

## What Is Data Modeling?

- **Definition:**  
*The process of designing, structuring, joining, and transforming data to prepare it for reporting and visualization.*
  - **Purpose:**
    - Combine multiple data sources
    - Make data easier to work with
    - Define metrics and KPIs
    - Ensure consistency and clarity
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## Key Data Modeling Techniques

### 1. Filtering

- **Definition:**  
*Show only data that meets specific criteria.*
  - **Types:**
    - **Include:** e.g., show only comedies
    - **Exclude:** e.g., hide horror movies
  - **Benefit:**  
*Focuses analysis on relevant subsets of data.*
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### 2. Blending

- **Definition:**  
*Combining data from multiple sources into one visualization.*
  - **Benefit:**  
*Enriches datasets and enables cross-source insights.*
  - **Limitation:**  
*Blends are not reusable across reports.*
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### 3. Aggregation

- **Definition:**  
*Summarizing data using functions like count, sum, average, min, max.*

- **Benefit:**  
*Helps group and simplify data for clearer insights.*
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## Adjusting Data for Clarity

- **Labeling:**  
*Modify unclear column titles to be more descriptive.*
    - **Local change:** update label in a specific visualization
    - **Global change:** update label in the data source
  - **Calculations:**  
*Apply formulas like sum or average either locally or globally depending on reuse needs.*
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## Why Data Modeling Matters

- **Improves data quality and usability**
  - **Supports effective visualizations**
  - **Helps analysts uncover key insights**
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## Final Takeaway

- **Keep practicing data modeling**  
*It's a powerful skill that enhances your ability to prepare data for impactful dashboards and reports.*