Data Visualisation Begins with Me

Microsoft PowerBI
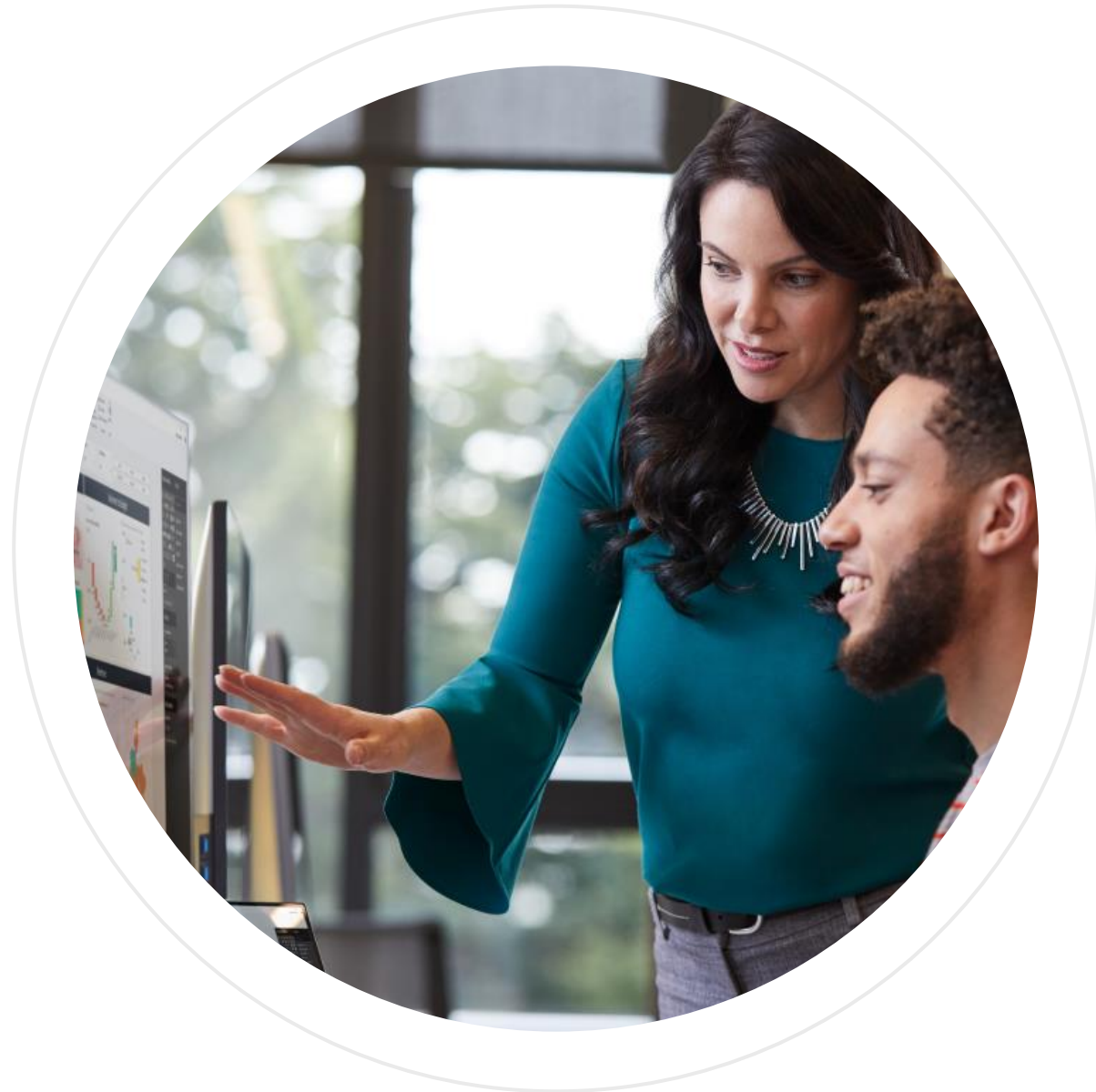
PowerBI Related Resources

https://arif.works/uob-series

Analysis $\overset{?}{=}$ Analytics

Analysis

←───────────────

Past

Explain

How? Why?

BI

We can use different tools to explain the previous trends like, PowerBI, Tableau, Qlikview etc.

Analytics

→

Future

Explore potential future events

ML/AI

We can use different language packages and framework to implement ML/AI model.

Data Analyst Role

Deliver actionable insights by leveraging available data and applying domain expertise.

Collaborate with key stakeholders across verticals to identify business requirements, clean and transform the data.
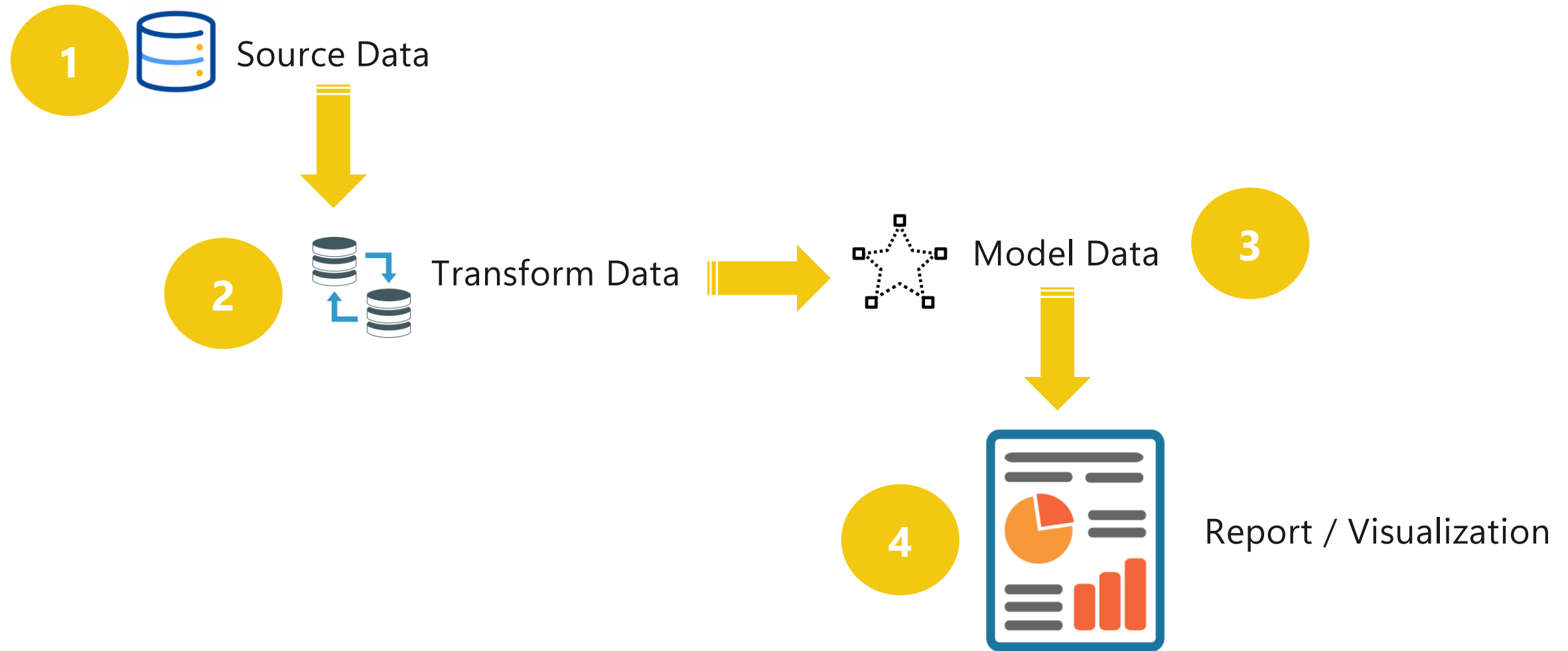
Responsible for designing and building data models, reports, and dashboards using Power BI.

Have proficiency using Power Query (M) and writing expressions by using DAX.

Basic Steps of Data Analysis & Visualization

1. Source Data

2. Transform Data

3. Model Data

4. Report / Visualization

Star Schema for Data Modelling

Star schema is a mature modeling approach widely adopted by relational data warehouses. It requires modelers to classify their model tables as either **dimension** or **fact**.
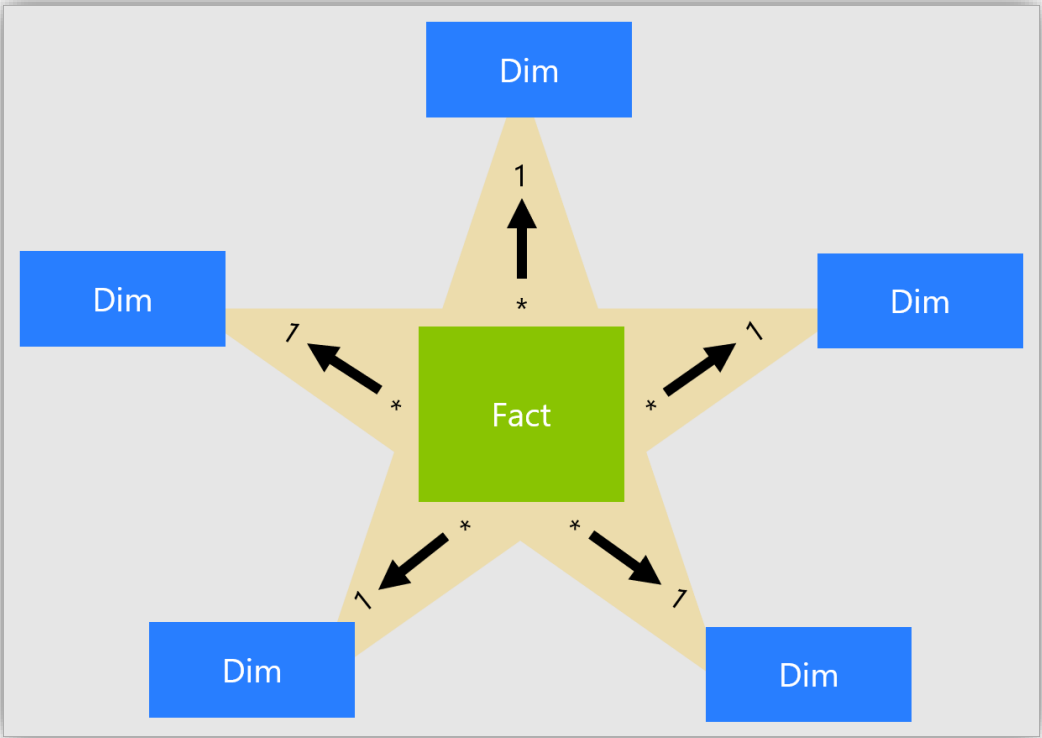
Fact Table & Dimension Table

Fact Table & Dimension Table

A fact table holds the data to be analyzed, and a dimension table stores data about the ways in which the data in the fact table can be analyzed.

A fact table works with dimension tables.

The fact table consists of two types of columns.

- The foreign keys column allows joins with dimension tables, and
- Measures columns contain the data that is being analyzed

Fact Table & Dimension Table

Suppose that a company sells products to customers. **Every sale is a fact that happens**, and the fact table is used to record these facts. For example:

Time ID	Product ID	Customer ID	Unit Sold
4	17	2	1
8	21	3	2
8	4	1	1

Fact Table & Dimension Table

Now we can add a dimension table about customers

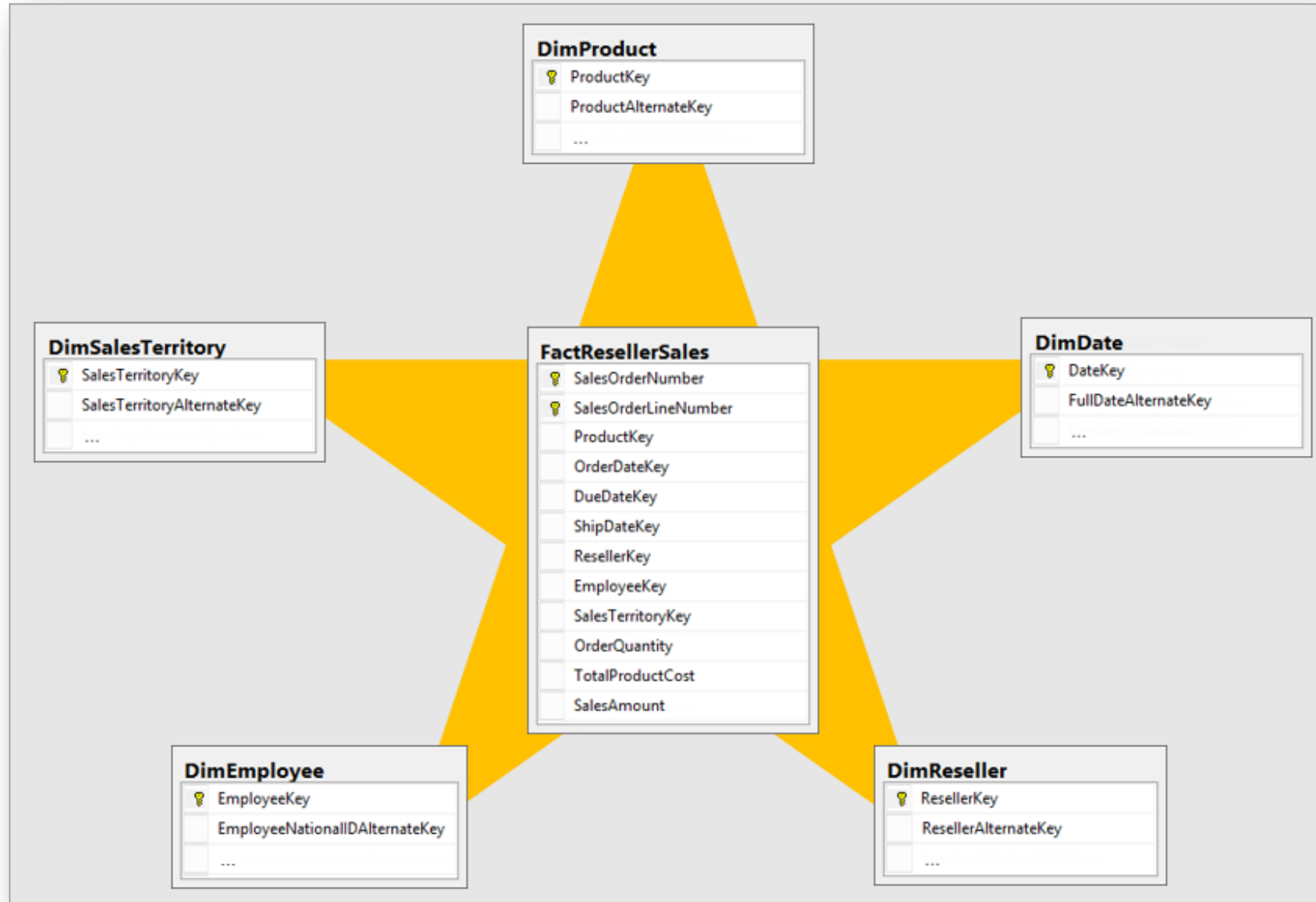| Customer ID	Name	Gender	Income	Education	Region
1	Brian Edge	M	2	3	4
2	Fred Smith	M	3	5	1
3	Sally Jones	F	1	7	3

Fact Table & Dimension Table

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Customer ID	Name	Gender	Income	Education	Region
1	Brian Edge	M	2	3	4
2	Fred Smith	M	3	5	1
3	Sally Jones	F	1	7	3

Fact Table & Dimension Table

Fact Table & Dimension Table

- Dimension tables support filtering and grouping
- Fact tables support summarization

End of Introduction