

Data Visualisation Packages

WOMEN IN DATA
ACADEMY

Session Content



What are data
visualisation
packages?



PowerBI



Importing and
Cleaning Data



Visualisation

Data Visualisation Packages

Many companies offer downloadable Software as a Service (SaaS) tools that enable you to import data and to create reports and data visualisations from this data using a dedicated environment.

These software packages help users to manipulate their data at the click of a button, rather than forcing the user to write complicated code.

Pros

- Mostly no code needed
- Simple user interface
- Easier to learn

Cons

- Limited functionality
- Usually available at a cost
- Less powerful

What's out there?



Power BI



Qlik® Sense

alteryx

Power BI



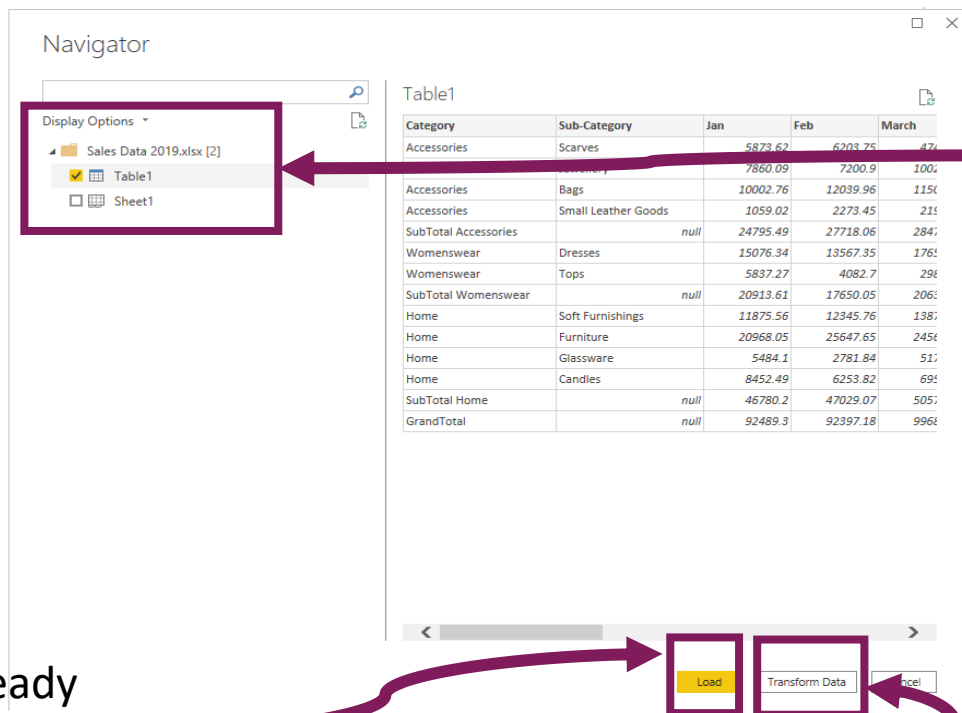
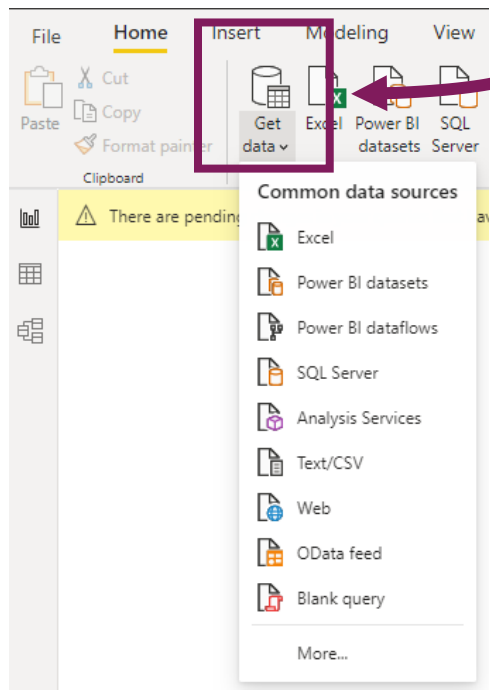
Microsoft Power BI is one of the most popular data visualisation packages and is used by many organisations to analyse their data. Notable examples using Power BI are:



A personal version that is free to run is available, this will enable you to practice with the software for free. Please do note that some of the features are limited to premium/paid for versions.

Importing Data

Selecting “Get Data” in the toolbar will show you which types of data that you can import in to PowerBI. This is comprehensive and includes both Excel and csv formats.

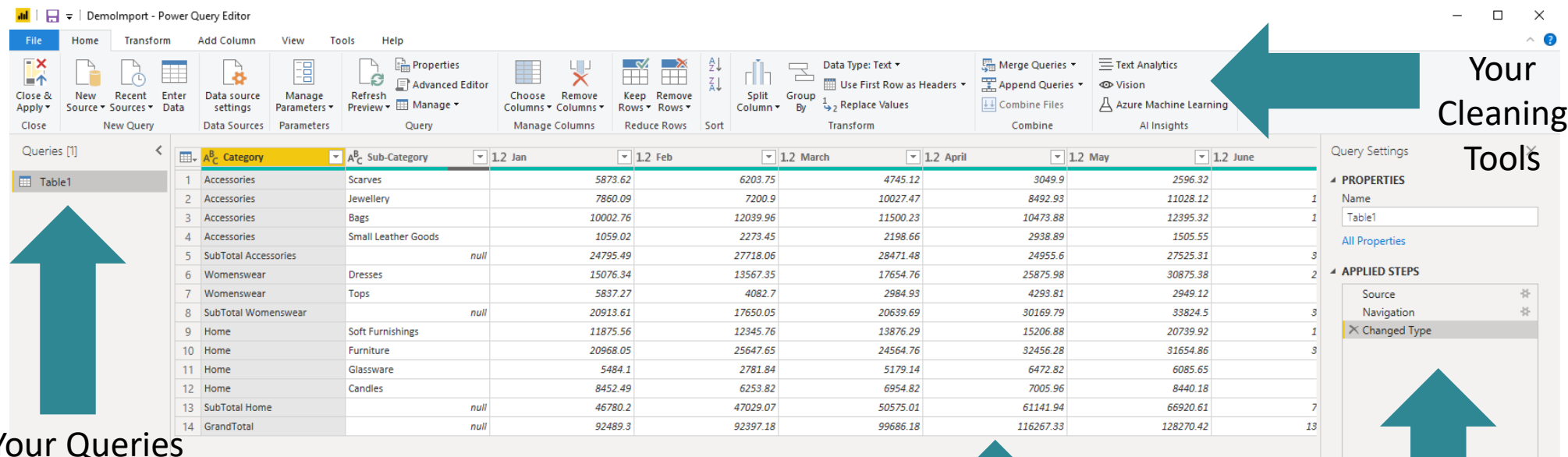


Navigate to the file you wish to import and then tick to select your data

Select “Transform Data” to open the PowerBI Query Editor as a new pop out window. This is where you can begin to edit and clean your data

If your data is already clean, you can simply load the data

Cleaning Data – Query Editor



The screenshot shows the Power Query Editor interface with the 'Transform' tab selected. The ribbon includes options like 'Close & Apply', 'New Source', 'Recent Sources', 'Enter Data', 'Data source settings', 'Manage Parameters', 'Refresh Preview', 'Advanced Editor', 'Choose Columns', 'Remove Columns', 'Keep Rows', 'Remove Rows', 'Sort', 'Split Column', 'Group By', 'Data Type: Text', 'Use First Row as Headers', 'Replace Values', 'Merge Queries', 'Append Queries', 'Combine Files', 'Text Analytics', 'Vision', and 'Azure Machine Learning'. A large teal arrow points from the 'Your Cleaning Tools' text to the 'Transform' tab. Another teal arrow points from the 'Your Queries' text to the 'Queries' list on the left, which shows 'Table1'. A third teal arrow points from the 'Change History' text to the 'Query Settings' pane on the right, which shows 'Properties' and 'Applied Steps'.

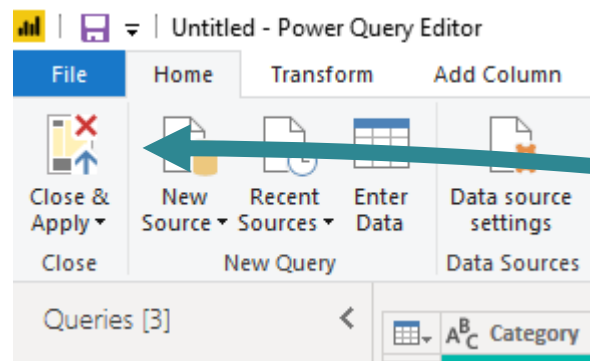
	Category	Sub-Category	1.2 Jan	1.2 Feb	1.2 March	1.2 April	1.2 May	1.2 June
1	Accessories	Scarves	5873.62	6203.75	4745.12	3049.9	2596.32	
2	Accessories	Jewellery	7860.09	7200.9	10027.47	8492.93	11028.12	1
3	Accessories	Bags	10002.76	12039.96	11500.23	10473.88	12395.32	1
4	Accessories	Small Leather Goods	1059.02	2273.45	2198.66	2938.89	1505.55	
5	SubTotal Accessories	null	24795.49	27718.06	28471.48	24955.6	27525.31	3
6	Womenswear	Dresses	15076.34	13567.35	17654.76	25875.98	30875.38	2
7	Womenswear	Tops	5837.27	4082.7	2984.93	4293.81	2949.12	
8	SubTotal Womenswear	null	20913.61	17650.05	20639.69	30169.79	33824.5	3
9	Home	Soft Furnishings	11875.56	12345.76	13876.29	15206.88	20739.92	1
10	Home	Furniture	20968.05	25647.65	24564.76	32456.28	31654.86	3
11	Home	Glassware	5484.1	2781.84	5179.14	6472.82	6085.65	
12	Home	Candles	8452.49	6253.82	6954.82	7005.96	8440.18	
13	SubTotal Home	null	46780.2	47029.07	50575.01	61141.94	66920.61	7
14	GrandTotal	null	92489.3	92397.18	99686.18	116267.33	128270.42	13

Your Queries

Your
Cleaning
Tools

Change History

Your Data

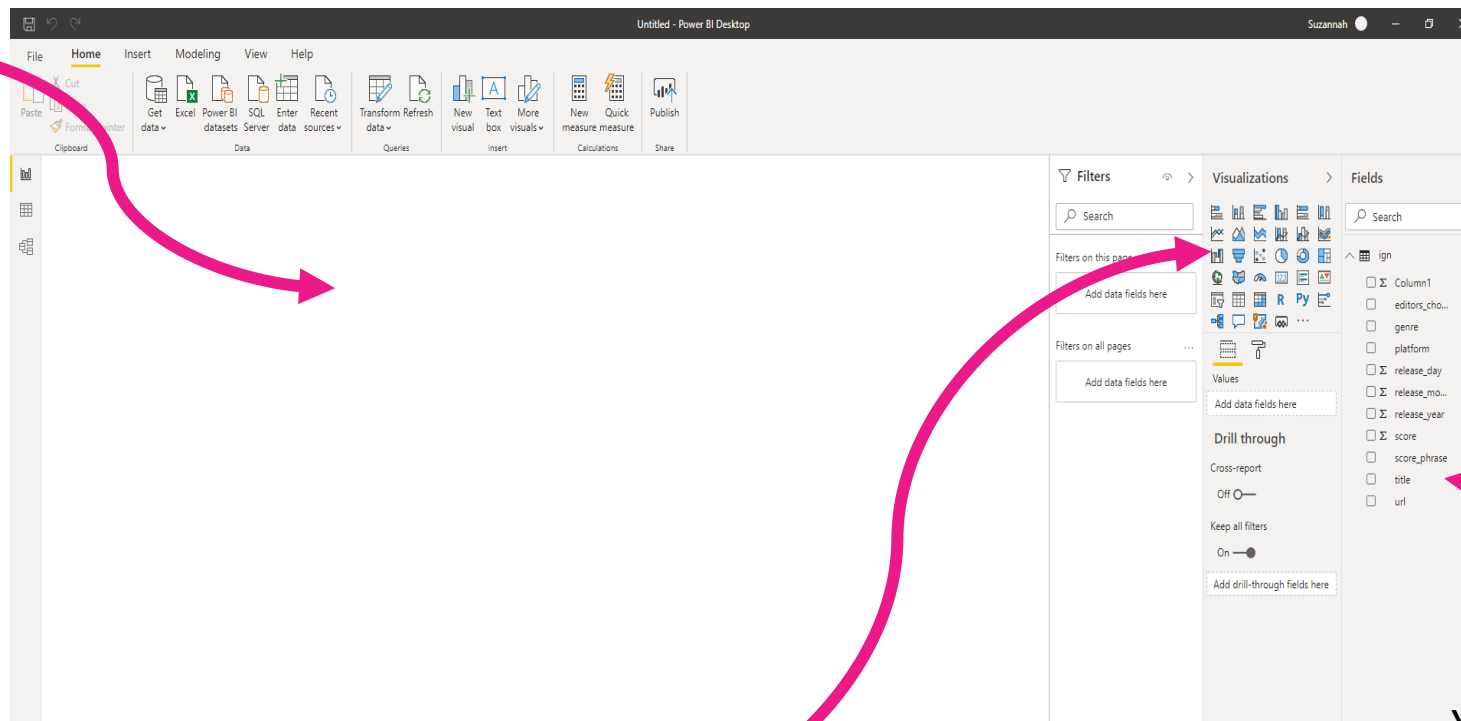


The screenshot shows the Power Query Editor interface with the 'Home' tab selected. The ribbon includes options like 'Close & Apply', 'New Source', 'Recent Sources', 'Enter Data', and 'Data source settings'. A large teal arrow points from the 'Close & Apply' button to the text 'When you have cleaned your data, select “Close & Apply” to begin working with your data.'

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The Visualisation Interface

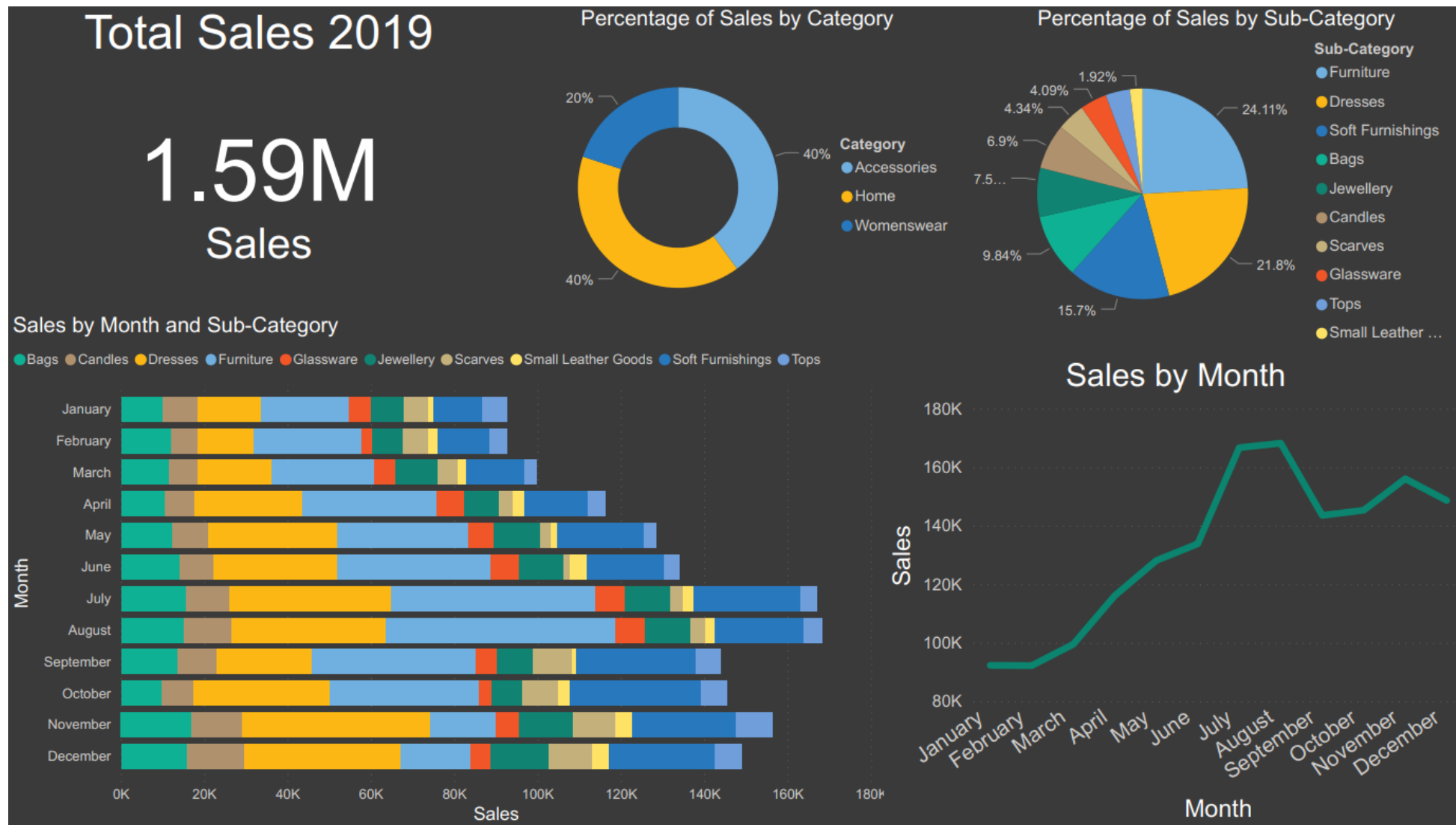
Dashboard
Area



Visualisation Options

Your Imported Data

Visualisation Dashboards



Home Learning Tasks



Create Your Own Dashboard!

Download PowerBI and create a dashboard of your own!

PowerBI – <https://powerbi.microsoft.com/en-us/downloads/>

Feel free to use a dataset of your choosing. You might have your own or you are welcome to search Kaggle for appropriate datasets:

<https://www.kaggle.com/datasets>

Alternatively, you can use the IGN Reviews dataset we have previously looked at.

Check out the PowerBI community gallery for inspiration!

<https://community.powerbi.com/t5/Data-Stories-Gallery/bd-p/DataStoriesGallery>



Further Information/Downloads

Tableau – <https://www.tableau.com/en-gb/trial/tableau-software>

Alteryx – <https://www.alteryx.com/>

Qlik Sense – <https://www.qlik.com/us/products/qlik-sense>



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