



# AMAZON Sales Data Analysis Report

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# Objective

To create a report on Sales Trend Year wise, Month wise and yearly month wise to understand the factors directly affecting the sales and gain the competitive advantage acquiring good chunk of market share. Also, to show meaningful relationship between attributes.

# Data Description

The dataset consist of following columns :

Sr. No.	Column Name	Sr. No.	Column Name
1	<b>Custkey</b> : Customer Key	8	<b>Sales Amount Based on List Price</b> : Sales Amount according to Listed Price
2	<b>DateKey</b> : Date key	9	<b>Sales Cost Amount</b> : Amount spent for conversion of Sale
3	<b>Discount Amount</b> : Discount on every order item	10	<b>Sales Margin Amount</b> : Margin amount on each item sold
4	<b>Order Number</b> : Order Number	11	<b>Sales Quantity</b> : Total number of items sold
5	<b>Item Number</b> : Item Number	12	<b>Sales Representative</b> : Representative under whom sale is completed
6	<b>List Price</b> : Listed Price of the Item	13	<b>Unit Sale Price</b> : Sales Price per unit
7	<b>Sales Amount</b> : Total amount of sales for particular item	14	<b>Index</b> : Index column

# Tools Used



NumPy



pandas



Excel



Power BI

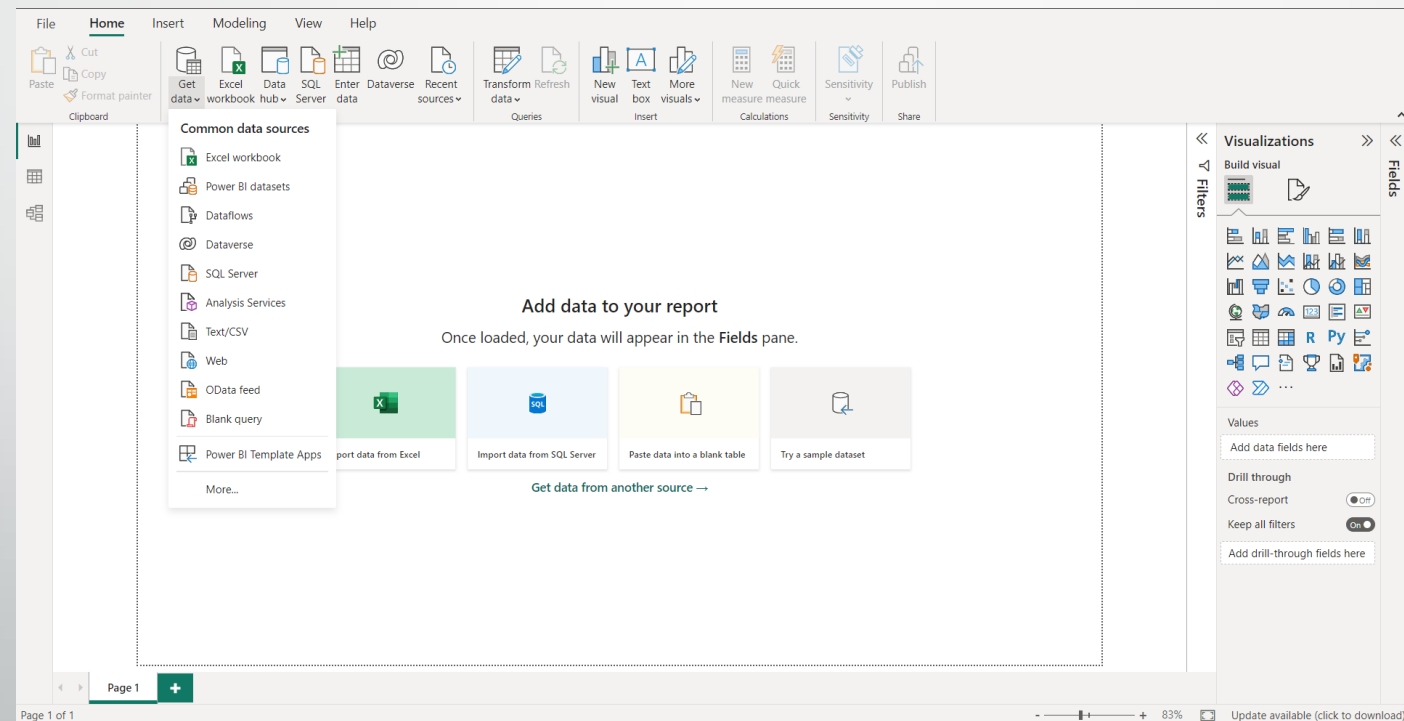
- Programming Language used : Python
- Python Libraries used : Numpy, Pandas
- Business Intelligence Tools : Excel, Power BI

# Data Imports and Data Cleaning

- Import the given Excel file in Jupyter Notebook for cleaning
- Data Cleaning is crucial as the dataset has impurities such as missing values or incorrect data types.
- I used Pandas library in Python to impute or remove missing values and make dataset ready for creating visual reports.

# Data Importing in Power BI

- In Power BI, we have options to connect to our dataset via various options such as SQL Server, MySQL, Excel or CSV files.
- We have our clean data in CSV file. We will import in Power BI with import data option and start working with it.



# Data Transformation in Power BI

- Once the data is imported in Power BI, we do transform data i.e. using Power Query Editor to perform certain operation on to the data.
- Ensuring correct data types, creating custom or conditional columns are some fundamental task performed in Power Query.

The screenshot displays the Power Query Editor window for 'Amazon Sales Analysis'. The ribbon includes tabs for File, Home, Transform, Add Column, View, Tools, and Help. The 'Transform' tab is active, showing various data manipulation options like 'Remove Columns', 'Split Column', 'Group By', and 'Data Type'. The main area shows a table with columns: CustKey, DateKey, Discount Amount, Invoice Date, Invoice Number, Item Class, and Item Number. The table contains 28 rows of data. The 'Query Settings' pane on the right shows the 'APPLIED STEPS' list, which includes 'Renamed Columns'.

CustKey	DateKey	Discount Amount	Invoice Date	Invoice Number	Item Class	Item Number	
1	10002220	14-07-2017	368.79	14-07-2017	100233	P01	20910
2	10002220	17-10-2017	109.73	17-10-2017	116165	P01	38076
3	10004516	27-05-2017	96627.94	27-05-2017	103341	P01	60776
4	10007866	03-09-2017	371.014	03-09-2017	100403	P01	20910
5	10009356	18-06-2017	608.08	18-06-2017	105481	P01	62550
6	10009356	18-06-2017	424.8	18-06-2017	105481	P01	60794
7	10009356	18-06-2017	13492.8	18-06-2017	105481	P01	36001
8	10009356	18-06-2017	10481.1	18-06-2017	105481	P01	38076
9	10009356	18-06-2017	404.1465	18-06-2017	105481	P01	61484
10	10009606	16-09-2017	1287.3476	16-09-2017	100445	P01	17801
11	10009606	16-09-2017	4764.33	16-09-2017	100445	P01	48500
12	10009633	10-06-2017	-526.64	10-06-2017	104708	P01	38631
13	10009633	20-08-2017	0	20-08-2017	100379	P01	60449
14	10009645	17-11-2017	0	17-11-2017	100684	P01	61801
15	10009652	14-05-2017	91	14-05-2017	102256	P01	63113
16	10009907	06-11-2017	786.6	06-11-2017	117815	P01	38050
17	10010884	19-06-2017	499.44	19-06-2017	105615	P01	38007
18	10010884	08-07-2017	409.77	08-07-2017	107052	P01	28401
19	10010884	08-07-2017	186.43	08-07-2017	107052	P01	26361
20	10010884	08-07-2017	349.78	08-07-2017	107052	P01	20910
21	10010884	08-07-2017	325.53	08-07-2017	107052	P01	45880
22	10010884	08-07-2017	313.27	08-07-2017	107052	P01	29394
23	10010884	08-07-2017	174.7	08-07-2017	107052	P01	36001
24	10010884	08-07-2017	338.2	08-07-2017	107052	P01	25300
25	10010884	08-07-2017	2788.64	08-07-2017	107052	P01	26502
26	10010884	08-07-2017	352.68	08-07-2017	107052	P01	26749
27	10010884	08-07-2017	2760.82	08-07-2017	107052	P01	47801
28	10013188	05-09-2017	381.99	05-09-2017	100415	P01	37172

# Building Visuals in Power BI

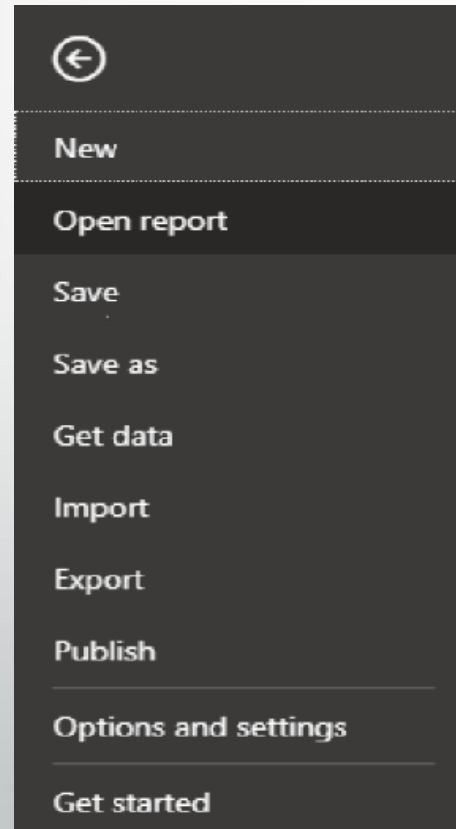
- ❖ A report is created in Power BI with various charts depicting Sales Insights for particular year, month and so on.
- ❖ I created Slicer, Data Cards, Sales Trend for Year, Month and Yearly month wise. Decomposition Charts to Sales and Profit decomposition into year, quarter, month, week of the month and day of week. Relationship between different variables.
- ❖ Top 5 & Bottom 5 Items by Sales and Profit. Also, Top 5 Sales Representative and Customer by Sales. Sales segmentation by Total Sales, Total Profit, Total Order and Sales Quantity.





# Deployment in Power BI

- ❖ In Power BI, we can directly publish the report online to your workstation. If you do not have the work email-id then you can save the file in '.pbix' version. This helps another viewer see your work and understand the story or insights you are communicating.





**Thank You !**