Designing A Sales Dashboard In Excel

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Cohort: **PGP DA Nov 2022 Cohort 2**

Course**: PC DA Analytics Foundation Assessment Project**

Dataset: ECommerce Sales Dashboard Project Dataset

Expected Deliverables: Design a sales dashboard that analyzes the sales based on various product categories. The company wants to add user control for product categories so that users can select a category and can see the trend month-wise and product-wise accordingly.

Tools required: Microsoft Excel, Data Analysis Add-in

Dataset Description: The dataset in file **E-Commerce Dashboard dataset.xlsx** contains sales data for different product categories. The following are the features in the dataset:

Order ID	Unique Order ID of a product
Order Date	Order Placement Date
Ship Date	Shipment Date of the placed order
Aging	Used to Create Histogram Bin
Ship Mode	Shipment mode of placed order
Product Category	Product Category
Product	Name of the Product
Sales	Sales Amount
Quantity	The amount or number of a material
Discount	A deduction from the usual cost of something
Profit	A financial advantage or benefit
Shipping Cost	The amount required to ship the placed order
Order Priority	Precedence of placed order
Customer ID	Unique Customer ID
Customer Name	Name of the Customer
City	Unique City Name
State	Unique State Name
Country	Unique Country Name
Region	Especially the part of a country

Months The month of placing the order

The following project tasks are required to be performed in Excel:

- Use the saved Sample E-Commerce database
- Prepare a table of Sales and Profit month-wise in a working sheet
- Prepare the sales table region-wise in the working sheet
- Create User Control Combo box for Product Category
- Create a Column Chart of the month-wise table and region-wise table
- Link the table with a combo box
- Create a dashboard.

Domain: E-Commerce

Dashboard Report:

In the sheet called **Working Sheet** of my final Excel project **E-CommerceDashboardProject_BushraTasnimZahed.xlsx** file, I have prepared all my necessary tables for the final dashboard presented in the **Dashboard** sheet.

First of all, I have made a table called **CategoryTable** consisting of a list of product categories and cell links in the Working Sheet by using data from the Sales Data sheet.

	A	B
1	Cell Link	List of Product Categories
2	1	Auto & Accessories
3	2	Electronic
4	3	Fashion
5	4	Home & Furniture

Figure1. **CategoryTable**

I have next prepared the **WorkingMonthlySalesProfits** table and **WorkingRegionalSales** table

By using the SUMIFs() function in the Working Sheet sheet.

D	E	F
Months	Sales	Profits
Jan	$87,526	$38,447
Feb	$85,683	$38,753
Mar	$95,249	$41,165
Apr	$95,962	$42,366
May	$91,445	$40,872
Jun	$96,597	$42,010
Jul	$91,690	$40,959
Aug	$88,153	$38,238
Sep	$89,216	$39,656
Oct	$97,347	$43,305
Nov	$88,575	$39,016
Dec	$89,696	$39,490

H	I
Regions	Sales
Africa	$102,156
Canada	$10,382
Caribbean	$32,493
Central	$227,929
Central Asia	$35,956
East	$72,321
EMEA	$102,947
North	$100,025
North Asia	$56,978
Oceania	$66,631
South	$139,614
Southeast Asia	$74,598
West	$75,109

Figure2: **WorkingMonthlySalesProfits** table and **WorkingRegionalSales** table

Sumifs() function for **Sales** column in the **WorkingMonthlySalesProfits** table is

```
=SUMIFS('Sales Data'!$H:$H,'Sales Data'!$U:$U,[@Months],'Sales Data'!$F:$F,'Working Sheet'!$A$25)
```

Sumifs() function for **Profits** column in the **WorkingMonthlySalesProfits** table is

```
=SUMIFS('Sales Data'!K:K,'Sales Data'!$U:$U,[@Months],'Sales Data'!$F:$F,'Working Sheet'!$A$25)
```

Sumifs() function for **Sales** column in the **WorkingRegionalSales** table is

```
=SUMIFS('Sales Data'!$H:$H,'Sales Data'!$T:$T,[@Regions],'Sales Data'!$F:$F,'Working Sheet'!$A$25)
```

Next, I have created a User Control Combo box for Product Category in the Working Sheet sheet. I have linked the combo box with the above tables. The cell link value is used to link the field with tables by generating an offset using the **offset()** function.

	A
19	
20	Auto & Accessories
21	
22	**Cell Link**
23	1
24	**Offset**
25	Auto & Accessories

Figure 3: **User Control Combo Box for Product Category**

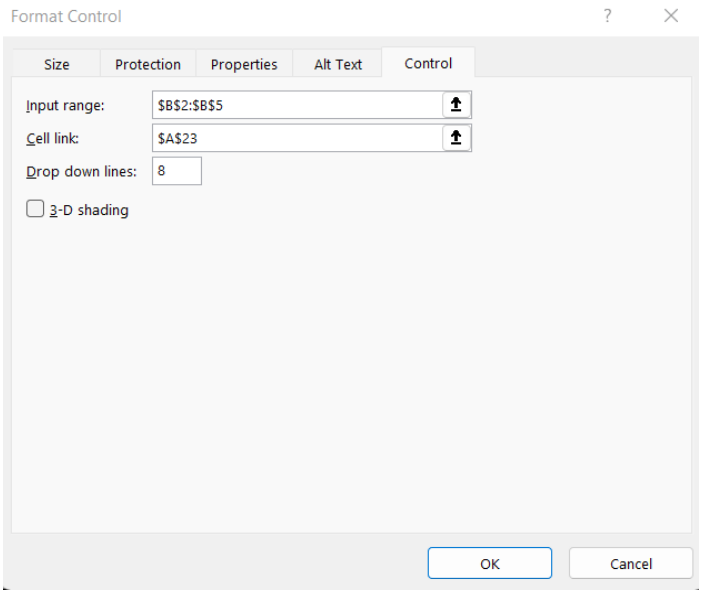
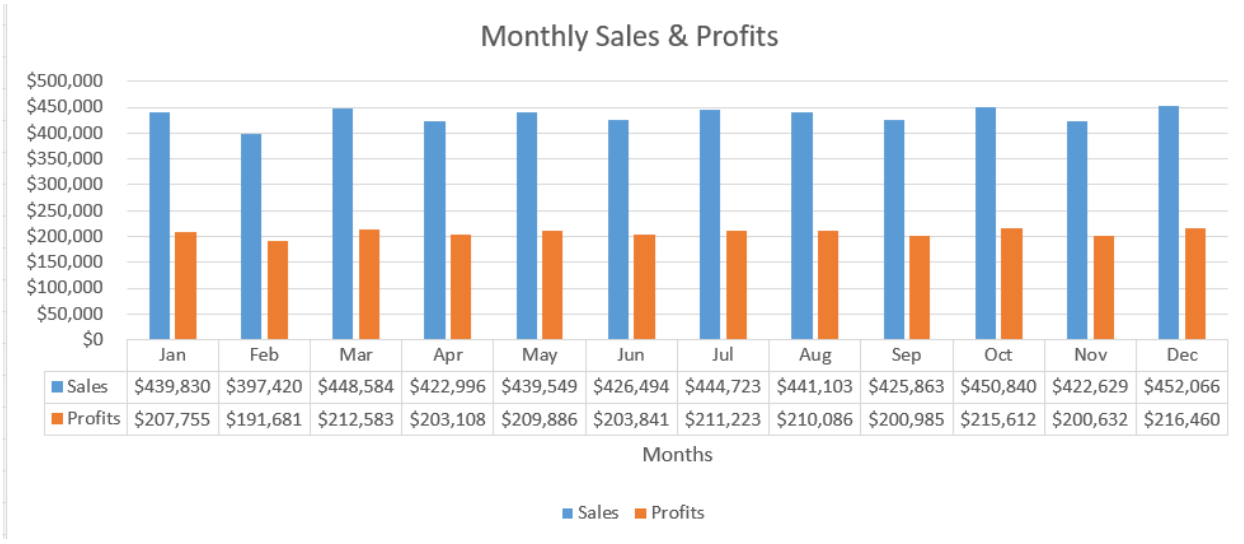


Figure 4: Setting up the user control box from the **CategoryTable**

The offset() function used to obtain the field from the user control drop-down combo box is

```
=OFFSET(CategoryTable[[#Headers],[List of Product Categories]],$A$23,0)
```

Finally, I generate column charts for both the **WorkingMonthlySalesProfits** table and **WorkingRegionalSales** table by inserting charts in the Working Sheet. The chart data are controlled by the user using the offset from the user control box based on the Product category in the **Working Sheet**.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sales	$439,830	$397,420	$448,584	$422,996	$439,549	$426,494	$444,723	$441,103	$425,863	$450,840	$422,629	$452,066
Profits	$207,755	$191,681	$212,583	$203,108	$209,886	$203,841	$211,223	$210,086	$200,985	$215,612	$200,632	$216,460

Figure 5: **Column Chart of WorkingMonthlySalesProfits Table**

The column chart shows monthly sales and profits based on different categories selected by the user from the combo box.

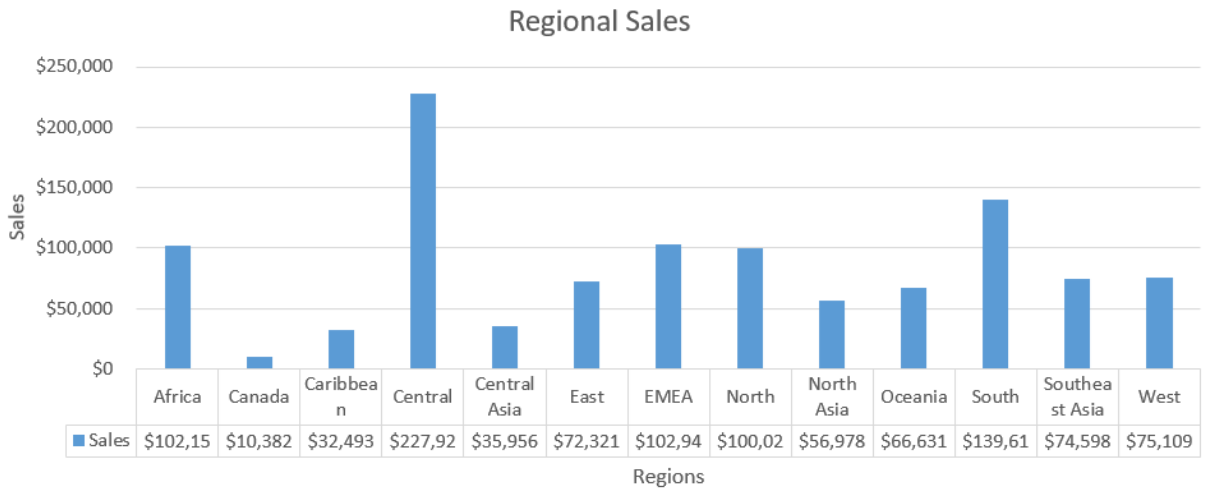
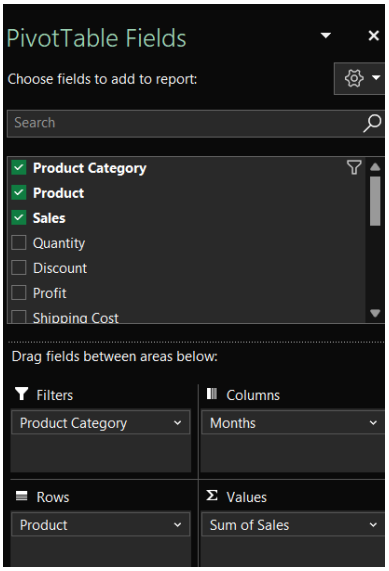


Figure 6: **Column Chart of WorkingRegionalSales Table**

I have also created a Pivot Table called **PivotTableProductwiseMonthlySales** in the **Working Sheet.**



Product Category	Electronic					
Sum of Sales	**Column L**					
Row Labels	**Jan**	**Feb**	**Oct**	**Nov**	**Dec**	**Grand Total**
Apple Laptop	$5,000	$3,500	$6,250	$4,750	$5,250	$24,750
Fans	$1,490	$2,235	$2,980	$1,639	$3,278	$11,622
Iron	$3,330	$4,884	$5,772	$5,328	$4,440	$23,754
Keyboard	$660	$231	$594	$726	$297	$2,508
LCD	$975	$1,300	$1,430	$1,365	$1,430	$6,500
LED	$2,880	$2,688	$4,416	$4,224	$4,032	$18,240
Mixer/Juicer	$1,826	$1,660	$2,241	$1,909	$1,162	$8,798
Mouse	$1,776	$1,998	$1,887	$1,998	$2,553	$10,212
Samsung Mobile	$3,740	$2,420	$4,620	$3,740	$3,740	$18,260
Speakers	$2,860	$3,510	$2,470	$2,080	$2,990	$13,910
Tablet	$4,975	$3,582	$3,980	$3,383	$4,378	$20,298
Watch	$1,768	$1,768	$2,600	$1,456	$1,352	$8,944
Grand Total	**$31,280**	**$29,776**	**$39,240**	**$32,598**	**$34,902**	**$167,796**

Figure 7: **PivotTableProductwiseMonthlySales Table**

In figure 7, the **PivotTableProductwiseMonthlySales** table shows sales for the month of Jan, Feb Oct, Nov, and Dec (during the major holidays) for the Electronic product category. We can select other categories and different months as well.

I have also generated a column and a pie chart from the P**ivotTableProductwiseMonthlySales** table respectively in the Working Sheet. The column chart displays the table data and the pie chart displays the Sales percentage of any given product in a given month based on the filter.

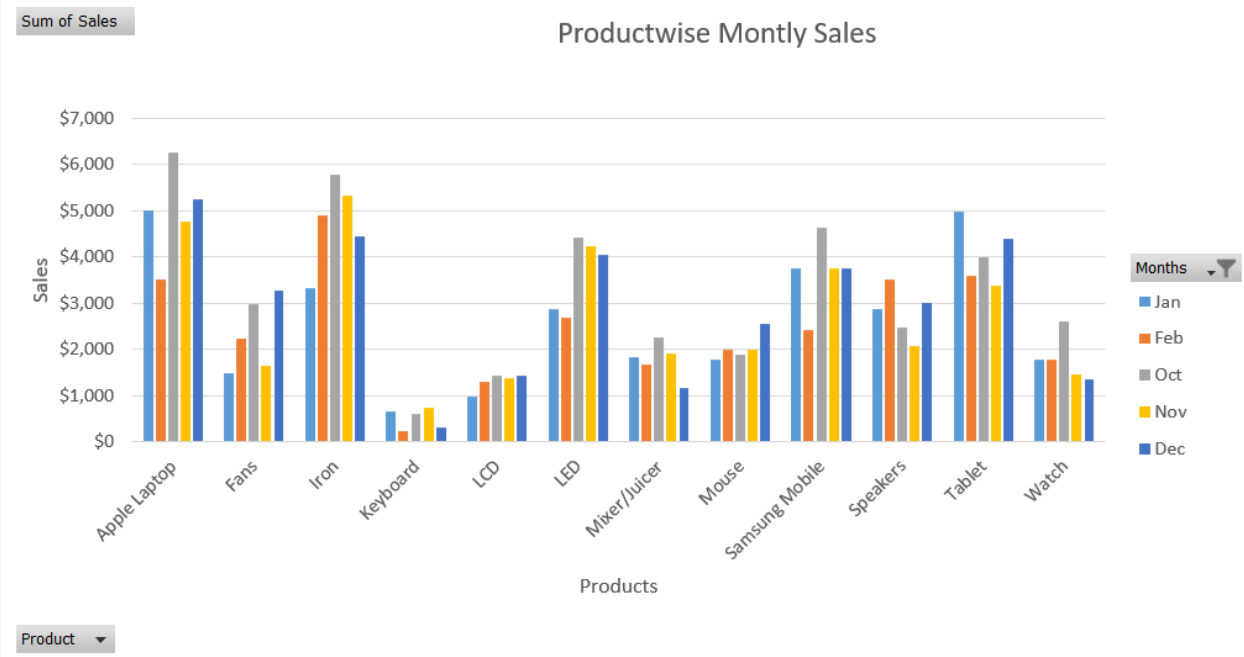


Figure 8: **The Productwise Monthly Sales from the PivotTableProductwiseMonthlySales**

From the Productwise Monthly Sales column chart we see the **Electronic category** products for the selected months. Apple laptops had more sales than any other product during the major holidays selected months in the Electronic category.

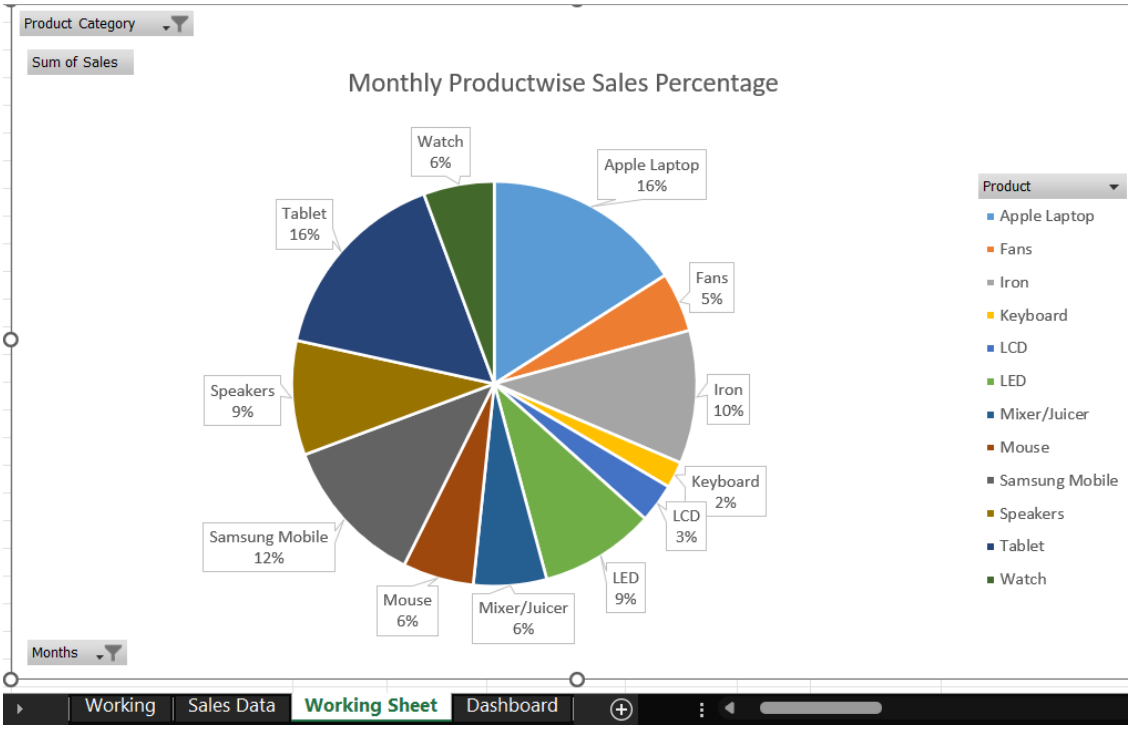


Figure 9: **Monthly Productwise Sales Percentage pie chart**

Finally, the **Dashboard sheet** has the final dashboard including the user-controlled combo box to select different product categories. Then based on the category selection, we see the column charts for sales and profits monthly and regionally. I have also included total sales, total quantities, and total profits for the selected product category from the combo box in the **Dashboard** sheet. The Dashboard is fully user controlled based on product category as the combo box is linked with both tables and charts for displaying monthly and regional sales and profits using SUMIFS() and OFFSET() functions.

The figures below show the Dashboard for four product categories.

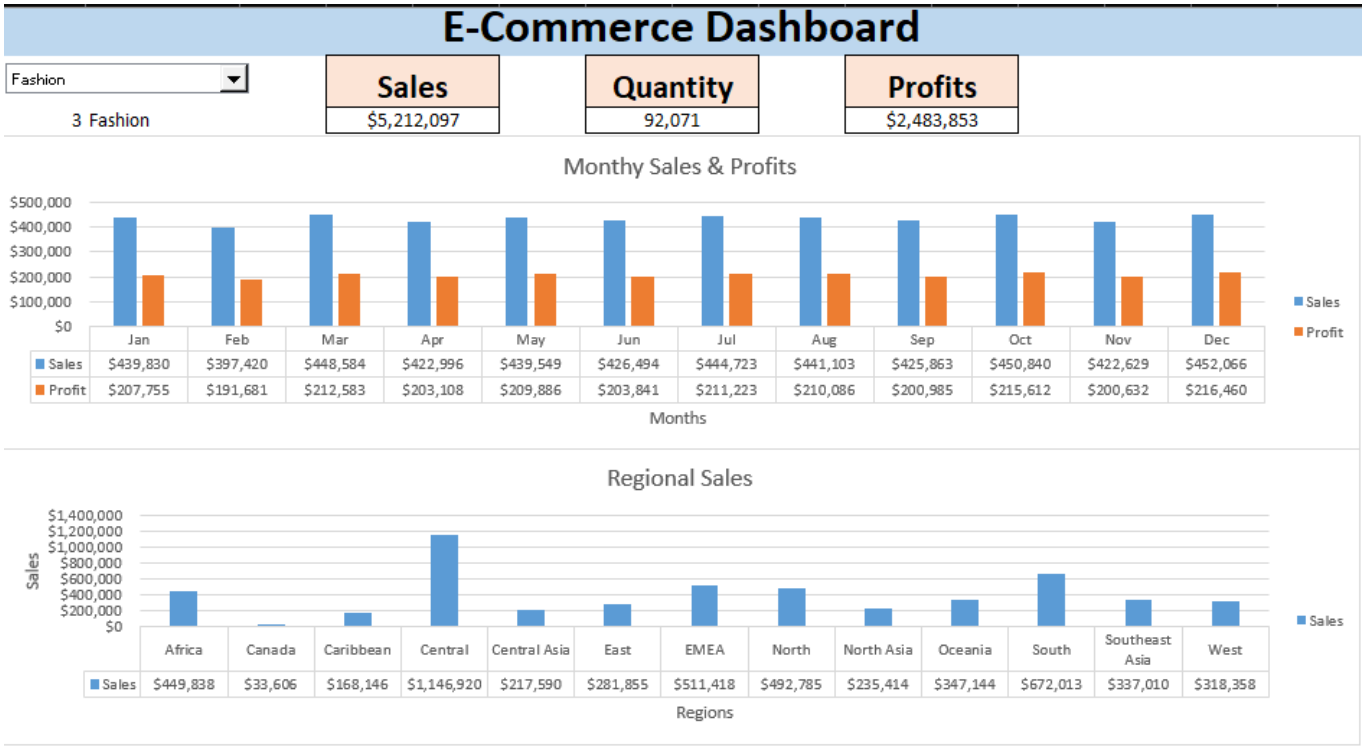


Figure 10: **Fashion Category Dashboard**

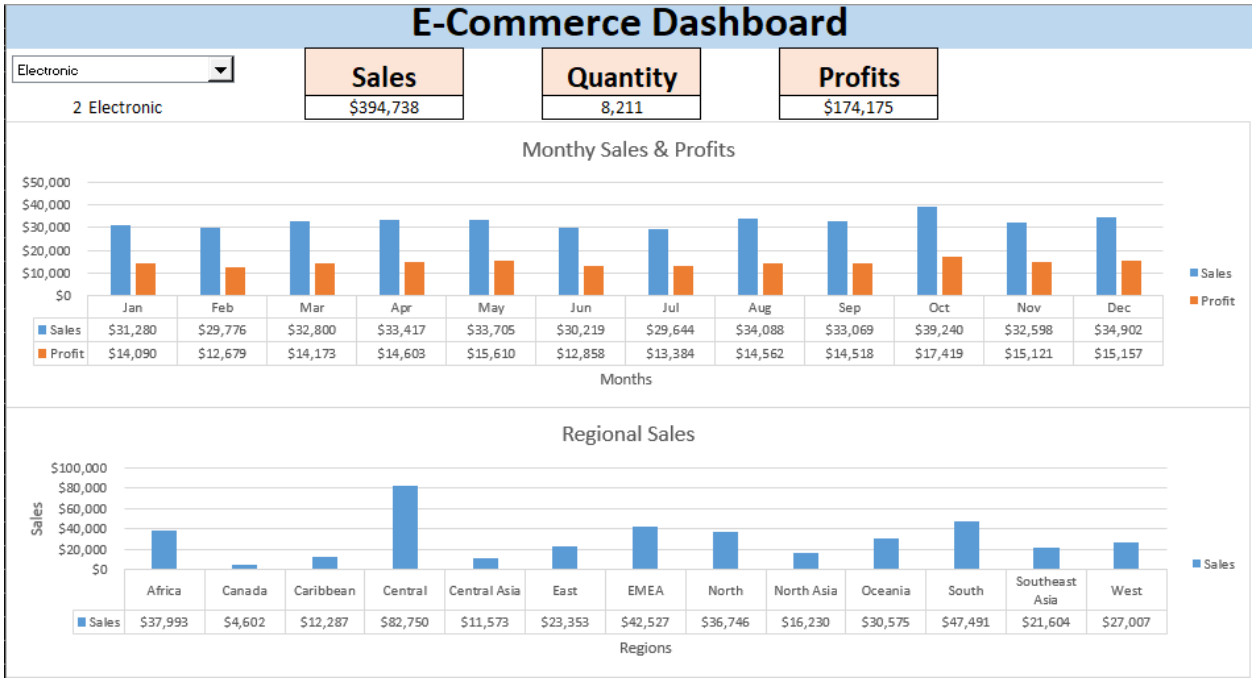


Figure 11: **Electronic Category Dashboard**

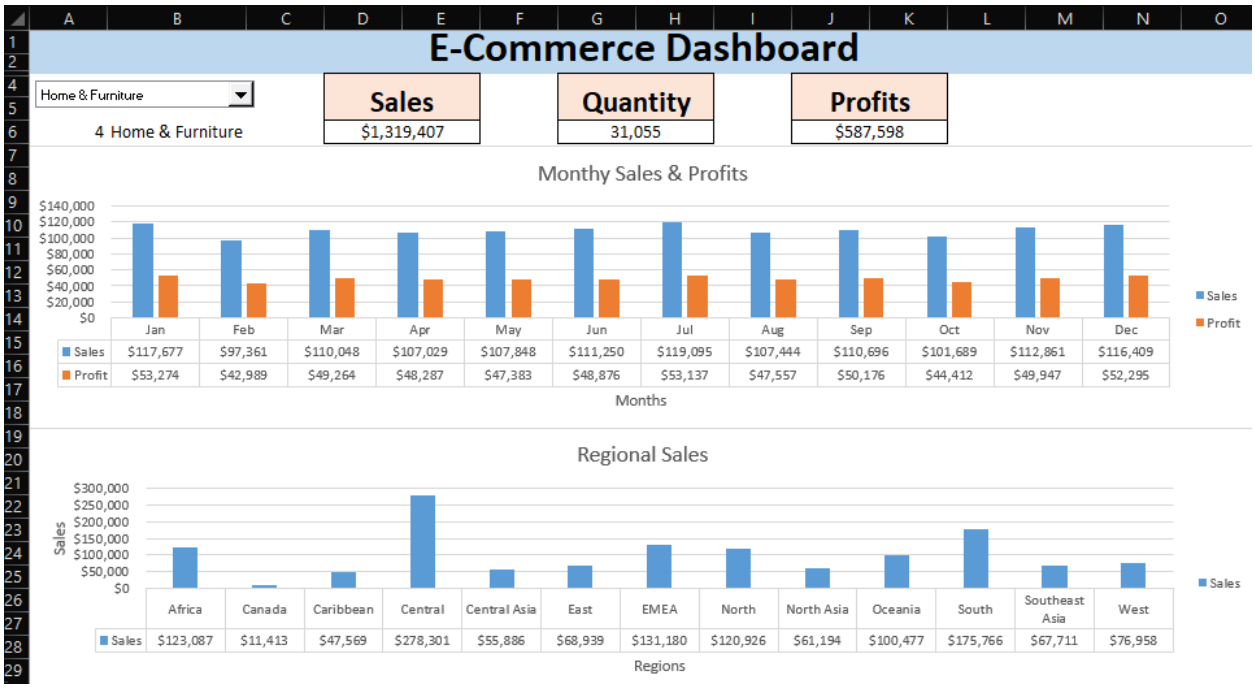


Figure 11: **Home & Furniture Category Dashboard**

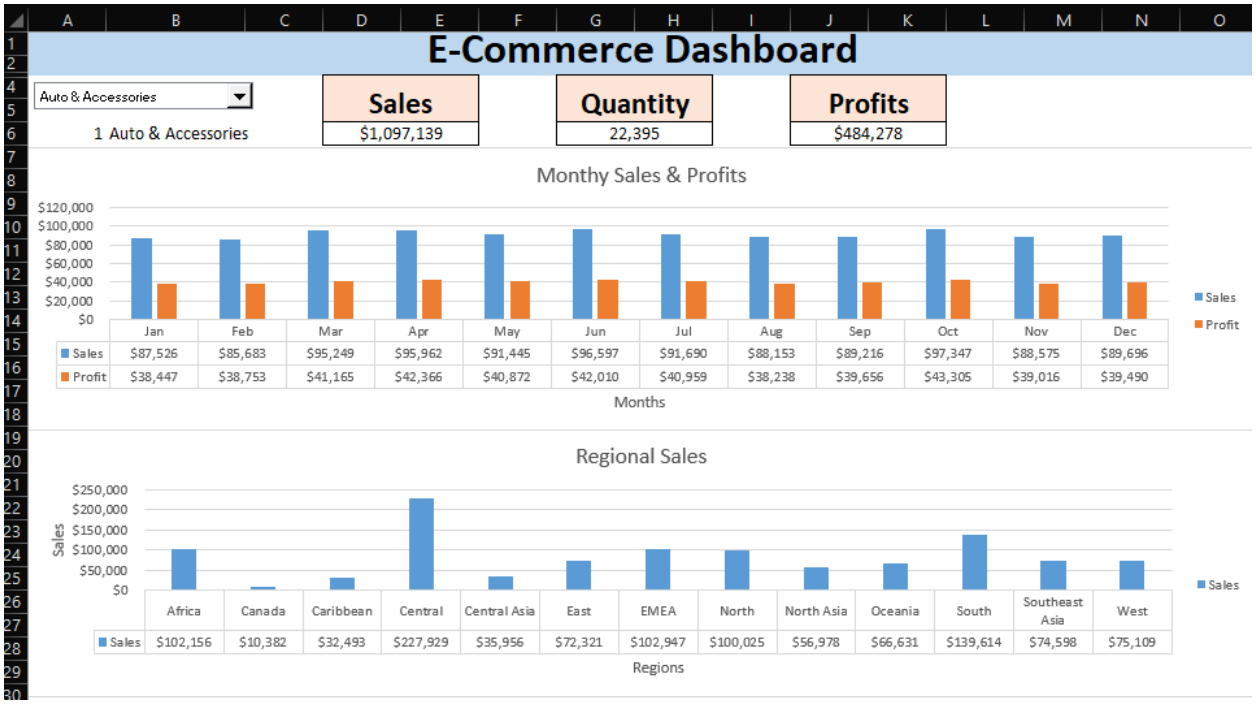


Figure 11: **Auto & Accessories Category Dashboard**

Of the four categories, the Fashion category had the most, and the Electronic category had the least sales and profits overall respectively. The Central region had the most sales across all the regions for all the product categories.