

# POWER BI AND SQL PRODUCT SALES ANALYSIS PROJECT

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## ASSIGNMENT:

Analyse a product sales dataset from Kaggle for patterns and trends about the different products and brands being sold.

## SOFTWARE:

MS EXCEL, MY SQL SERVER, POWER BI

## Overview:

The steps taken to complete this analysis project

1. Importing the data to MySQL SERVER to create the database, write queries and create appropriate tables.
2. Import the SQL database to Power Query for data cleaning and transforming.
3. Using Power BI to create data visualizations and build 2 dashboards.
4. Reporting on insights from the data.

## Results from the SQL queries:

Total sales:

9134297

Total sales by brand:

and	1215798
casio	1109958
aurelia	710019
adidas	685782
biba	643334
arteastri	421144
anne klein	405231
catwalk	392505
coach	383968
armani exchange	353456
allen solly	334851
clarks	270739
cover story	218662
campus sutra	195585
ayesha	186961
amazfit	150484
ceriz	148914
carolina herrera	141545
amante	140718
aarke	124540
109f	116916
clara	104683
burberry	98675
amukti	75247
calvin klein	73750
altnlife	60139
belleziya	53176
clovia	49853
citizen	36000
alexandre christie	25995
chopard	24300
ajmal	23982
abercrombie & fitch	22140
allen solly tribe	19185
chloe	16650
alcis	15886
crimsoune club	10800
arcelia	10447

antonio banderas	9023
clinique	8750
colour me	7896
aigner	7595
18.21 man made	5500
calvin klein underwear	4058
4711	3120
back to earth	2799
athome	2799
boucheron	2695
all good scents	2190
aspen	1900
betty barclay	1520
accessorize	995
charchit	841
black panther	598

Most popular brands based on total sales:

and	1215798
casio	1109958
aurelia	710019
adidas	685782
biba	643334

Quantity per brand:

and	706
aurelia	486
ayesha	381
biba	290
adidas	248
allen solly	239
catwalk	237
casio	198
amante	193
altnlife	161
cover story	148
clovia	147
arteastri	138
campus sutra	115
109f	114
ceriz	96
amukti	93
belleziya	74

clarks	61
anne klein	56
clara	53
aarke	40
armani exchange	31
coach	31
ajmal	30
carolina herrera	25
arcelia	21
amazfit	16
calvin klein	16
burberry	15
allen solly tribe	15
alcis	14
crimsoune club	10
antonio banderas	10
colour me	7
abercrombie & fitch	5
citizen	4
chopard	3
aigner	2
all good scents	2
black panther	2
calvin klein underwear	2
chloe	2
boucheron	1
alexandre christie	1
accessorize	1
aspen	1
betty barclay	1
clinique	1
athome	1
back to earth	1
charchit	1
4711	1
18.21 man made	1

Look at different clothing categories:

Fragrance-Women
Westernwear-Women
Indianwear-Women
Lingerie&Nightwear-Women
Jewellery-Women
Footwear-Women

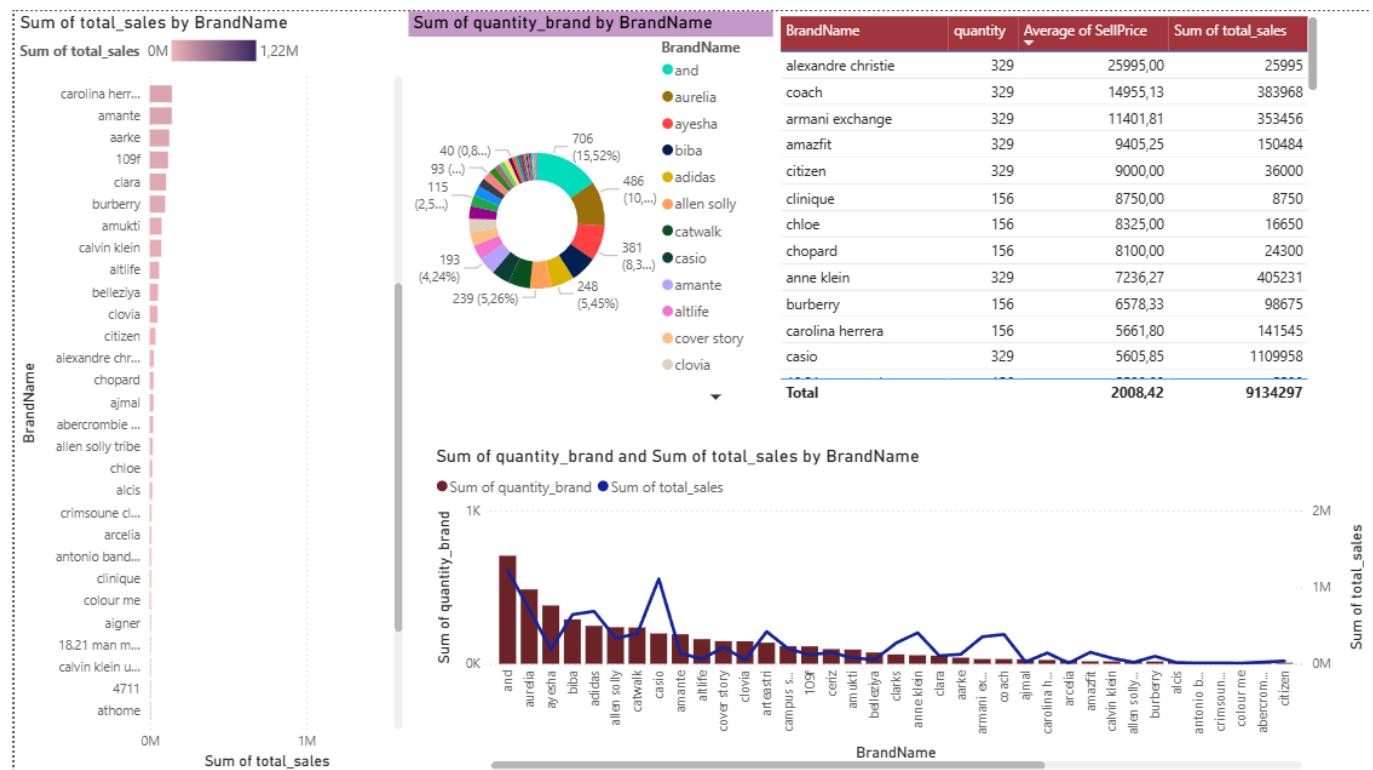
## Watches-Women

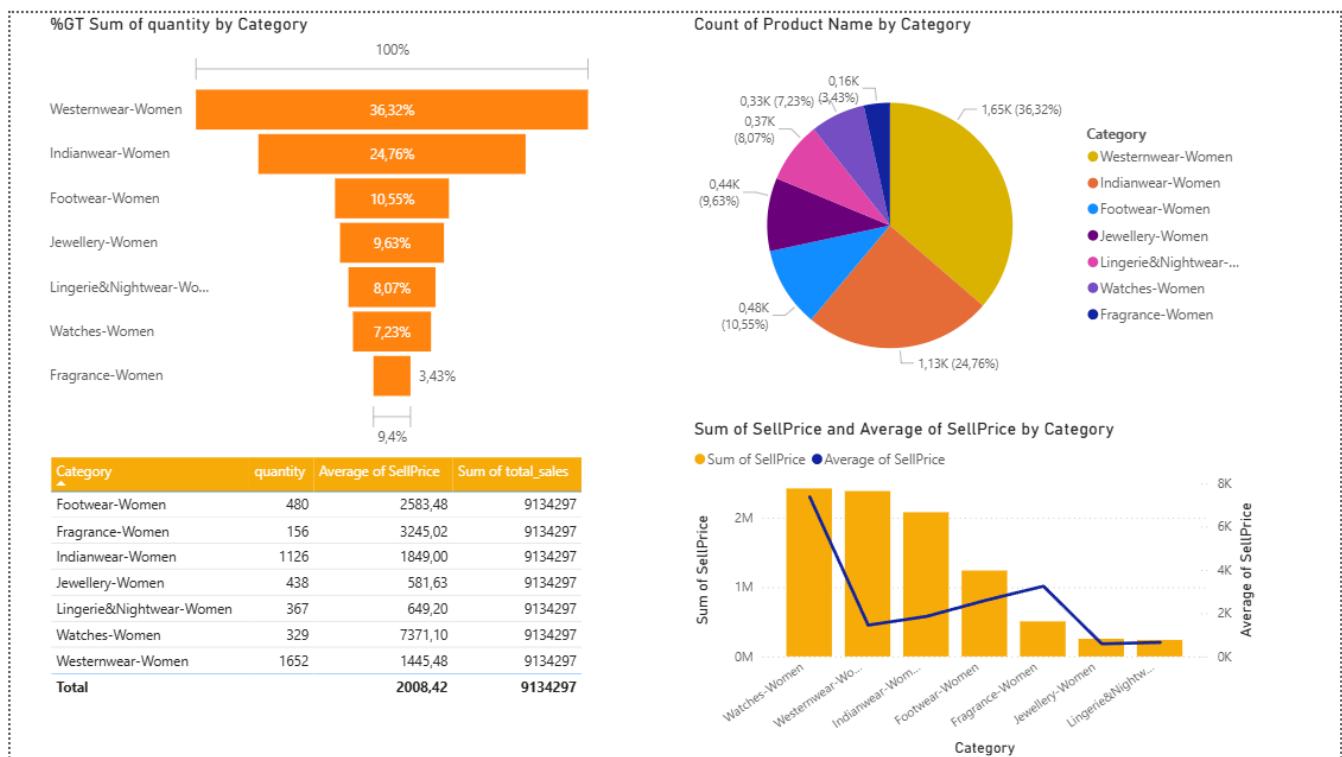
Most performing product:

Westernwear-Women	1652
Indianwear-Women	1126
Footwear-Women	480
Jewellery-Women	438
Lingerie&Nightwear-Women	367
Watches-Women	329
Fragrance-Women	156

## Visualizing the data:

- Column chart showing total sales by Brand
- Donut chart showing the quantity of products by Brand
- Bar and line chart showing quantity of products and total sales by Brand
- Funnel chart and pie chart showing quantity of products by Category
- Bar and line chart showing sum of the price and average price by Category





## INSIGHTS GAINED:

- The popular brands in this dataset are And, Casio, Aurelia, Adidas, and Biba. They had the highest total sales amongst the other brands.
- A visual was created showing the quantity of products per brand. And, Aurelia, Ayesha, Adidas, and Biba have the most quantity of products.
- Most expensive of brand is Casio, total sales is larger than the total quantity of this brand. This suggests that products have a high price compared to the other brands.
- Western wear women has the highest count of products and Fragrance women has the lowest count of products
- Watches women has the most total sales, whereas lingerie and nightwear has the least total sales.

## SQL TIMESTAMP:

#	Time	Action	Message	Duration
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					<b>/ Fetch</b>
3	1	10:49:45	<code>SELECT * FROM sales_db.`message_group - product` LIMIT 0, 1000</code>	<u>1000 row(s) returned</u>	<u>0.015 sec / 0.047 sec</u>
3	2	10:51:40	<code>RENAME TABLE `message_group - product` TO `product_sales`</code>	<u>0 row(s) affected</u>	<u>0.109 sec</u>
3	3	10:52:15	<code>SELECT * FROM product_sales LIMIT 0, 1000</code>	<u>1000 row(s) returned</u>	<u>0.031 sec / 0.000 sec</u>
3	4	10:55:49	<code>SELECT SUM(SellPrice) FROM product_sales LIMIT 0, 1000</code>	<u>1 row(s) returned</u>	<u>0.000 sec / 0.000 sec</u>
3	5	10:56:35	<code>SELECT SUM(SellPrice) AS Total_revenue FROM product_sales LIMIT 0, 1000</code>	<u>1 row(s) returned</u>	<u>0.000 sec / 0.000 sec</u>
0	6	11:03:40	<code>SELECT BrandName, Total_revenue AS total_sales FROM product_sales GROUP BY BrandName ORDER BY Total_revenue DESC LIMIT 0, 1000</code>	<u>Error Code: 1054. Unknown column 'Total_revenue' in 'field list'</u>	<u>0.281 sec</u>
0	7	11:04:14	<code>SELECT BrandName, Total_revenue AS total_sales FROM product_sales GROUP BY BrandName ORDER BY total_sales DESC LIMIT 0, 1000</code>	<u>Error Code: 1054. Unknown column 'Total_revenue' in 'field list'</u>	<u>0.000 sec</u>
3	8	11:04:53	<code>SELECT BrandName, SUM(SellPrice) AS total_sales FROM product_sales GROUP BY BrandName ORDER BY total_sales DESC LIMIT 0, 1000</code>	<u>54 row(s) returned</u>	<u>0.078 sec / 0.000 sec</u>
3	9	11:07:09	<code>SELECT SUM(SellPrice) AS Total_revenue FROM product_sales LIMIT 0, 1000</code>	<u>1 row(s) returned</u>	<u>0.015 sec / 0.000 sec</u>
3	10	11:08:16	<code>SELECT BrandName, SUM(SellPrice) AS total_sales FROM product_sales GROUP BY BrandName ORDER BY total_sales DESC LIMIT 0, 1000</code>	<u>54 row(s) returned</u>	<u>0.015 sec / 0.000 sec</u>
3	11	11:13:27	<code>SELECT BrandName, COUNT(*) AS quantity_brand FROM product_sales group by BrandName ORDER BY quantity_brand DESC LIMIT 0, 1000</code>	<u>54 row(s) returned</u>	<u>0.016 sec / 0.000 sec</u>
3	12	11:17:06	<code>SELECT DISTINCT Category FROM product_sales LIMIT 0, 1000</code>	<u>7 row(s) returned</u>	<u>0.016 sec / 0.000 sec</u>

<u>3</u>	<u>13</u>	<u>11:20:55</u>	<code>SELECT Category, COUNT(*) AS quantity FROM product_sales GROUP BY Category ORDER BY quantity DESC LIMIT 0, 1000</code>	<u>7 row(s) returned</u>  	<u>0.016 sec / 0.000 sec</u>
<u>3</u>	<u>14</u>	<u>11:40:29</u>	<code>CREATE TABLE total_sales_brand AS SELECT BrandName, SUM(SellPrice) AS total_sales FROM product_sales GROUP BY BrandName ORDER BY total_sales DESC</code>	<u>54 row(s) affected</u> <u>Records: 54</u> <u>Duplicates: 0</u> <u>Warnings: 0</u>	<u>0.250 sec</u>
<u>3</u>	<u>15</u>	<u>11:42:25</u>	<code>CREATE TABLE brand_quantity AS SELECT BrandName, COUNT(*) AS quantity_brand FROM product_sales group by BrandName ORDER BY quantity_brand DESC</code>	<u>54 row(s) affected</u> <u>Records: 54</u> <u>Duplicates: 0</u> <u>Warnings: 0</u>	<u>0.078 sec</u>
<u>3</u>	<u>16</u>	<u>11:44:07</u>	<code>CREATE TABLE products_category AS SELECT Category, COUNT(*) AS quantity FROM product_sales GROUP BY Category ORDER BY quantity DESC</code>	<u>7 row(s) affected</u> <u>Records: 7</u> <u>Duplicates: 0</u> <u>Warnings: 0</u>	<u>0.031 sec</u>