

Manipulating Data in Tableau Desktop

ORGANIZING YOUR DATA



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Overview



Organizing Your Data

- Introduction to the Data Pane
- Data Field Roles and Types
- Organize and Customize Fields
- Documentation



Course Information



Prerequisite: Familiarity with the Tableau interface



Prerequisite: Connecting to data in Tableau Desktop



Software: Tableau Desktop 2019.2



Download the exercise files





Organized

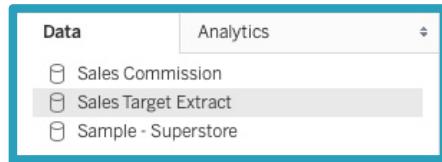


Chaos

Introduction to the Data Pane



Data Pane Organization



Data Sources: | files and servers

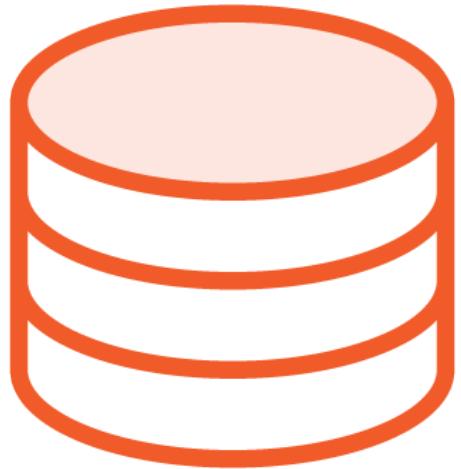
Dimensions | data fields

Measures | data fields

Sets | subset of data

Parameters | dynamic inputs





What is a Data Source?

- ✓ Your data
- ✓ Files or database connections

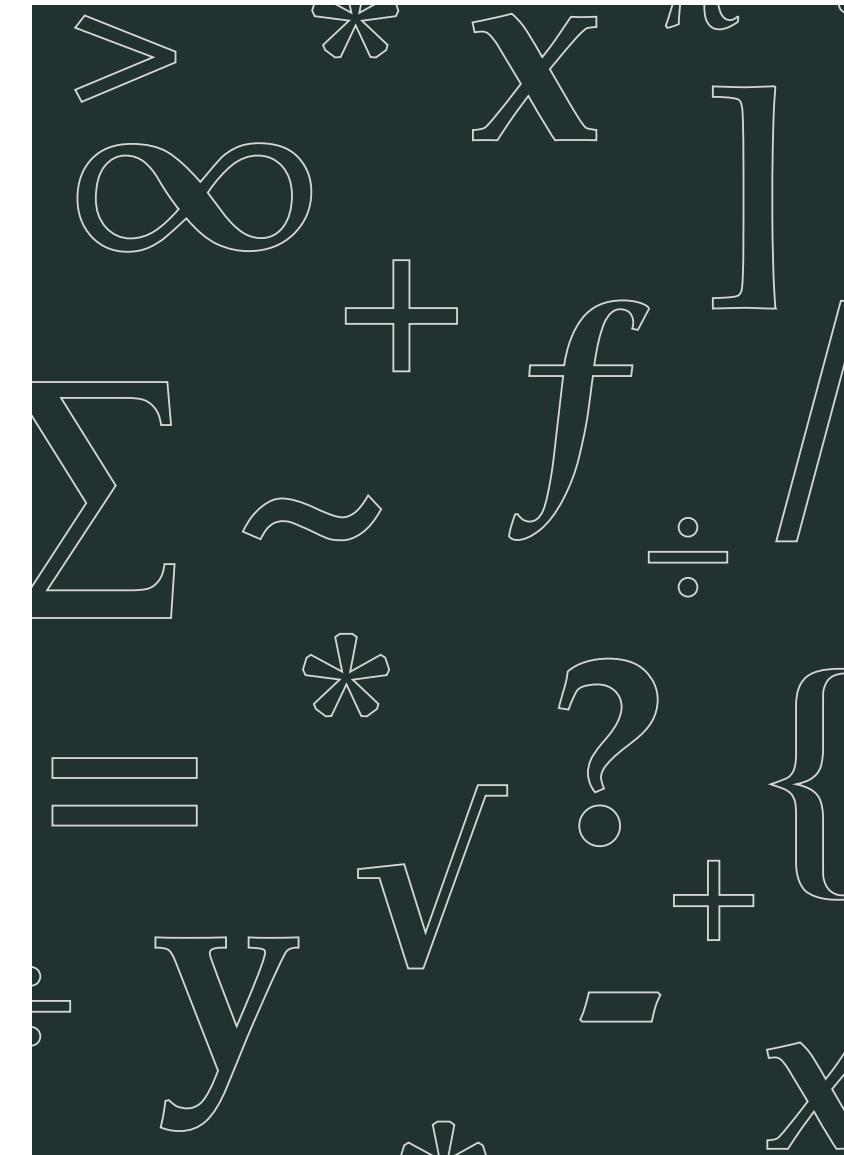




What is a Dimension?

- ✓ Contains qualitative values
- ✓ Used to categorize or segment data
- ✓ Affect the view level of detail

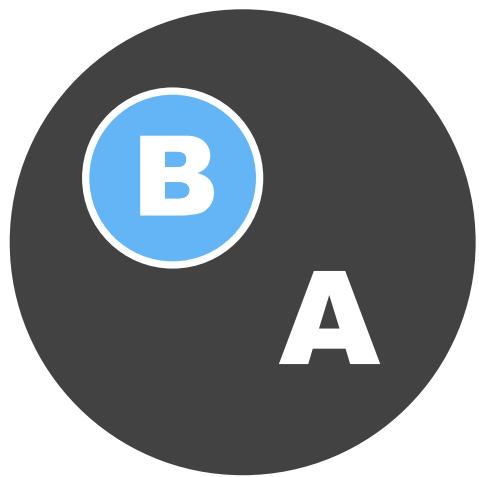




What is a Measure?

- ✓ Contains quantitative values
- ✓ Numeric values
- ✓ Can be aggregated





What is a Set?

- ✓ Subset of data
- ✓ Based on some condition





What is a Parameter?

- ✓ Dynamic values
- ✓ Manual inputs
- ✓ Replace constants



Data Field Roles and Types



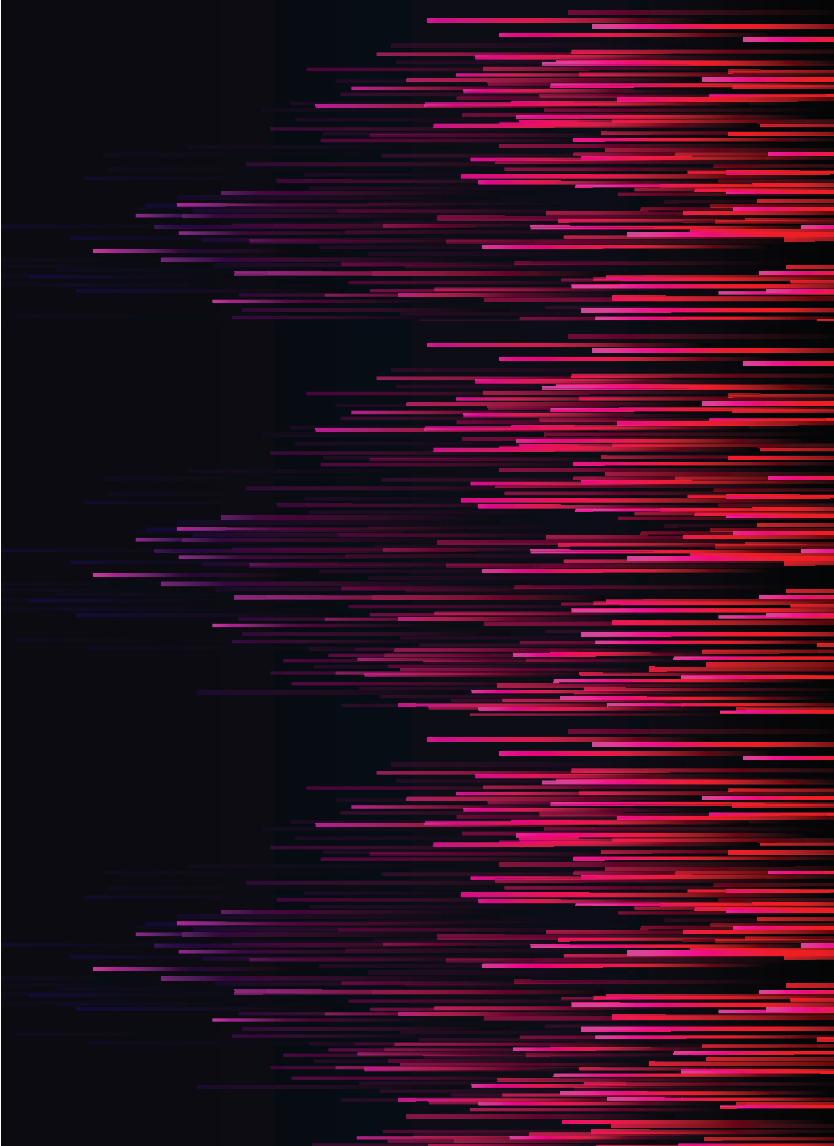


Tableau analyzes your data source

- ✓ Dimension vs. Measure
- ✓ Data type
- ✓ Data role



- Number (decimal)
- Number (whole)
- Date & Time
- Date
- ✓ String
- Boolean

Data Types

- ✓ Assigned by Tableau
- ✓ Can be changed later



Data Roles

individually separate and distinct

forming an unbroken whole, without interruption



Discrete Fields

Blue Pills

Values treated as finite
Adds headers to the view

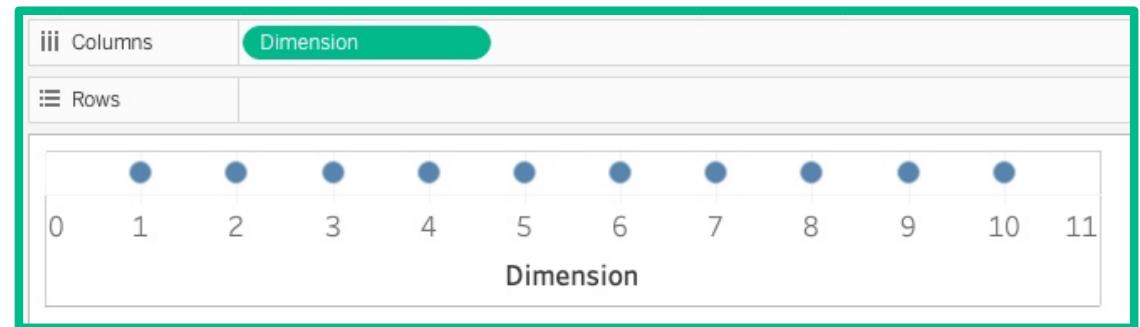
Columns	Dimension
Rows	
1	•
2	•
3	•
4	•
5	•
6	•
7	•
8	•
9	•
10	•



Continuous Fields

Green Pills

Values treated as an infinite range
Adds axes to the view

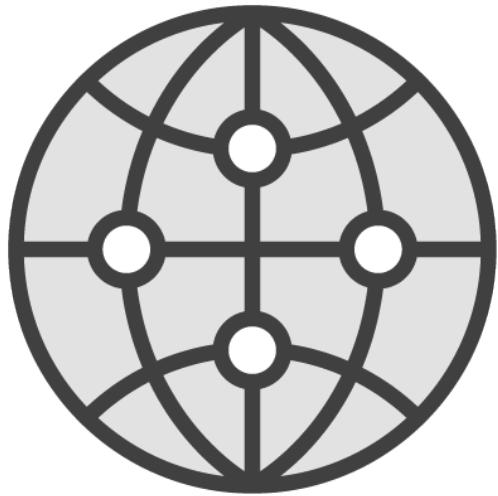




Unlearning Check

- ✓ **Blue pills** != Dimensions
- ✓ **Green pills** != Measures





Geographic Roles

- ✓ Geocodes your data
- ✓ Can be changed later



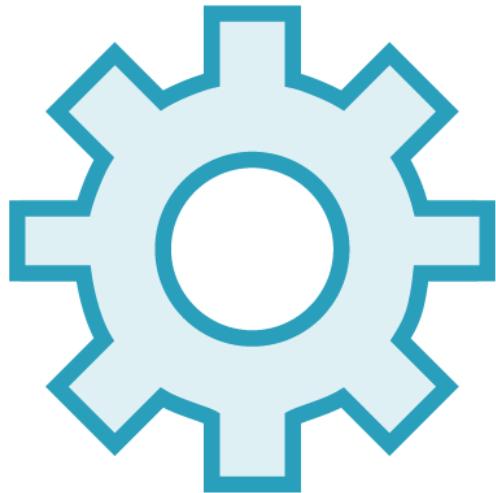
Assigning Roles

Select from the list in the data pane

The screenshot shows the Tableau Data pane with the 'Dimensions' section open. The dimension 'Country' is selected, highlighted with a red box. A dropdown menu titled 'Geographic Role' is displayed, also with a red box around its title. The menu lists several options: 'None', 'Airport', 'Area Code (U.S.)', 'CBSA/MSA (U.S.)', 'City', 'Congressional District (U.S.)', '✓ Country/Region', 'County', 'NUTS Europe', 'State/Province', and 'ZIP Code/Postcode'. The 'Country/Region' option is checked, indicated by a checkmark.

Geographic Role
None
Airport
Area Code (U.S.)
CBSA/MSA (U.S.)
City
Congressional District (U.S.)
✓ Country/Region
County
NUTS Europe
State/Province
ZIP Code/Postcode





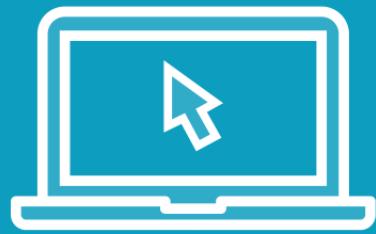
**Changing data roles
and types in action**



Changing Data Field Roles and Types



Demo



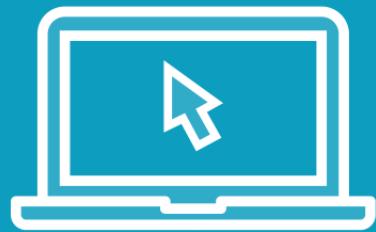
Data Field Roles and Types



Organize and Customize Fields



Demo



Organize and Customize Fields

- Group fields
- Sort fields
- Find fields
- Rename fields
- Combine fields
- Hide fields
- Create Calculated fields



Grouping fields



Sorting fields



Finding fields



Renaming fields



Combining fields



Hiding fields



Creating calculated fields



Documentation





Documentation

- ✓ Handoff projects to other resources
- ✓ Personal reference
- ✓ Provide metadata on data source



Methods for Capturing Metadata

Group by Folders

Makes it easier to work with large organized data sources

Comment Fields

Inform users about where the data comes from and provide context

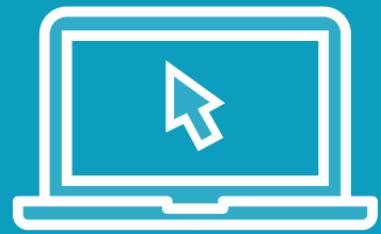
Comment Calcs

Inform users how a number is derived from important business logic

- ✓ Important when publishing a data source for others to consume
- ✓ You will have to answer less questions



Demo



Documentation

- Comment fields
- Comment calculations
- Use describe fields



Summary



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Things to Remember

Discrete fields draw headers

Continuous fields draw axes

**Data types and roles
determine what Tableau draws
on the canvas**

Document your workbooks

