	None	6	960	1374	00	2023
16	ode	2023-12-01 00:00:00.00000000	A popular condenser microphone known for its low	\$160	\$229	https://absentdata.com/wp-content/uploads/2024/1	Education	None	6	960	1374	00	2023
17	ode	2023-12-01 00:00:00.00000000	A popular condenser microphone known for its low	\$160	\$229	https://absentdata.com/wp-content/uploads/2024/1	Education	None	6	960	1374	00	2023
18	ode	2023-12-01 00:00:00.00000000	A popular condenser microphone known for its low	\$160	\$229	https://absentdata.com/wp-content/uploads/2024/1	Education	None	6	960	1374	00	2023
19	ode	2023-12-01 00:00:00.00000000	A popular condenser microphone known for its low	\$160	\$229	https://absentdata.com/wp-content/uploads/2024/1	Education	None	6	960	1374	00	2023
20	ode	2023-12-01 00:00:00.00000000	A popular condenser microphone known for its low	\$160	\$229	https://absentdata.com/wp-content/uploads/2024/1	Education	None	6	960	1374	00	2023

```
SELECT

*,

(REPLACE(Cost_Price, '$', '') * Units_Sold) as Total_Cost,

(REPLACE(Sale_Price, '$', '') * Units_Sold) as Revenue

FROM

product_data as a

JOIN Product_Sales as b ON a.product_ID = b.Product
```

⊞ Re	sults 🗐 Me	essages							
	Brand	Description	Image_url	Date	Customer_Type	Country	Product	Discount_Band	Units
1	Shure	A versatile USB/XLR dynamic microphone ideal for	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Government	Germany	SR1001	None	15
2	Rode	A popular condenser microphone known for its low s	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Education	United States of America	RR10020	None	6
3	Focusrite	A compact USB audio interface with two inputs, allo	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Government	Canada	FR10021	None	18
4	Focusrite	A compact USB audio interface with two inputs, allo	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.00000000	Government	Germany	FR10021	None	15
5	HyperX	A USB condenser microphone featuring customizab	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Government	Canada	HY1004	None	18
6	Shure	A versatile USB/XLR dynamic microphone ideal for	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Government	France	SR1001	Low	22
7	Focusrite	A compact USB audio interface with two inputs, allo	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Government	France	FR10021	Low	22
8	Shure	A versatile USB/XLR dynamic microphone ideal for	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.00000000	Government	Canada	SR1001	Low	29
9	Focusrite	A compact USB audio interface with two inputs, allo	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.00000000	Small Business	Canada	FR10021	Low	19
10	Focusrite	A compact USB audio interface with two inputs, allo	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Government	Canada	FR10021	Low	29
11	Focusrite	A compact USB audio interface with two inputs, allo	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Enterprise	Canada	FR10021	Low	27
12	Focusrite	A compact USB audio interface with two inputs, allo	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Creator	France	FR10021	Low	11
13	Focusrite	A compact USB audio interface with two inputs, allo	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Creator	Mexico	FR10021	Low	11
14	PreSonus	A complete recording bundle that includes an audio	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Creator	France	PS10022	Low	11
15	PreSonus	A complete recording bundle that includes an audio	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Creator	Mexico	PS10022	Low	11
16	HyperX	A USB condenser microphone featuring customizab	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Enterprise	Canada	HY1004	Low	27
17	SteelSeries	A wireless gaming headset with excellent sound qu	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.00000000	Small Business	Canada	AR1200	Low	19
18	Rode	A popular condenser microphone known for its low s	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.0000000	Enterprise	France	RR10020	Low	13
19	Rode	A popular condenser microphone known for its low s	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.00000000	Enterprise	Germany	RR10020	Low	17
20	Focusrite	A compact USB audio interface with two inputs, allo	https://absentdata.com/wp-content/uploads/2024/1	2023-12-01 00:00:00.00000000	Enterprise	France	FR10021	Low	13



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SQL Queries for Data Transformation

```
with cte as
SELECT
    a.Product,
    a.Category,
    a.Brand,
    b.Date,
    a.Description.
    a.Cost Price,
    a.Sale_Price,
    a.Image url,
    b.Customer Type,
    b.Discount_Band,
    b.Units Sold,
    (REPLACE(Cost_Price, '$', '') * Units_Sold) as Total_Cost,
     (REPLACE(Sale_Price, '$', '') * Units_Sold) as Revenue,
     Month (Date) as Month,
     format(date,'yyyy') as Year
FROM
    product_data as a
    JOIN Product Sales as b ON a.product ID = b.Product )
    select * ,
       (1 - CAST(REPLACE(Discount, '%', '') AS decimal(10,2)) * 1.0 / 100) * Revenue as discount revenue
    from cte al
    join discount data b1
    on a1.Discount_Band = b1.Discount_Band ;
```

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Impart connectors

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Data re

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Importing Data into Power BI

1 Data Source Connection

> Connected Power BI to the SQL database containing the combined dataset.

Data Loading

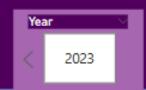
Imported the data from the SQL database into Power BI Desktop for visualization.



Dashboard



Electronics Product Sales Dashboard



AudioBox...

A complete recording bundle that includes an audinterface, M7 condenser microphone, headphones and software. This all-in-one package is design musicians, podcasters, and streamers looking for affordable, portable recording setup.

Sum of Revenue by Country

\$13,08,624.00 United States of America

> \$12,56,088.00 France

\$11,15,196.00 Mexico

\$10,53,108.00 Germany

\$10,00,572.00 Canada

















Sum of Revenue by Date and Year

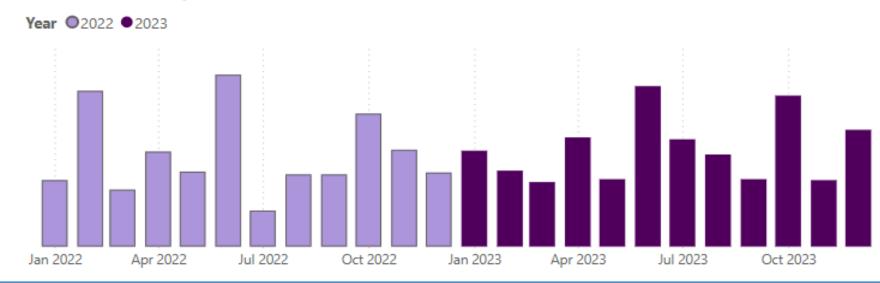
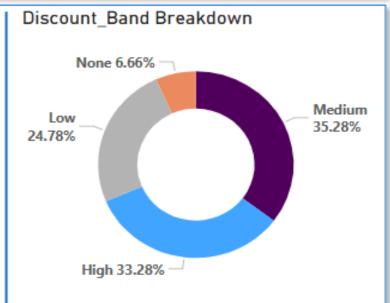


Table Breakdown

Year	2022		2023				
Customer_Type	Sum of Revenue	Min of Profit	Sum of Revenue	Min of Profit			
			\$3,91,632	245			
⊞ Education	\$2,24,472	429	\$4,39,392	214			
	\$7,18,788	0	\$5,18,196	427			
⊞ Government	\$11,96,388	79	\$13,13,400	122			
	\$6,39,984	184	\$2,91,336	427			
Total	\$27,79,632	0	\$29,53,956	122			



Insights

- **1. Year-over-Year (YoY) Profit Growth:** There is a significant YoY profit increase of 1.32449%. This indicates that the business is performing well and generating more profit compared to the previous year.
- 2. The bar chart shows revenue fluctuations across different quarters of 2022 and 2023. This can help identify seasonal trends or any specific periods with high/low revenue.
- 3. The United States is the top revenue-generating country, followed by France, Mexico, and Germany. This information can be used to focus sales and marketing efforts in these key markets.
- **4. Profit:** Enterprise and Government customers have higher profit margins compared to other customer types.
- **5. Discount Band Breakdown:** A significant portion of sales (66.6%) are made with no discount, indicating that the business might have room to offer discounts strategically to boost sales or incentivize certain customer segments.

Thank You!

Thank You

Thank you for your time and attention. I hope this presentation has provided valuable insights into the power of data integration and visualization.

