🧹 Filtering with Dimensions and Measures

🎯 What is Filtering?

- **Filtering** limits the data returned from a query based on specific criteria.
- It helps focus on **relevant data** to answer specific questions.

🧩 Filtering with Dimensions

✅ Definition

- **Dimensions** are **descriptive attributes** (e.g., title, author, category).
- Filtering with dimensions happens **before calculations**.

📘 Example: Book Dataset

- Dataset includes: **title**, **author**, **price**.
- Filtering by **author = "Chad A."** returns 2 rows.
- Filtering by **author AND title** returns 1 row.
- Filtering by **author OR title** returns 3 rows.

🔧 Logical Operators

- **AND**: Returns rows that meet **all criteria**.
- **OR**: Returns rows that meet **at least one criterion**.

📐 Filtering with Measures

✅ Definition

- **Measures** are **aggregated values** (e.g., count, average).
- Filtering with measures happens **after calculations**.

📘 Example: Average Book Price

- Group rows by **author**, calculate **average price**.
- Filter authors with **average price ≥ $10**.
- Returns: **Amy T. ($12)** and **Beatrix P. ($20)**.

🔁 Key Differences

Feature	Dimensions	Measures
Type	Descriptive attributes	Aggregated values
Filter Timing	Before calculation	After calculation
Example	Author = "Chad A."	Avg price > $10

✅ Why It Matters

As a **cloud data analyst**, mastering filtering techniques helps you:

- Focus on **relevant data**
- Improve **data quality**
- Make **accurate and timely decisions**