



University of
Dayton

Lab 8

CPS 563 – Data Visualization

Dr. Tam Nguyen

tamnguyen@udayton.edu

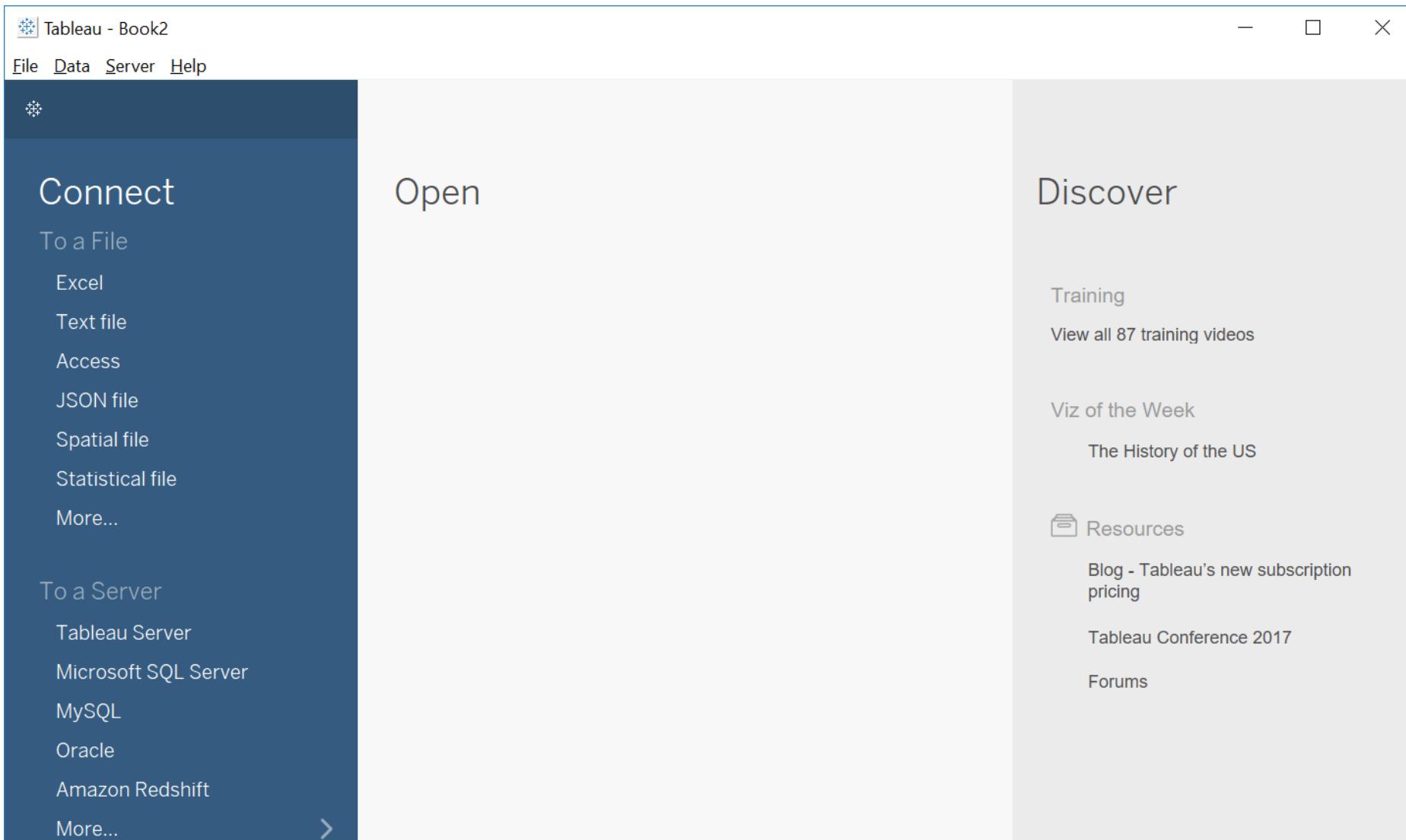
Outline

- Create some visualization charts with Tableau
- Create a visualization dashboard with Tableau

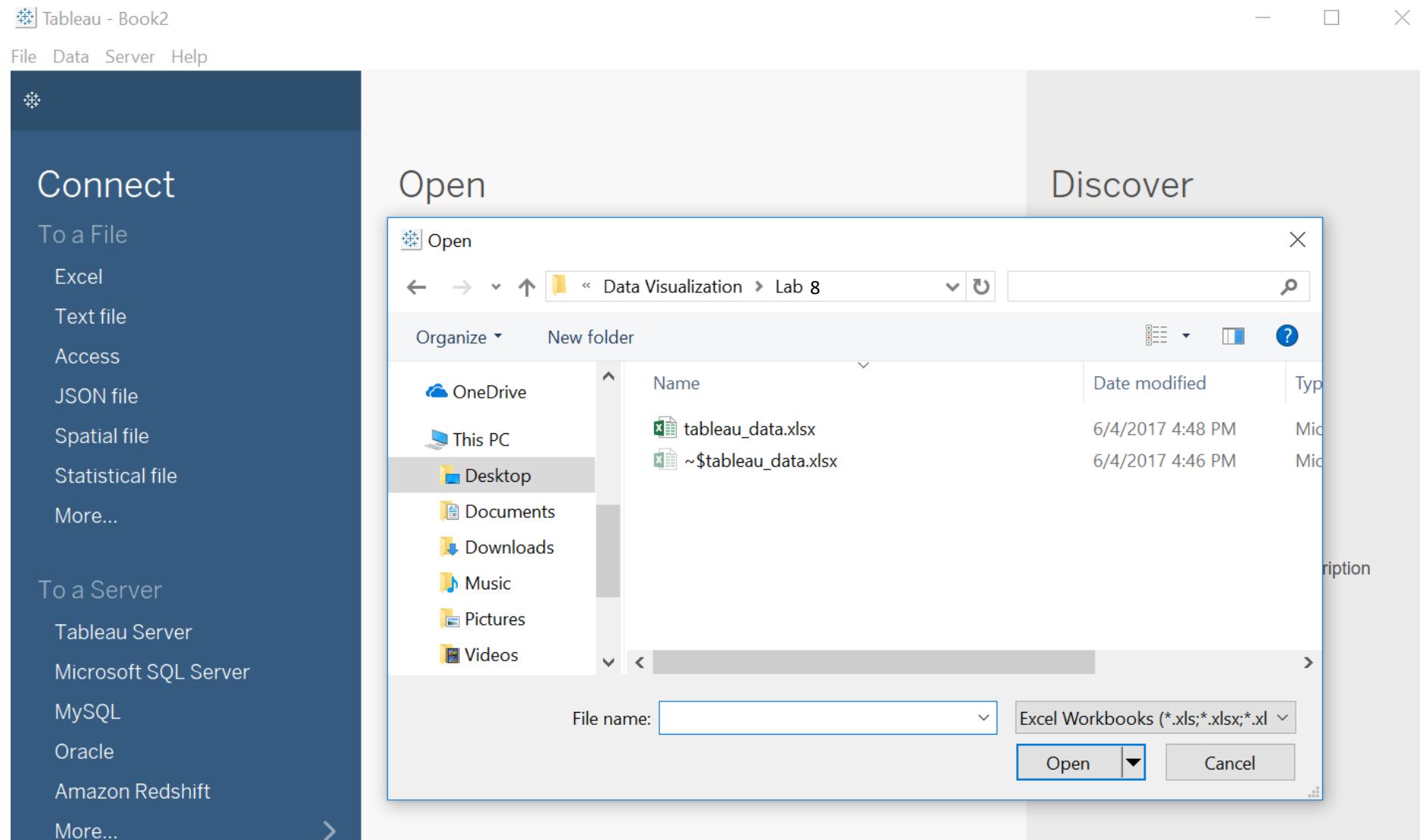
Create “Lab 8” folder and copy “tableau_data.xlsx” file from isidore to this folder

Name	Date modified	Type	Size
 tableau_data.xlsx	6/4/2017 4:48 PM	Microsoft Excel Work...	13 KB

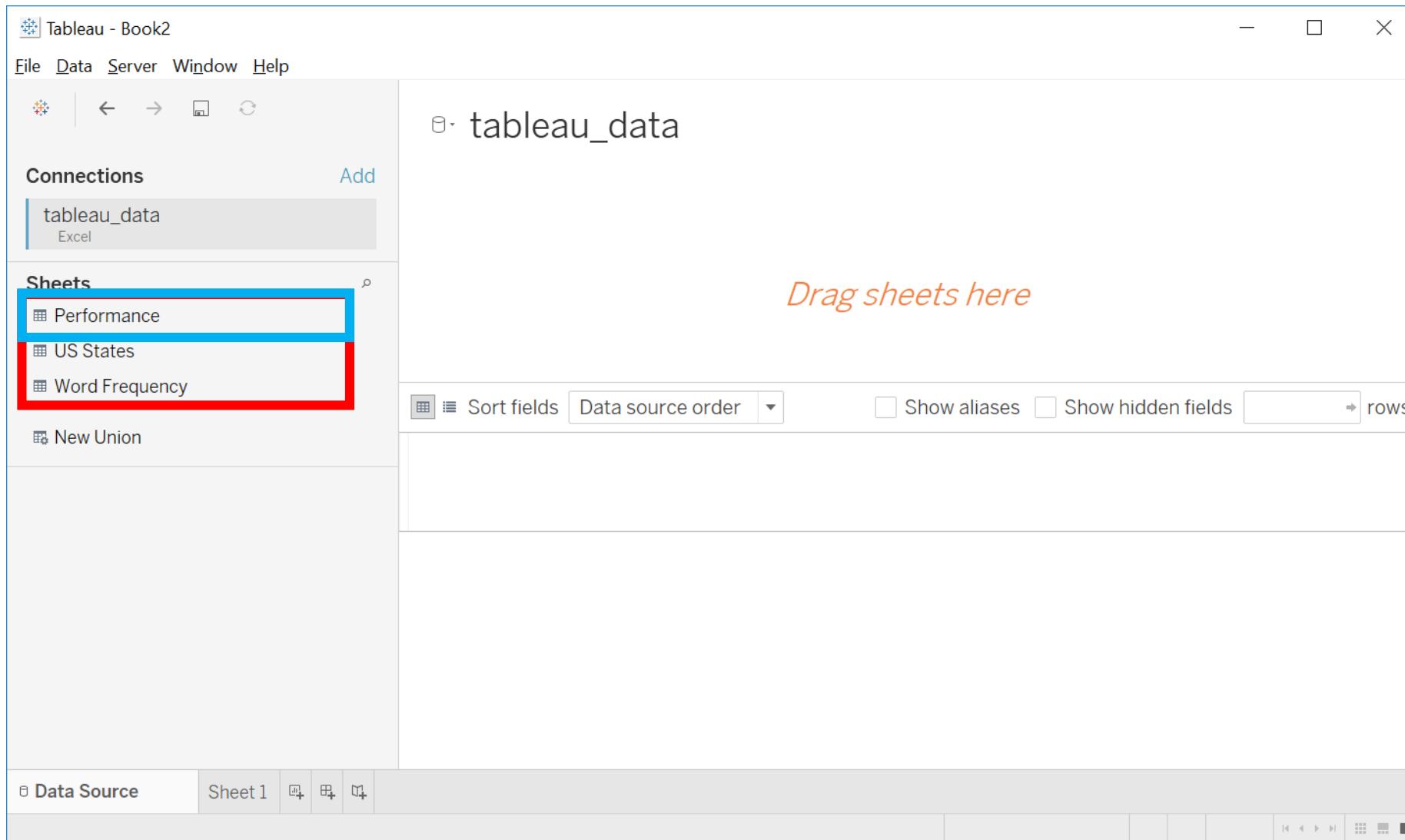
Start Tableau



Connect to “tableau_data.xlsx” file



There are 3 sheets



Choose “Performance”

Tableau - Book3

File Data Server Window Help

Connections Add

tableau_data Excel

Sheets

- Performance
- US States
- Word Frequency
- New Union

Performance (tableau_data)

Connection Live Extract

Filters 0 | Add

Performance

Sort fields Data source order ▾

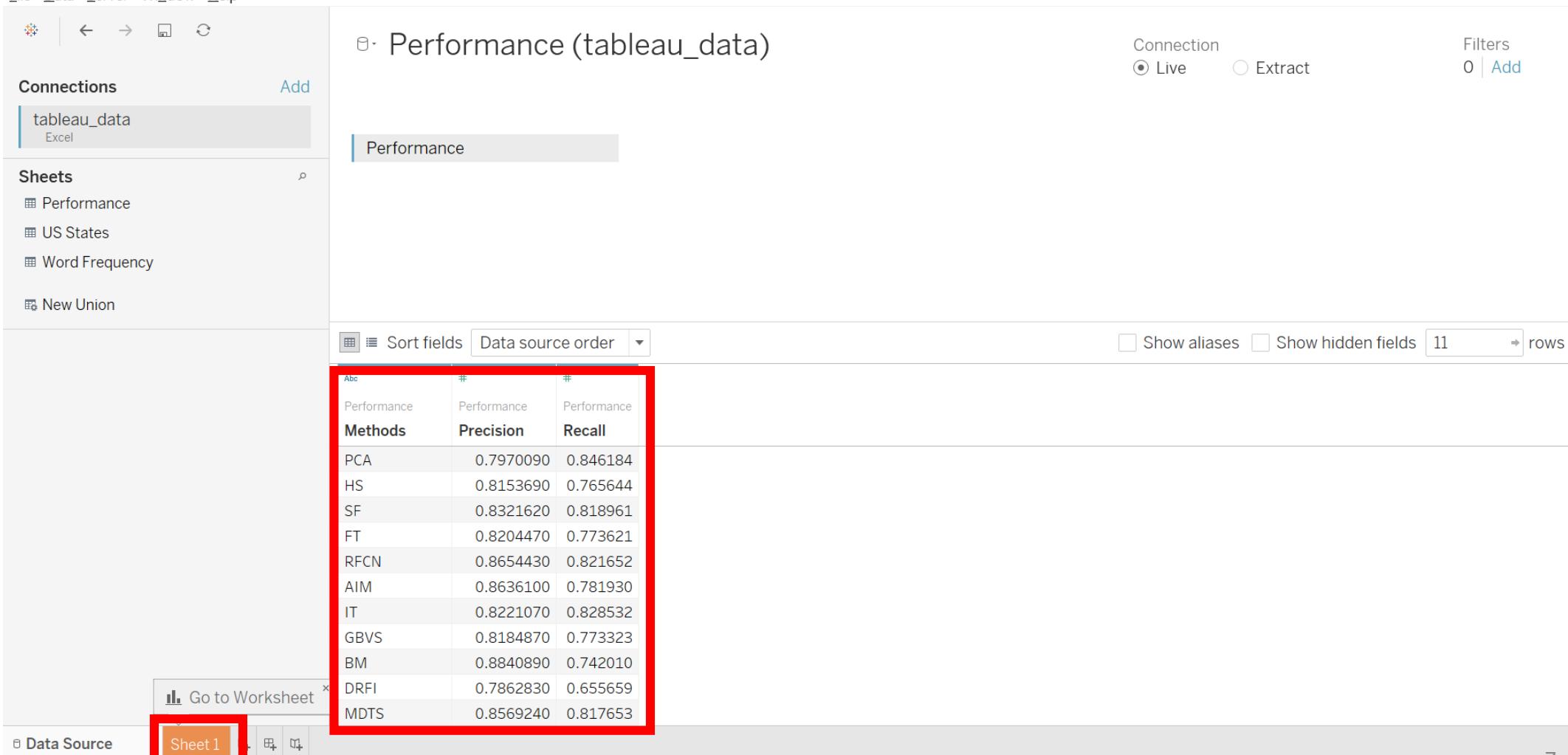
Show aliases Show hidden fields 11 rows

Methods	Precision	Recall
PCA	0.7970090	0.846184
HS	0.8153690	0.765644
SF	0.8321620	0.818961
FT	0.8204470	0.773621
RFCN	0.8654430	0.821652
AIM	0.8636100	0.781930
IT	0.8221070	0.828532
GBVS	0.8184870	0.773323
BM	0.8840890	0.742010
DRFI	0.7862830	0.655659
MDTS	0.8569240	0.817653

Go to Worksheet

Data Source Sheet1

7



In Sheet 1

Tableau - Book3

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Data Analytics

Performance (tableau_dat...)

Dimensions

Methods

Measure Names

Measures

Precision

Recall

Number of Records

Measure Values

Pages

Columns

Rows

Filters

Marks

Automatic

Color

Size

Text

Detail

Tooltip

Sheet 1

Drop field here

Drop field here

Drop field here

Show Me

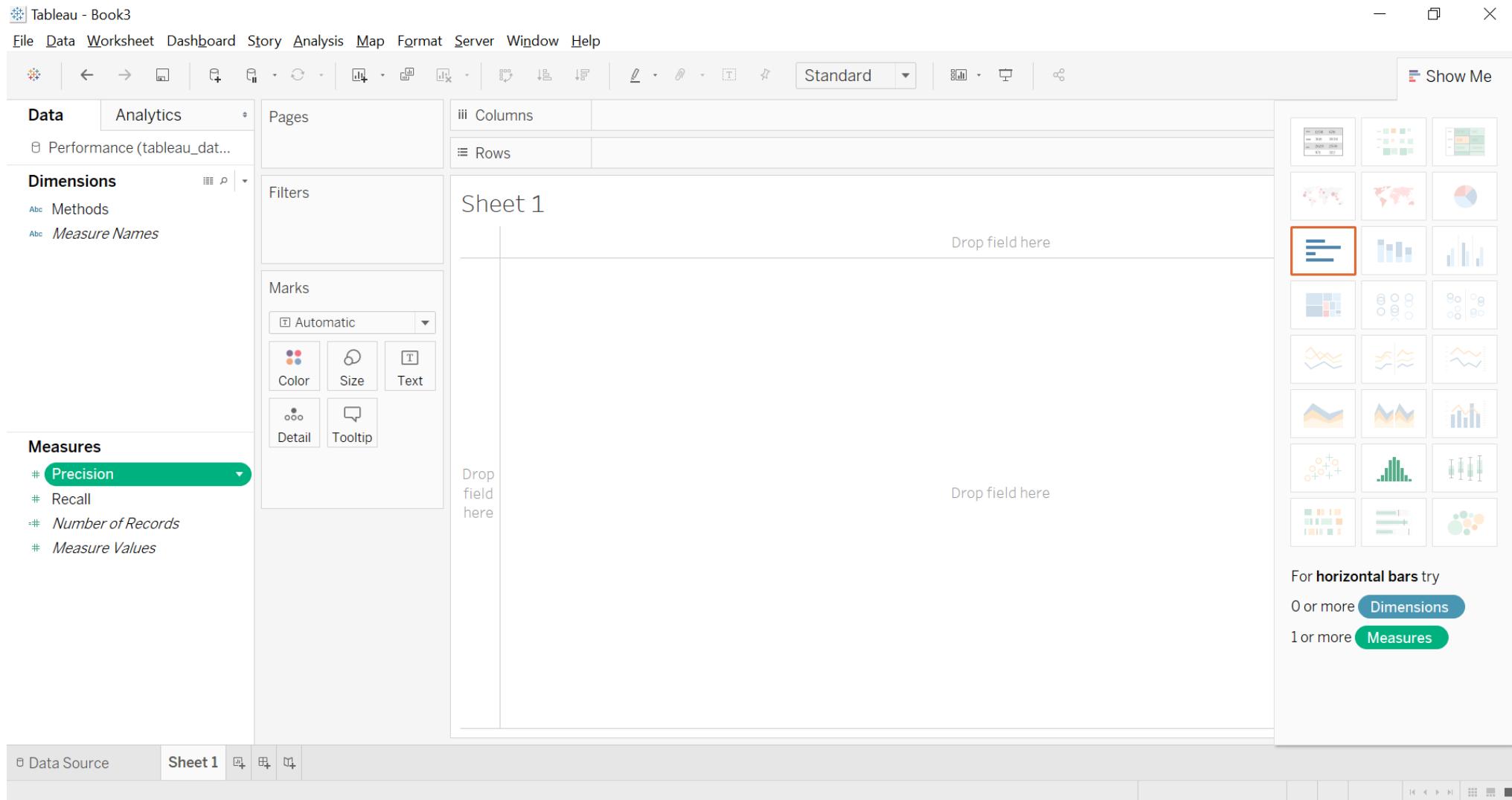
Horizontal bars

For horizontal bars try

0 or more Dimensions

1 or more Measures

Data Source Sheet 1



Create the new field: F-measure

The screenshot shows the Tableau interface with the following details:

- Top Bar:** Tableau - Book3, File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, Help.
- Left Sidebar:** Data, Dimension, Measures. Under Measures, there are four items: Precision (highlighted with a green oval), Recall, Number of Records, and Measure Values.
- Context Menu:** An "Add to Sheet" context menu is open over the "Precision" measure. The "Create" option is selected, and its submenu is visible, showing "Calculated Field..." (highlighted with a blue box).
- Sheet View:** A single sheet titled "Sheet 1" with three "Drop field here" placeholder boxes.
- Show Me:** A panel on the right displaying various visualization icons, with a horizontal bar chart icon highlighted with an orange border.
- Bottom Bar:** Data Source, Sheet 1, and other standard Tableau navigation buttons.

Standard

Show Me

Data Analytics

Performance (tableau_dat...)

Dimensions

Methods

Measure Names

Marks

Automatic

Color

Size

Text

Detail

Tooltip

F-measure

$2 * [\text{Precision}] * [\text{Recall}] / ([\text{Precision}] + [\text{Recall}])$

The calculation is valid.

OK

Drop field here

Sheet 1

Drop field here

Select or drag data
Use the Shift or Ctrl key to select multiple fields

Data Source Sheet 1

This screenshot shows the Tableau desktop application. In the center, there's a dialog box for creating a calculated field named 'F-measure'. The formula entered is $2 * [\text{Precision}] * [\text{Recall}] / ([\text{Precision}] + [\text{Recall}])$. Below the formula, a message says 'The calculation is valid.' with 'OK' and 'Apply' buttons. To the right of the dialog, there's a 'Show Me' panel displaying various chart and table options. On the left, the 'Data' shelf lists 'Performance (tableau_dat...)' and the 'Measures' shelf lists 'Precision', 'Recall', 'Number of Records', and 'Measure Values'. The bottom navigation bar includes 'Data Source', 'Sheet 1', and other standard Tableau navigation icons.

Drag “Methods” into the Columns

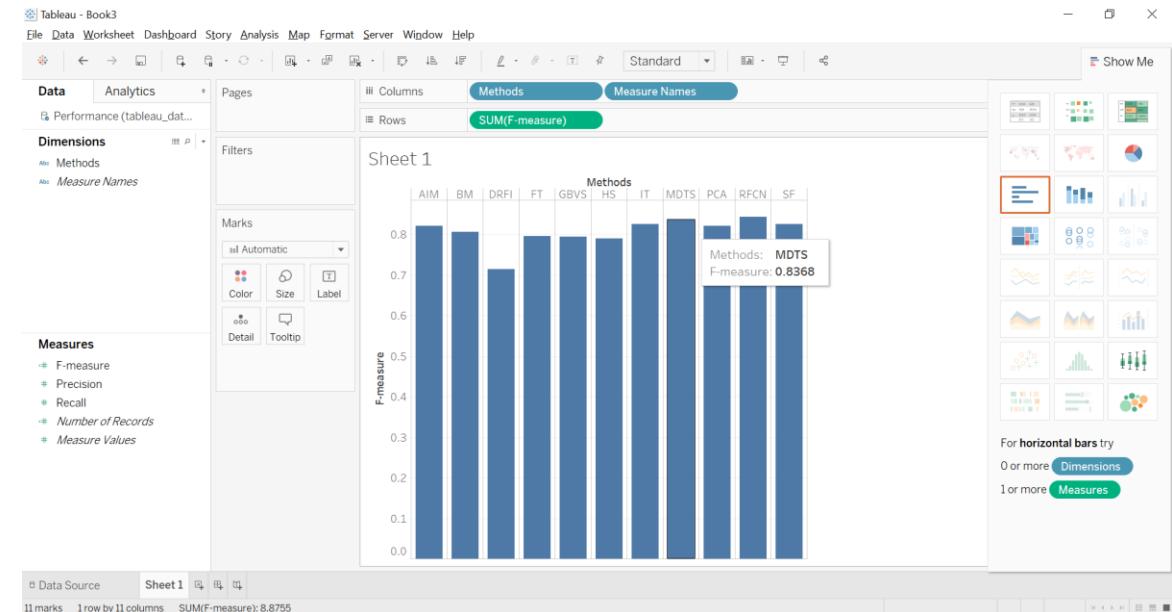
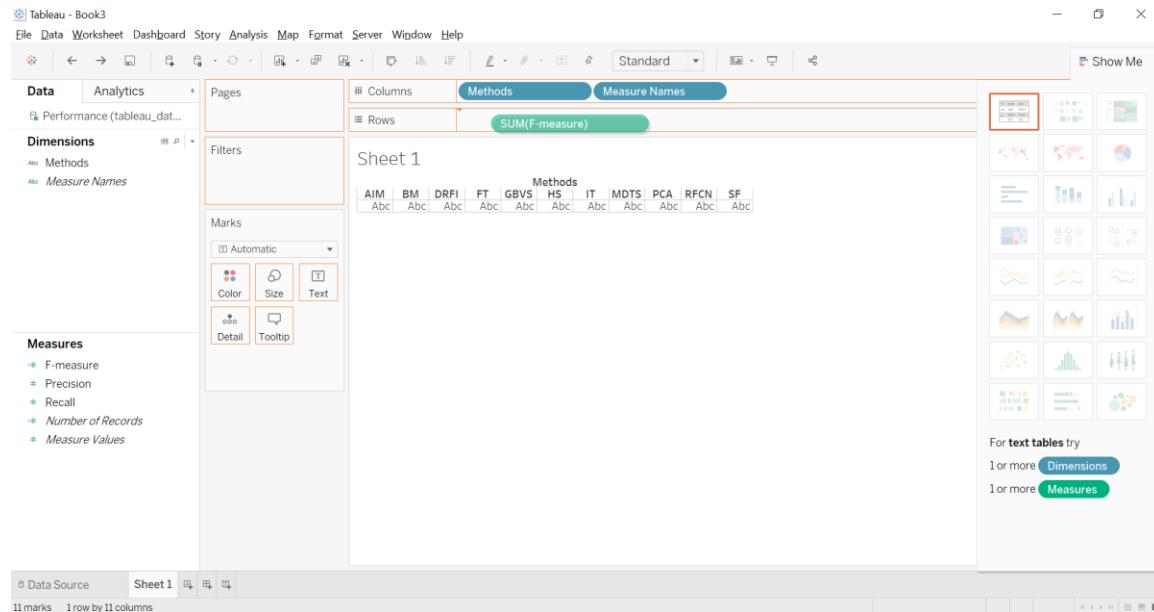
This screenshot shows the Tableau interface with the 'Methods' tab selected in the Data pane. The Data pane also lists 'Performance' and 'Measure Names'. The Analytics pane shows 'Pages', 'Columns', and 'Rows'. The Marks pane shows 'Automatic' with options for 'Color', 'Size', and 'Text'. The Measures pane lists 'F-measure', 'Precision', 'Recall', 'Number of Records', and 'Measure Values'. The Columns pane is empty, indicated by 'Drop field here'. The Rows pane is also empty, indicated by 'Drop field here'. The Filters pane is empty, indicated by 'Drop field here'. The Marks pane has a note: 'Select or drag data Use the Shift or Ctrl key to select multiple fields'. The bottom status bar shows 'Data Source' and 'Sheet 1'.

This screenshot shows the Tableau interface with the 'Methods' tab selected in the Columns pane. The Data pane lists 'Performance' and 'Measure Names'. The Analytics pane shows 'Pages', 'Dimensions', and 'Filters'. The Dimensions pane lists 'Methods'. The Measures pane lists 'F-measure', 'Precision', 'Recall', 'Number of Records', and 'Measure Values'. The Columns pane contains data for AIM, BM, DRFI, FT, GBVS, HS, IT, MDTs, PCA, RFCN, and SF, all with values 'Abc'. The Rows pane is empty, indicated by 'Drop field here'. The Filters pane is empty, indicated by 'Drop field here'. The Marks pane is empty, indicated by 'Drop field here'. The bottom status bar shows 'Data Source' and 'Sheet 1'.

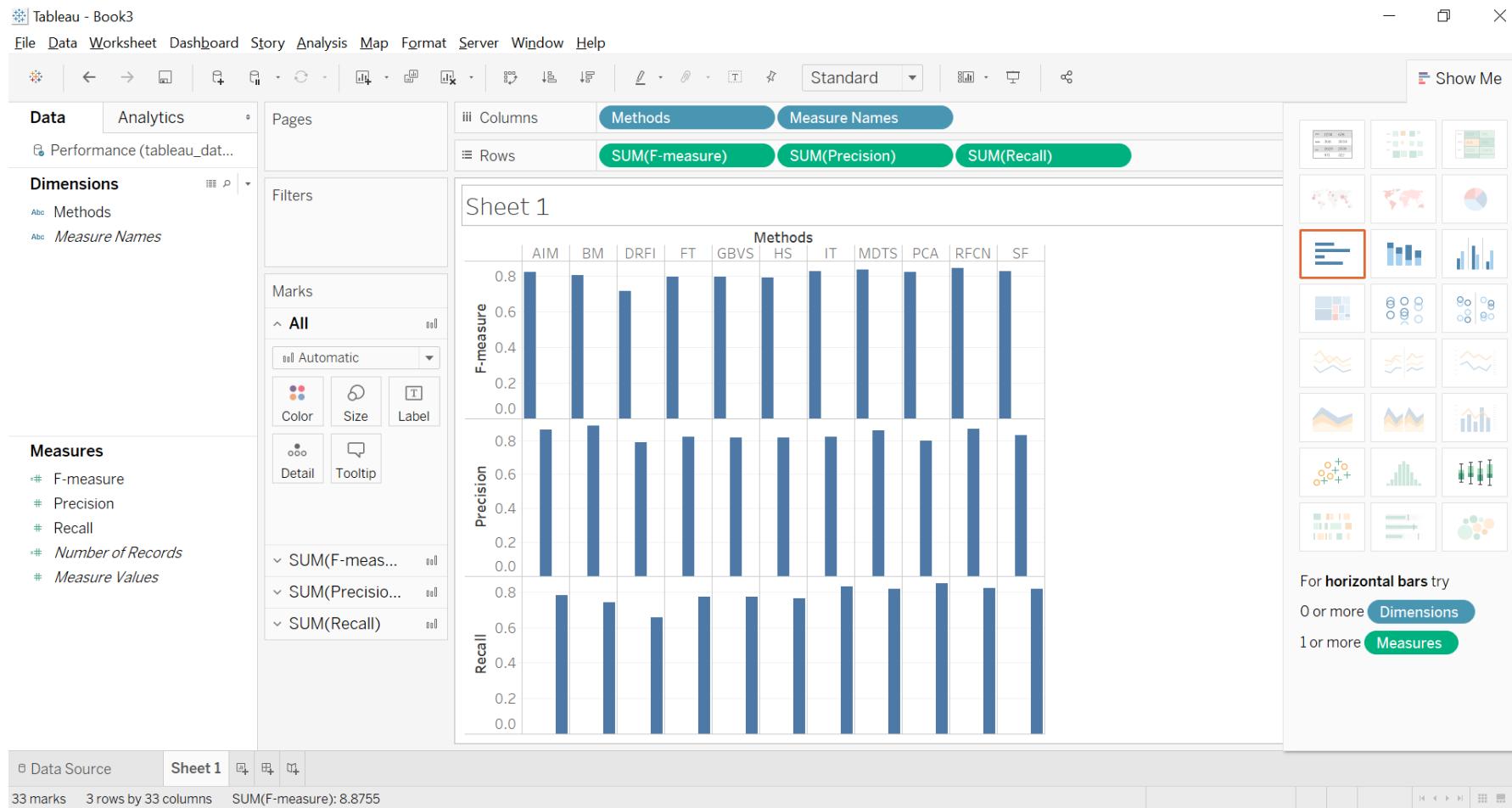
Drag “Measure Names” into the Columns

The screenshot shows the Tableau interface with a data view titled "Sheet 1". The top navigation bar includes File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, and Help. The left sidebar contains sections for Data, Analytics, Dimensions (with "Methods" and "Measure Names" listed), Filters, and Marks. The main area displays a grid of 11 columns labeled AIM, BM, DRFI, FT, GBVS, HS, IT, MDTS, PCA, RFCN, and SF, each containing the value "Abc". A tooltip box with a red border appears over the grid, containing the text: "Drag dimensions or measures here or double-click to start a new calculation." To the right of the grid is a "Show Me" panel displaying various visualization icons, with the first icon (a grid) highlighted by a red box. Below the visualization panel, text suggests "For text tables try 1 or more Dimensions" and "1 or more Measures". The bottom status bar indicates "11 marks 1 row by 11 columns".

Drag “F-measure” into Rows



Drag “Precision” and “Recall” into Rows



Change the chart to side-by-side bars

Tableau - Book3

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Data Analytics

Performance (tableau_dat...

Dimensions

- Methods
- Measure Names

Filters

Marks

- All
- Automatic
- Color
- Size
- Label
- Detail
- Tooltip

Measures

- F-measure
- Precision
- Recall
- Number of Records
- Measure Values

iii Columns Methods Measure Names

Rows SUM(F-measure) SUM(Precision) SUM(Recall)

Show Me

Sheet 1

Methods

Method	F-measure	Precision	Recall
AIM	~0.82	~0.85	~0.78
BM	~0.82	~0.85	~0.78
DRFI	~0.75	~0.78	~0.65
FT	~0.82	~0.85	~0.78
GBVS	~0.82	~0.85	~0.78
HS	~0.82	~0.85	~0.78
IT	~0.82	~0.85	~0.78
MDTS	~0.82	~0.85	~0.78
PCA	~0.82	~0.85	~0.78
RFCN	~0.82	~0.85	~0.78
SF	~0.82	~0.85	~0.78

For side-by-side bars try

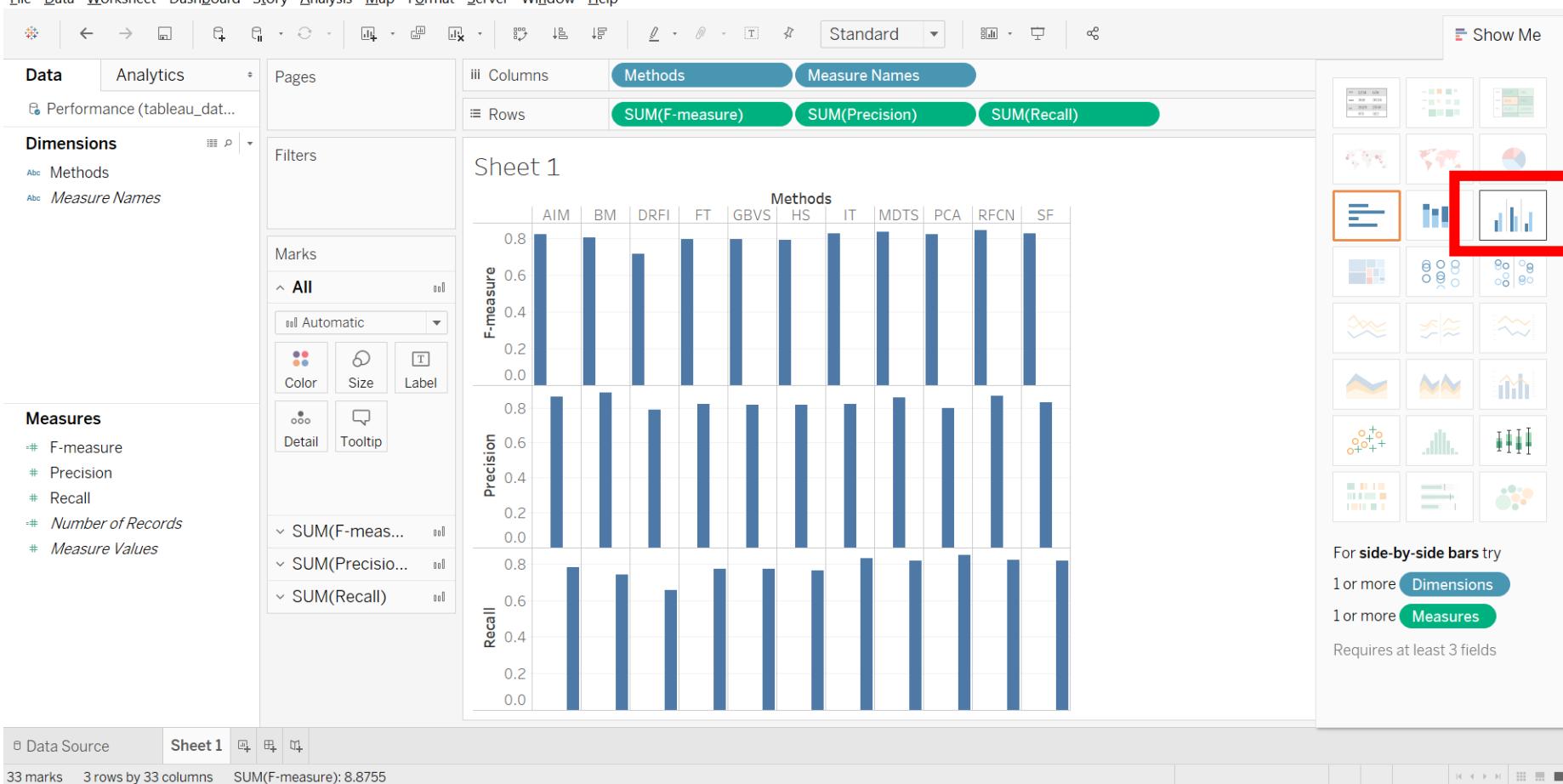
1 or more Dimensions

1 or more Measures

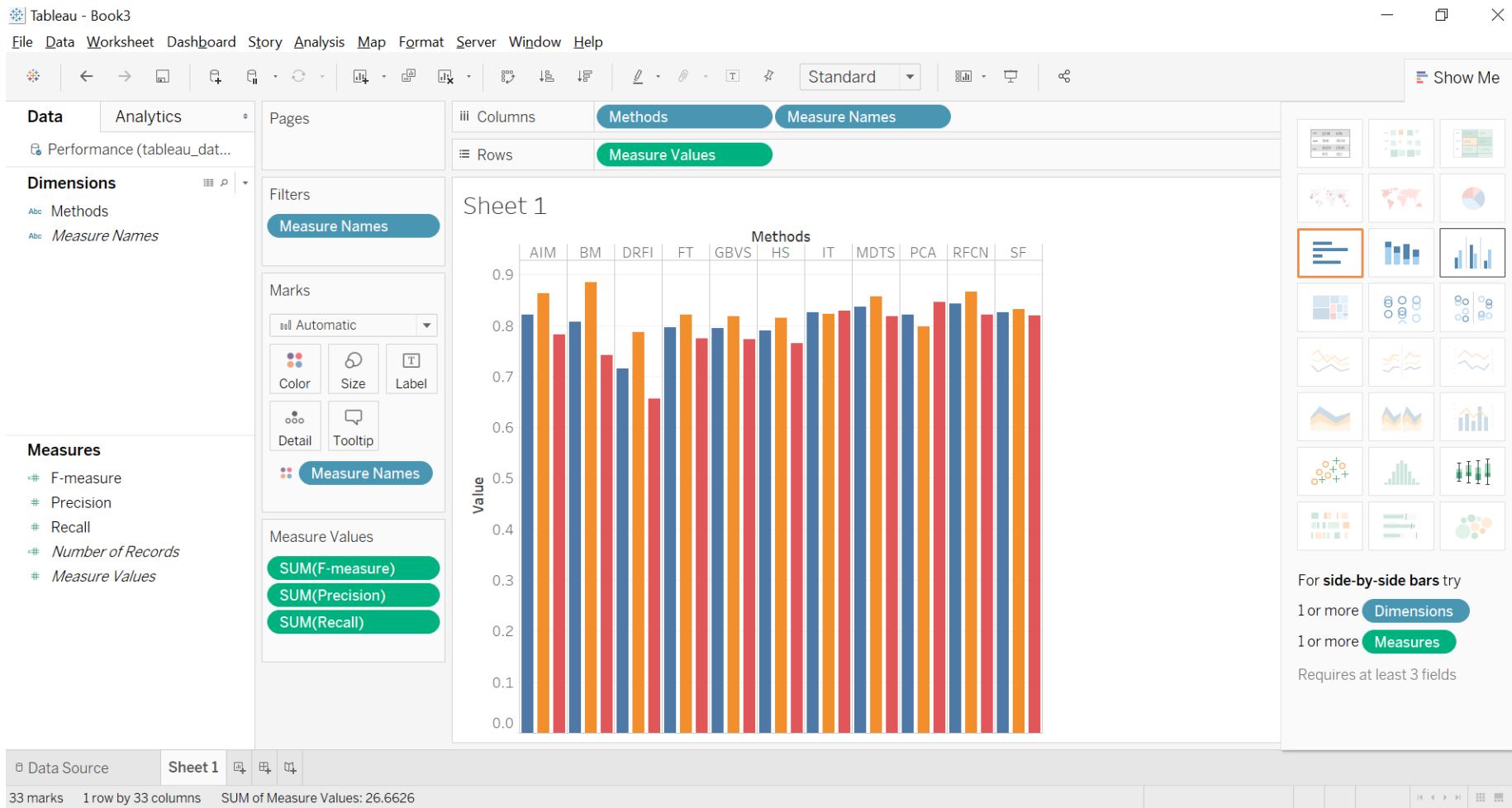
Requires at least 3 fields

Data Source Sheet 1

33 marks 3 rows by 33 columns SUM(F-measure): 8.8755

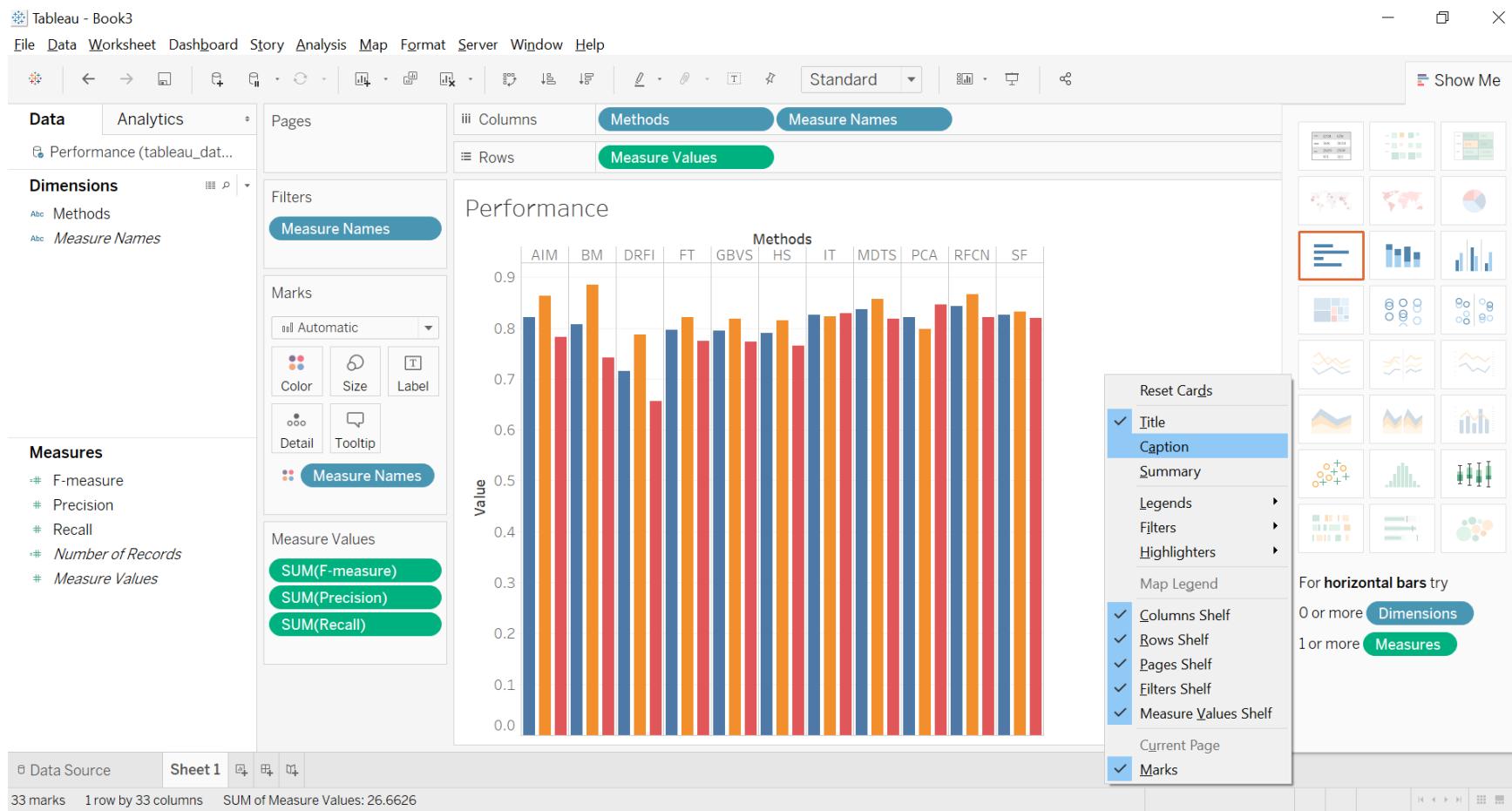


Change the chart to side-by-side bars



Update the title

Add caption



Input caption

Tableau - Book3

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Data Analytics

Performance (tableau_dat...)

Dimensions

- Methods
- Measure Names

Measures

- F-measure
- Precision
- Recall
- Number of Records
- Measure Values

Pages

iii Columns Methods Measure Names

Rows Measure Values

Filters

Measure Names

Marks

- Automatic
- Color
- Size
- Label
- Detail
- Tooltip

Measure Names

Methods

- AIM
- BM
- DRFI
- FT
- GBVS
- HS
- IT
- MDTS
- PCA
- RFCN
- SF

Performance

Edit Caption

Tableau Book

F-measure, Precision and Recall for each Methods. Color shows details about F-measure, Precision and Recall.

Value

Reset OK Cancel Apply

Caption

F-measure, Precision and Recall for each Methods. Color shows details about F-measure, Precision and Recall.

Show Me

Horizontal bars

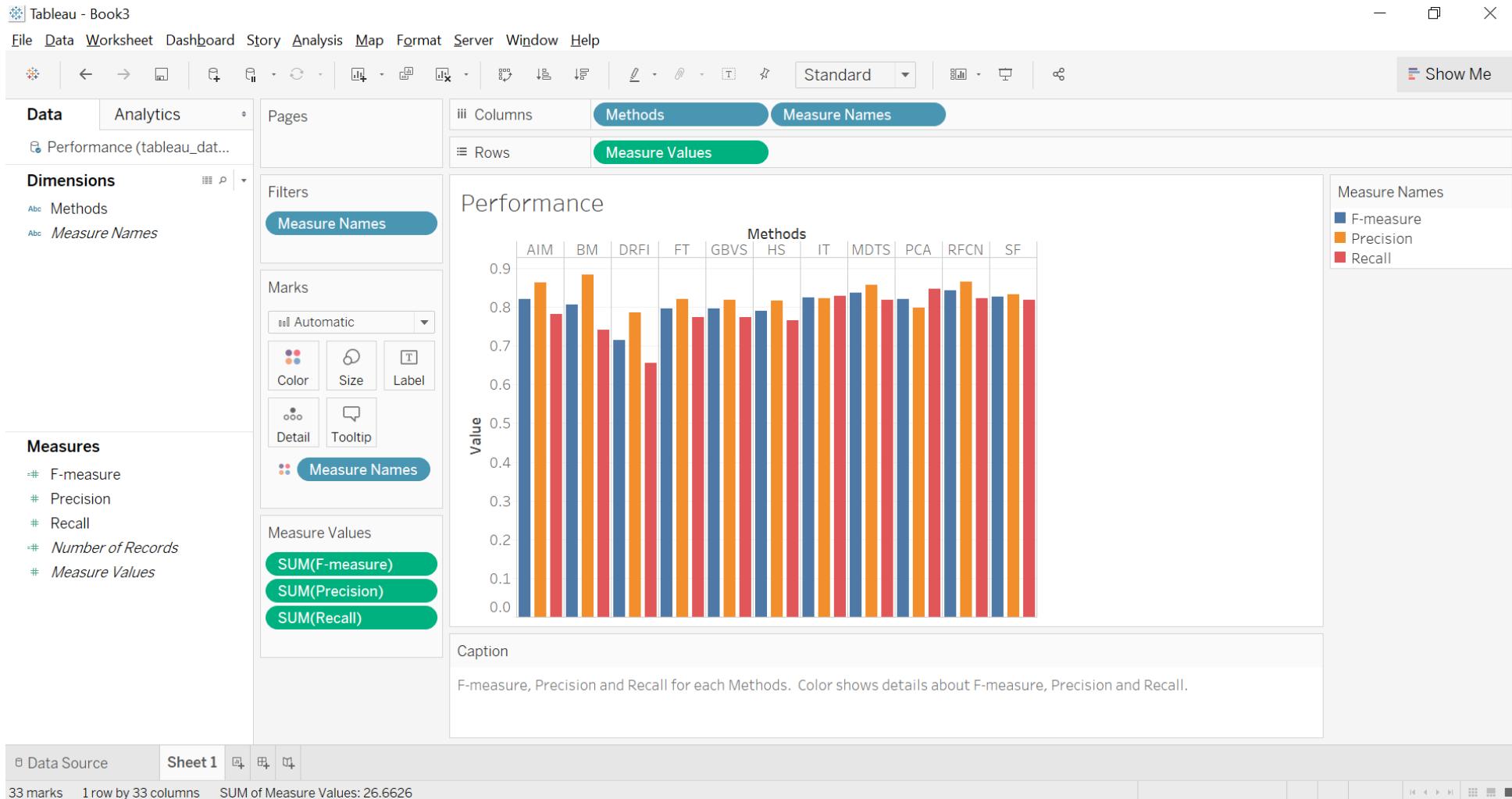
0 or more Dimensions

1 or more Measures

33 marks 1 row by 33 columns SUM of Measure Values: 26.6626

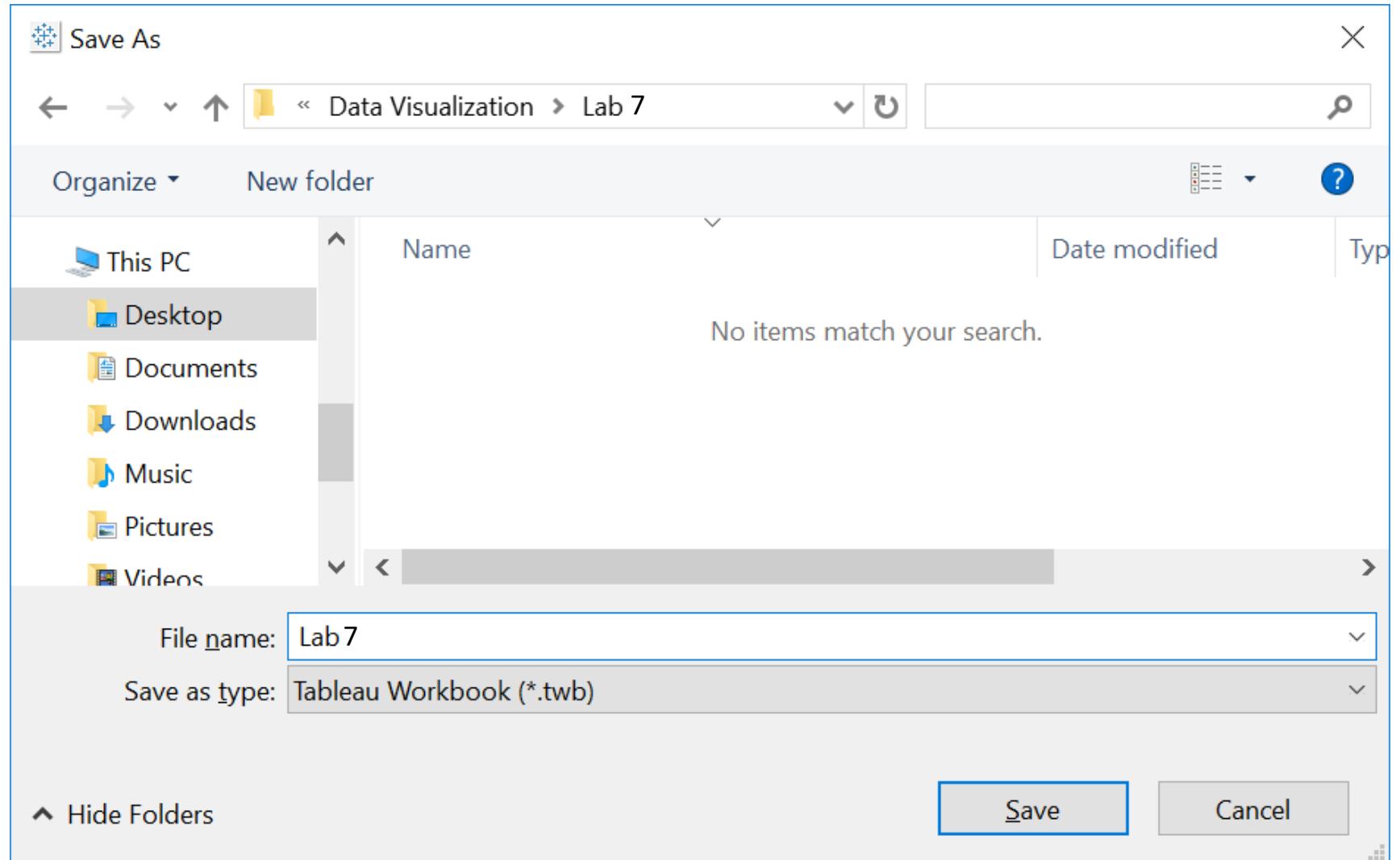
19

Click “Show Me” button to reveal the chart legends

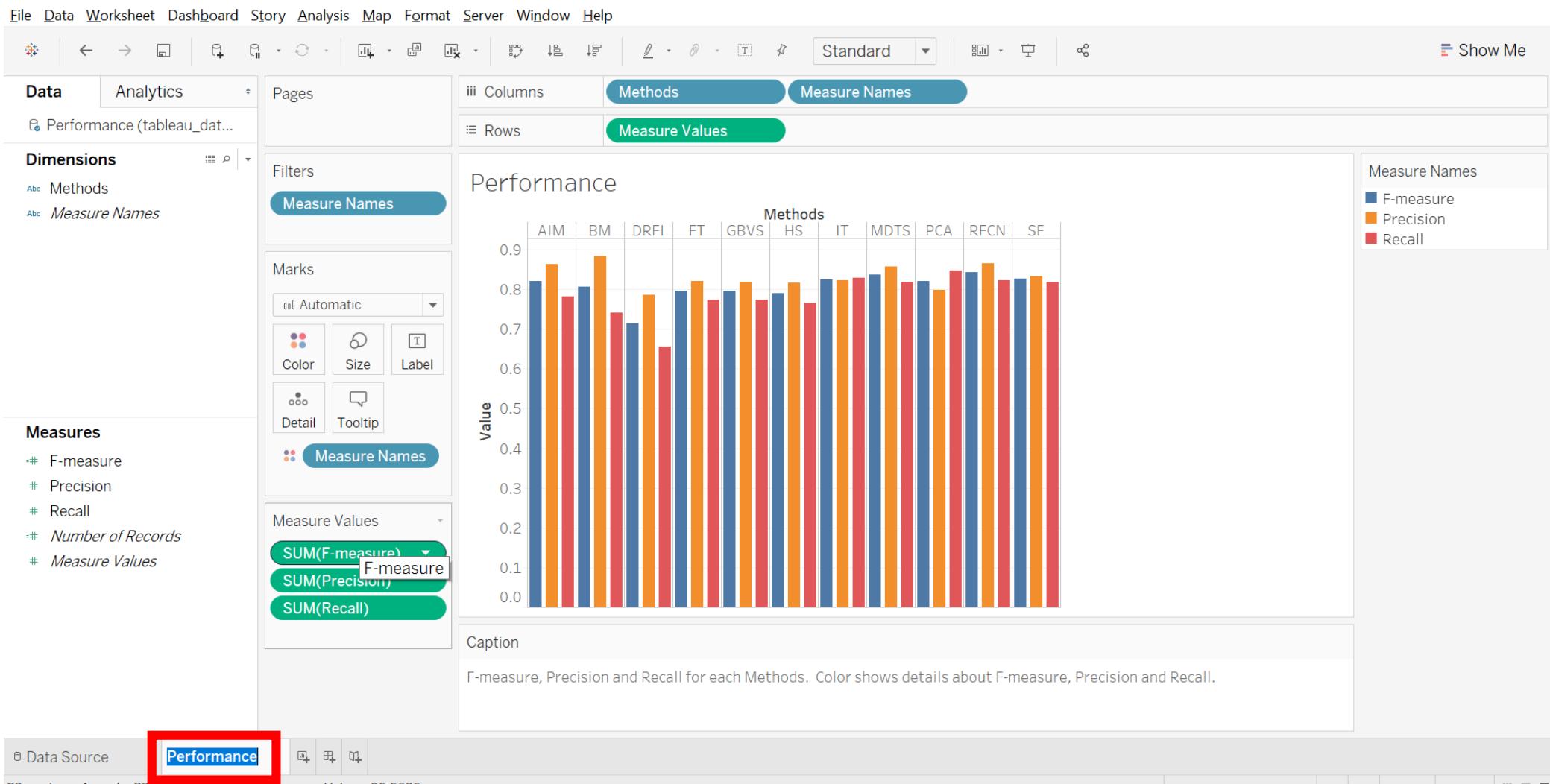


Save the workbook

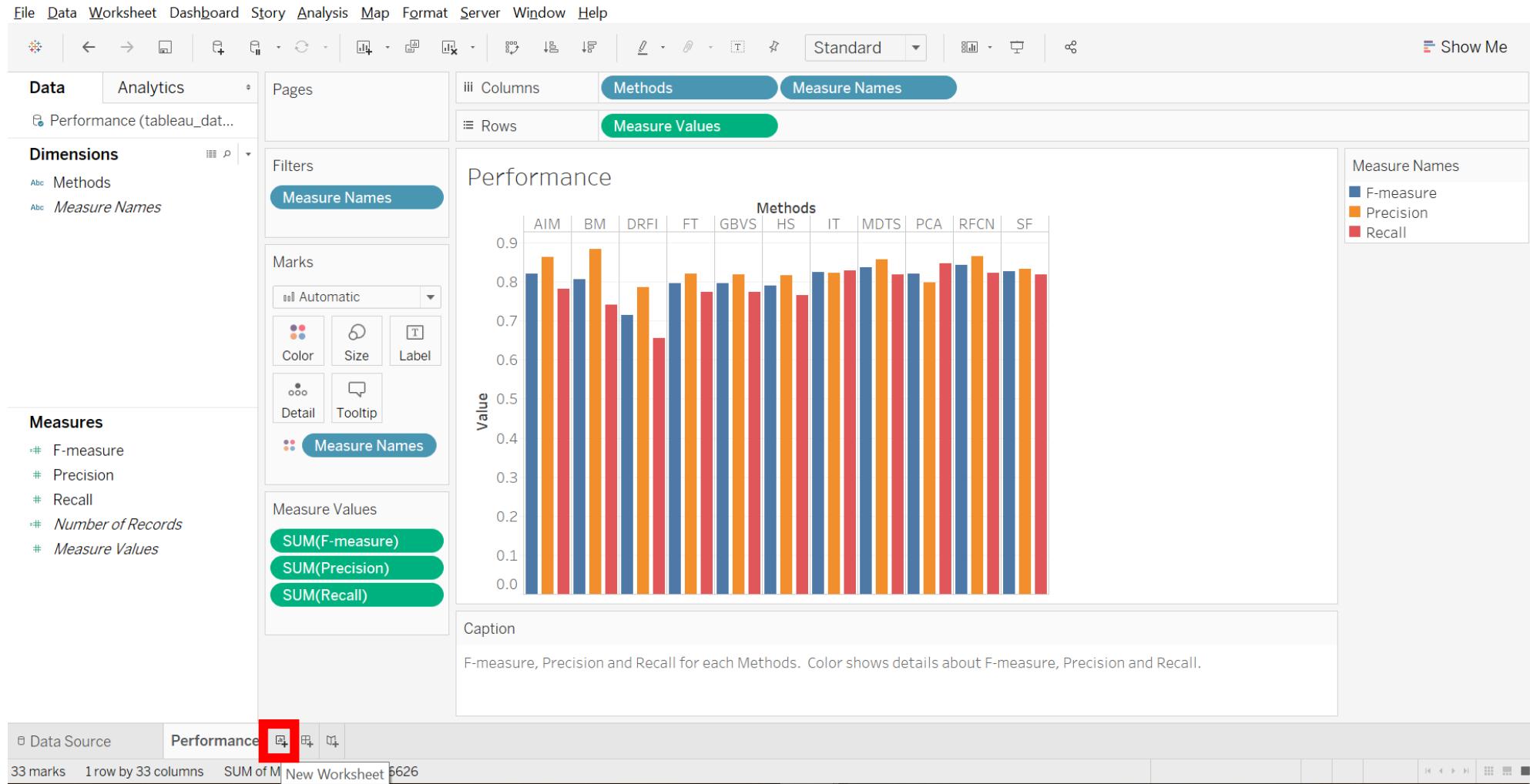
- Press **Ctrl-S**



Rename “Sheet 1” to “Performance”



Add a new worksheet



In worksheet “Sheet 2”

The screenshot shows the Tableau interface with the following details:

- Top Bar:** File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, Help.
- Toolbars:** Standard, Show Me.
- Left Panel (Data Source):** Data (selected), Analytics, Performance (tableau_dat...), Dimensions (Methods, Measure Names), Measures (F-measure, Precision, Recall, Number of Records, Measure Values).
- Middle Panel:** Pages (iii Columns, Rows), Filters, Marks (Automatic, Color, Size, Text, Detail, Tooltip).
- Right Panel (Sheet 2):** A large workspace with placeholder text: "Sheet 2", "Drag dimensions or measures here or double-click to start a new calculation.", "Drop field here", and "Drop field here".
- Bottom Navigation:** Data Source (highlighted with a red box), Performance, Sheet 2, and other navigation icons.

Add data source “US States”

The screenshot shows the Tableau Data Source Manager interface. At the top, there's a toolbar with various icons. Below it, the 'Connections' section lists 'tableau_data' (Excel) as the active connection. Under 'Sheets', 'US States' is selected. A large central area is labeled 'Drag sheets here'. On the left, there are sections for 'Dimensions' (Number, State Name, Measure Names), 'Measures' (Size, Latitude (generated), Longitude (generated), Number of Records, Measure Values), and 'Data' (Analytics, Pages). The bottom navigation bar includes tabs for 'Data Source', 'Performance', 'Sheet 2', and other options.

This screenshot is identical to the one above, showing the Tableau Data Source Manager with the 'tableau_data' connection selected and the 'US States' sheet highlighted. The interface includes the toolbar, 'Connections' list, 'Sheets' list, and the 'Drag sheets here' area.

The screenshot shows the Tableau Connect dialog box. It has a 'Connect' header and a 'Search' bar. Below it, there's a list of data sources: Tableau Server, Actian Matrix, Actian Vector, Amazon Aurora, and Amazon EMR. A large blue arrow points from the 'tableau_data' connection in the Data Source Manager to this list. Below the connect section is an 'Open' dialog box. The title bar says 'Open' and shows the path 'Data Visualization > Lab 8'. The main area is a file explorer window titled 'Organize' with 'New folder' and 'This PC' buttons. It lists files: 'tableau_data.xlsx' (modified 6/4/2017 5:20 PM) and '~\$tableau_data.xlsx' (modified 6/4/2017 4:46 PM). The bottom of the dialog shows a 'File name:' dropdown set to 'tableau_data.xlsx', a 'Type:' dropdown set to 'Excel Workbooks (*.xls;*.xlsx;*.xl', and 'Open' and 'Cancel' buttons. A second blue arrow points from the 'Open' dialog back to the 'tableau_data' connection in the Data Source Manager.

US States data

Number	State Name	Size
1	Alaska	663,267.26
2	Texas	268,580.82
3	California	163,695.57
4	Montana	147,042.40
5	New Mexico	121,589.48
6	Arizona	113,998.30
7	Nevada	110,560.71
8	Colorado	104,093.57
9	Oregon	98,380.64
10	Wyoming	97,813.56

Two data sources in Sheet 2

The screenshot shows the Tableau Data Source Editor interface. The top menu bar includes File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, and Help. The ribbon below the menu has tabs for Data, Analytics, and other options like Pages, Columns, Rows, and Filters.

The left sidebar contains the Data pane, which lists "Performance (tableau_data)" and "US States (tableau_data)" under the "Data" tab. It also includes sections for Dimensions (Number, State Name, Measure Names) and Measures (Size, Latitude (generated), Longitude (generated), Number of Records, Measure Values).

The center workspace is titled "Sheet 2" and features three "Drop field here" placeholder areas. The top-right area is associated with the "Rows" section in the ribbon. The bottom-left area is associated with the "Columns" section. The bottom-right area is associated with the "Pages" section.

The bottom navigation bar includes tabs for Data Source, Performance, and Sheet 2, along with various icons for saving, publishing, and sharing.

Drag “State Name” into the field

The screenshot shows the Tableau Data Editor interface. On the left, the Data pane lists 'Performance (tableau_data)' and 'US States (tableau_data)'. The Dimensions pane shows 'Number', 'State Name', and 'Measure Names'. The Measures pane shows 'Size', 'Latitude (generated)', 'Longitude (generated)', 'Number of Records', and 'Measure Values'. In the center, the 'Sheet 2' canvas has three 'Drop field here' placeholder boxes. A blue arrow points from the 'State Name' item in the Marks shelf to the top-right 'Drop field here' box. The Marks shelf also includes 'Automatic' and 'Color', 'Size', 'Text', 'Detail', and 'Tooltip' options.

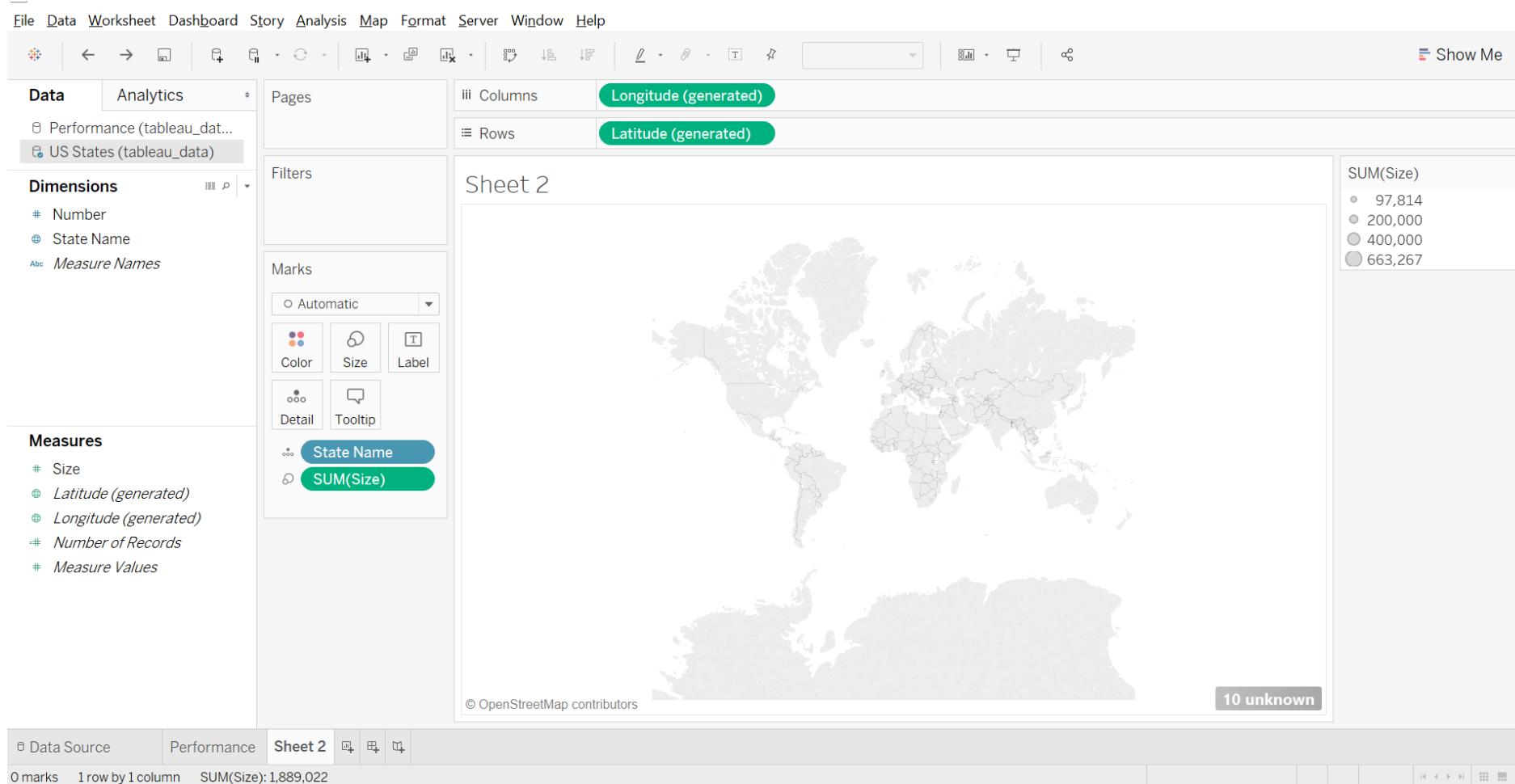
Drag “Size” into the field

The screenshot shows a Tableau interface with the following elements:

- Top Bar:** File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, Help.
- Data Source:** US States (tableau_data).
- Dimensions:** Number, State Name.
- Measures:** Size, Latitude (generated), Longitude (generated), Number of Records, Measure Values.
- Columns:** Longitude (generated).
- Rows:** Latitude (generated).
- Marks:** Automatic, Color, Size, Label, Detail, Tooltip. The "Size" button is highlighted with an orange border.
- State Name:** Selected in the Marks card.
- Summarized Labels:** SUM(Size) is displayed in a green pill.
- Map View:** A world map where each country's size corresponds to its value in the "Size" measure.
- Bottom Navigation:** Data Source, Performance, Sheet 2, and various icons.
- Bottom Status:** 0 marks, 1 row by 1 column, 10 unknown.

A large blue arrow points from the "Size" button in the Marks card towards the green "SUM(Size)" pill in the shelf, indicating the action of dragging the measure into the visualization.

What do we see?



Change the chart to treemaps

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Data Analytics

Pages iii Columns Longitude (generated)

Rows Latitude (generated)

Filters

Sheet 2

© OpenStreetMap contributors 10 unkn

0 marks 1 row by 1 column SUM(Size): 1,889,022

Show Me

Dimensions

- # Number
- @ State Name
- Abc Measure Names

Marks

- Automatic
- Color
- Size
- Label
- Detail
- Tooltip

State Name

SUM(Size)

Measures

- # Size
- @ Latitude (generated)
- @ Longitude (generated)
- # Number of Records
- # Measure Values

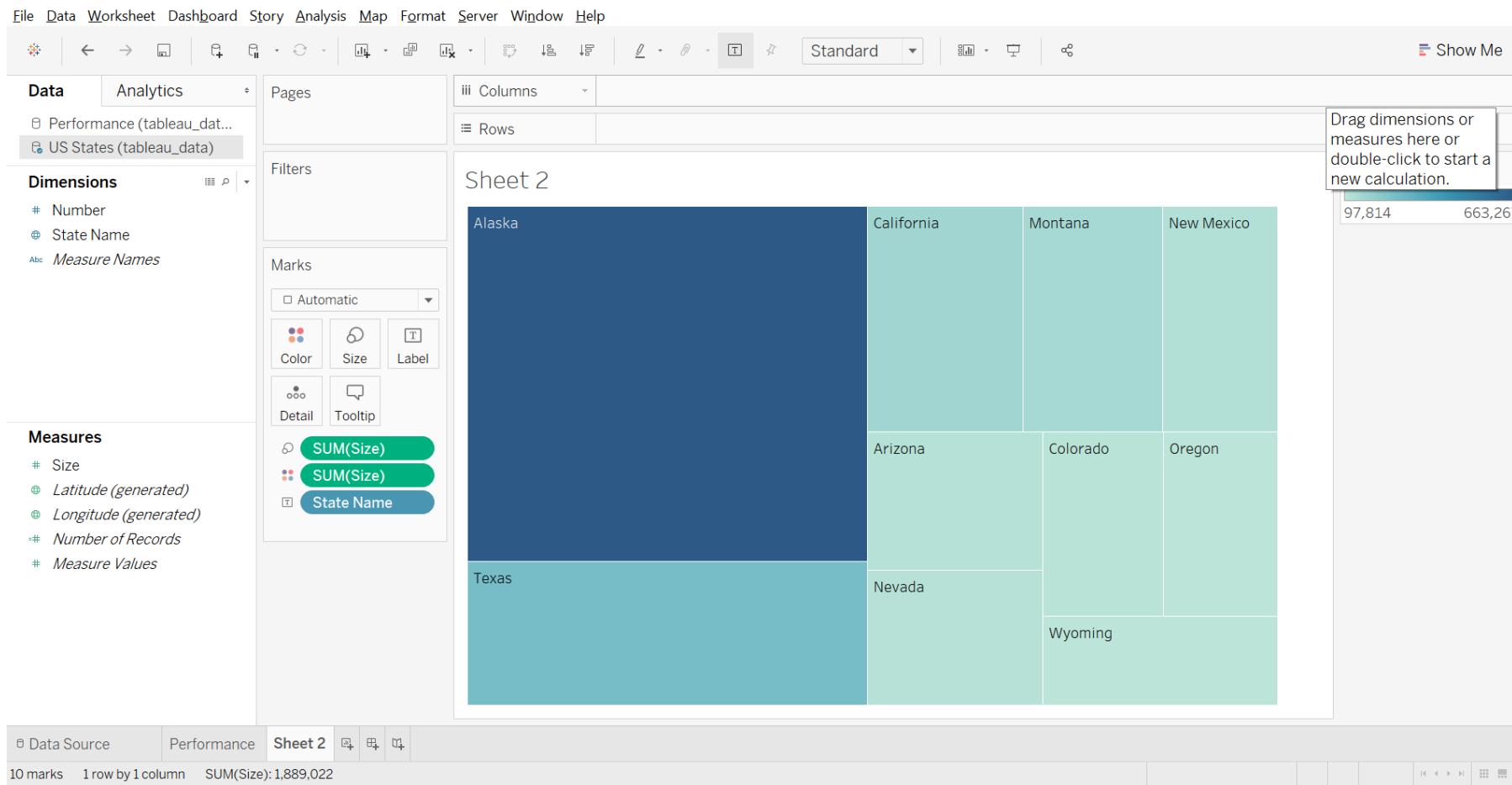
For treemaps try

1 or more Dimensions

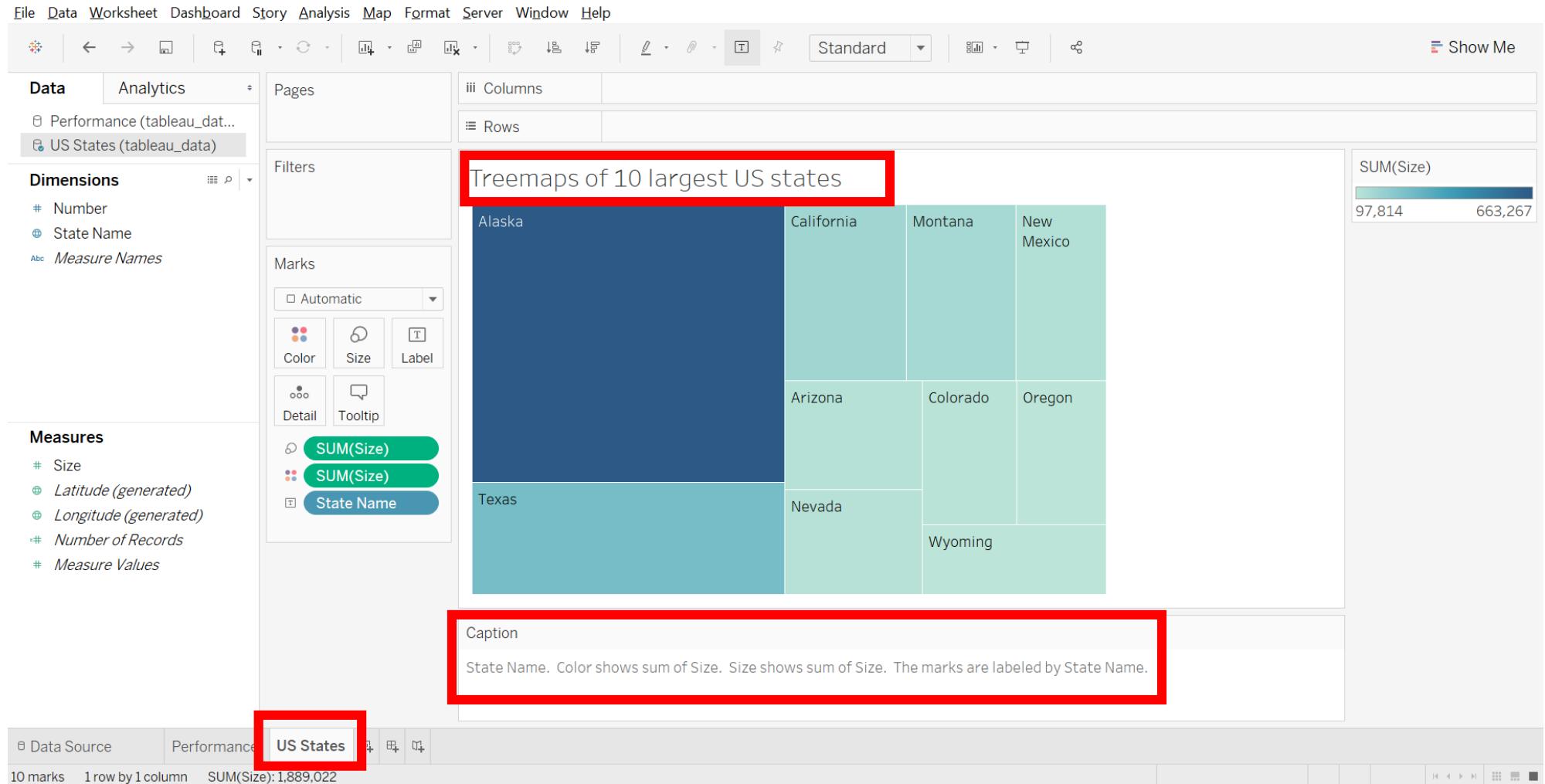
1 or 2 Measures

The screenshot shows a Tableau interface with a world map visualization. The map is a treemap where each country's area represents its size according to the 'SUM(Size)' measure. The 'Show Me' panel on the right has a grid of chart types, and the 'Treemap' icon is highlighted with a red box. Below the grid, text suggests trying 1 or more dimensions or 1 or 2 measures for treemaps.

Treemaps



Update chart title and caption and rename worksheet



Create new worksheet “Sheet 3” and add Word Frequency data source

The screenshot shows the Tableau Data Source interface. The top navigation bar includes File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, and Help. Below the menu is a toolbar with various icons. The left sidebar has tabs for Data (selected), Analytics, Pages, Filters, Marks, Dimensions, and Measures. Under Data, 'Word Frequency (tableau_data)' is selected. Under Dimensions, 'Word' and 'Measure Names' are listed. Under Measures, 'Frequency', 'Number of Records', and 'Measure Values' are listed. The main workspace is titled 'Sheet 3' and contains three 'Drop field here' placeholder boxes. The bottom navigation bar includes Data Source, Performance, US States, Sheet 3, and other icons.

Word Frequency

- Data visualization or data visualisation is viewed by many disciplines as a modern equivalent of visual communication. It involves the creation and study of the visual representation of data, meaning "information that has been abstracted in some schematic form, including attributes or variables for the units of information".
- A primary goal of data visualization is to communicate information clearly and efficiently via statistical graphics, plots and information graphics. Numerical data may be encoded using dots, lines, or bars, to visually communicate a quantitative message. Effective visualization helps users analyze and reason about data and evidence. It makes complex data more accessible, understandable and usable. Users may have particular analytical tasks, such as making comparisons or understanding causality, and the design principle of the graphic (i.e., showing comparisons or showing causality) follows the task. Tables are generally used where users will look up a specific measurement, while charts of various types are used to show patterns or relationships in the data for one or more variables.

word	frequency
data	7
informatic	4
visualizatio	3
communicat	2
compariso	2
causality	2
variables	2
graphics	2
showing	2
visual	2
users	2
used	2
may	2
understan	1
representa	1
relationsh	1
understan	1
visualisati	1
communicat	1
quantitativ	1
measurem	1
statistical	1

Drag Word (Dimensions) to Text (Marks)

The screenshot shows the Tableau Data Source view with the following interface elements:

- Top Bar:** File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, Help.
- Data Shelf:** Pages, Rows, Filters, Sheet 3.
- Dimensions Shelf:** Word (selected), Measure Names.
- Marks Shelf:** Automatic, Color, Size, Word (highlighted with a blue selection bar), Text, Detail, Tooltip.
- Measures Shelf:** Frequency, Number of Records, Measure Values.
- Bottom Bar:** Data Source, Performance, US States, Sheet 3, various icons.

A blue selection bar highlights the "Word" button in the Marks shelf. The "Word" dimension is currently selected in the Dimensions shelf. The "Text" mark type is highlighted in the Marks shelf, indicating it is the target for the drag operation. The "Sheet 3" area contains three "Drop field here" placeholder boxes.

Drag Frequency (Measures) to Size (Marks)

The screenshot shows the Tableau desktop application interface. The top menu bar includes File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, and Help. The left sidebar contains sections for Data (Performance, US States, Word Frequency), Dimensions (Word, Measure Names), and Measures (Frequency, Number of Records, Measure Values). The central workspace is titled "Sheet 3" and displays a dense block of text: "abstracted accessible analytical analyze attributes bars causality charts clearly communicate communication comparisons complex creation Data data design disciplines dots Effective efficiently encoded equivalent evidence follows form generally goal graphic graphics helps i.e including information involves lines look makes making many may meaning measurement message modern Numerical one particular patterns plots primary principle quantitative reason relationships representation schematic show showing specific statistical study Tables task tasks types understandable understanding units usable used Users users using variables various via viewed visual visualisation visualization visually will". The bottom navigation bar shows tabs for Data Source, Performance, US States, Sheet 3, and other sheet icons. The bottom status bar indicates "83 marks 1 row by 1 column".

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Data Analytics

Pages

iii Columns

Rows

Filters

Sheet 3

abstracted accessible analytical analyze attributes bars causality charts clearly communicate communication comparisons complex creation Data data design disciplines dots Effective efficiently encoded equivalent evidence follows form generally goal graphic graphics helps i.e including information involves lines look makes making many may meaning measurement message modern Numerical one particular patterns plots primary principle quantitative reason relationships representation schematic show showing specific statistical study Tables task tasks types understandable understanding units usable used Users users using variables various via viewed visual visualisation visualization visually will

Marks

Automatic

SUM(Frequency)

Color

Size

Text

Detail

Tooltip

Word

Measures

Frequency

Number of Records

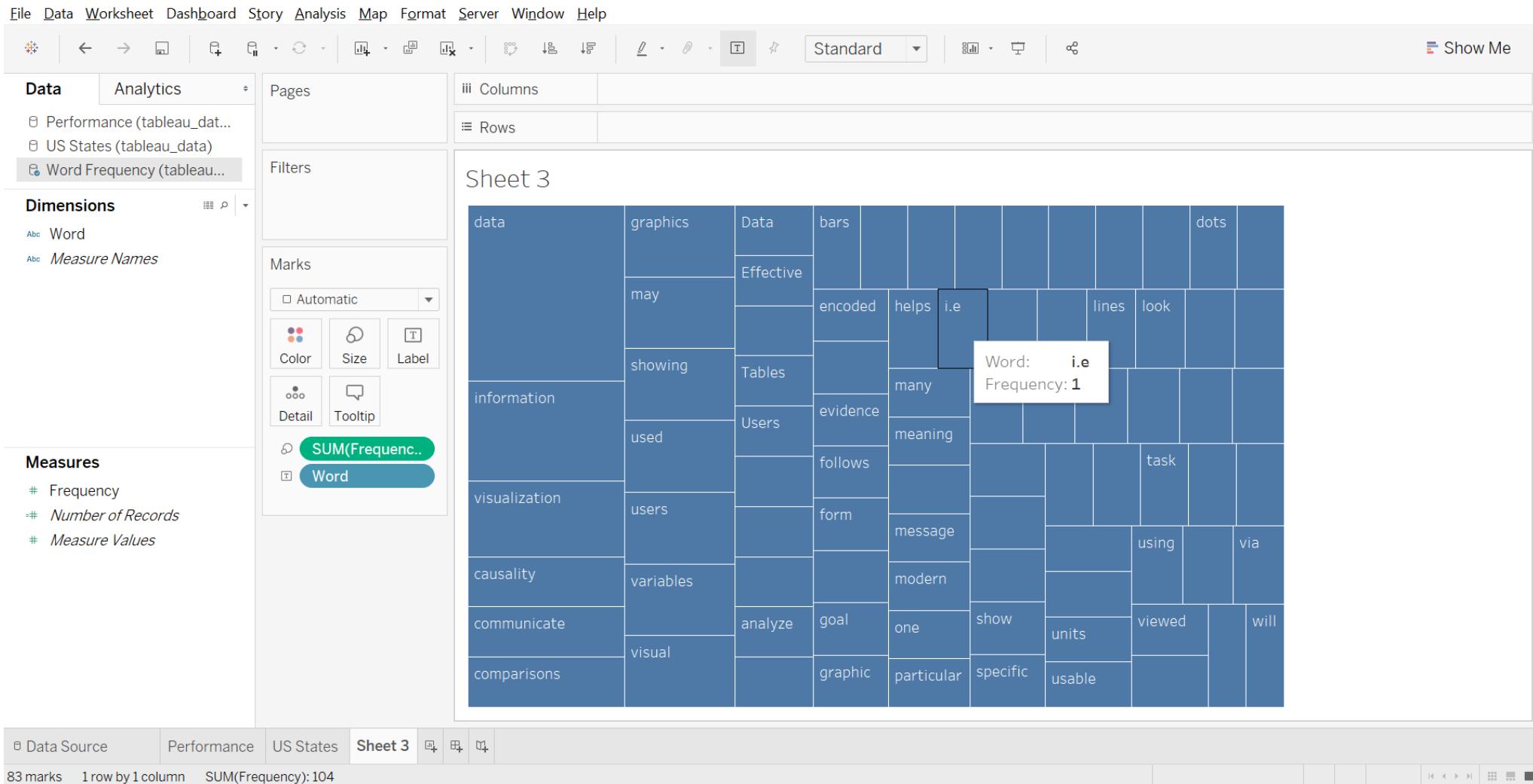
Measure Values

Data Source Performance US States Sheet 3

83 marks 1 row by 1 column

37

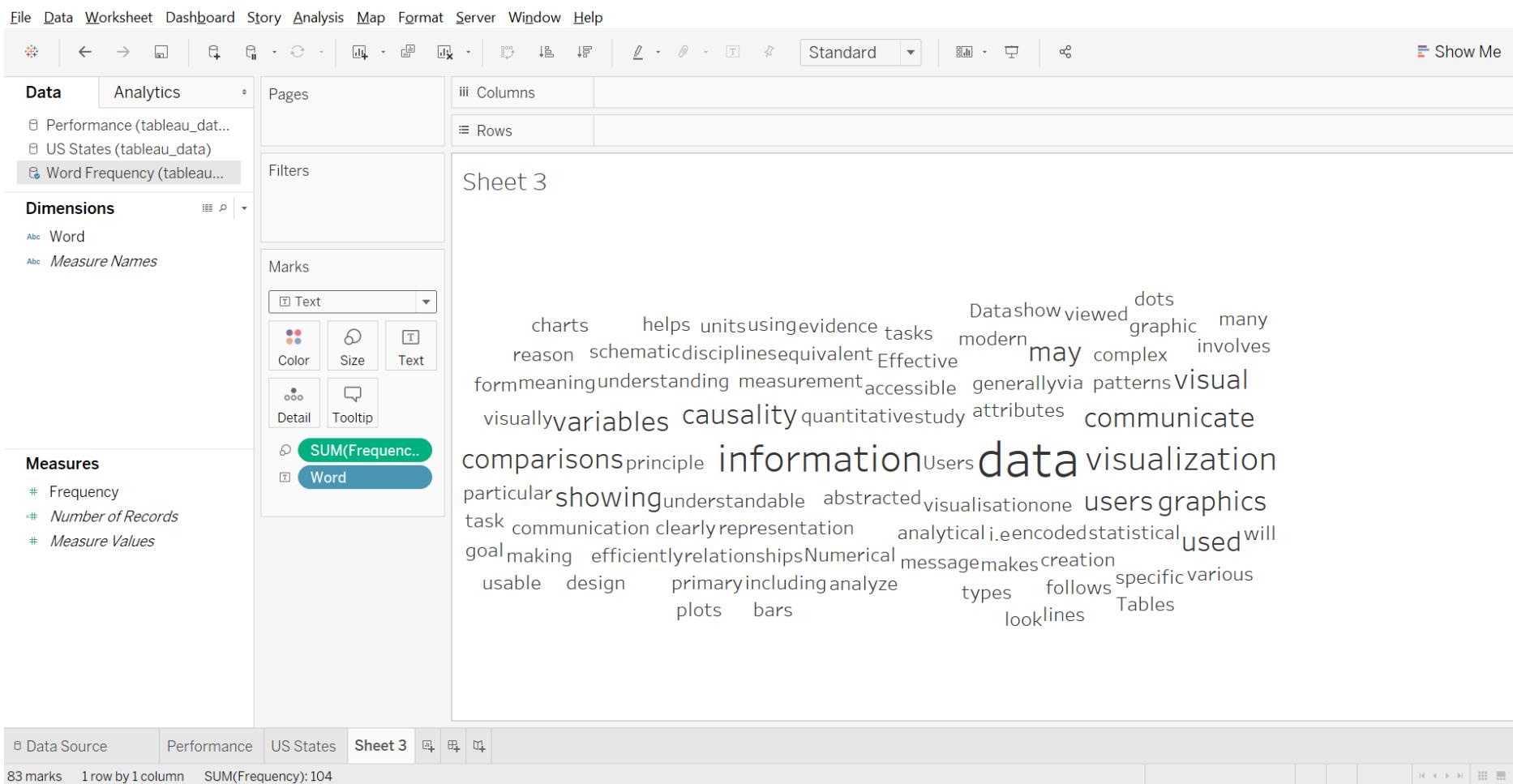
What do we see?



Change Marks to Text

The screenshot shows the Tableau Data Explorer interface. The top navigation bar includes File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, and Help. The left sidebar contains sections for Data (Performance, US States, Word Frequency), Dimensions (Word, Measure Names), and Measures (Frequency, Number of Records, Measure Values). The main workspace is titled "Sheet 3" and displays a word cloud visualization. The words are arranged in a grid-like structure, with larger words representing higher frequency. The words include "data", "graphics", "Data", "bars", "Effective", "may", "encoded", "helps", "i.e.", "many", "plots", "lines", "look", "information", "Tables", "evidence", "meaning", "task", "users", "follows", "form", "message", "modern", "analyze", "goal", "one", "show", "units", "viewed", "via", "will", "causality", "variables", "communicate", "visual", "comparisons", "graphic", "particular", "specific", and "usable". A context menu is open over the word "Text" in the Dimensions pane, listing options like Automatic, Bar, Line, Area, Square, Circle, Shape, and Text.

Word cloud

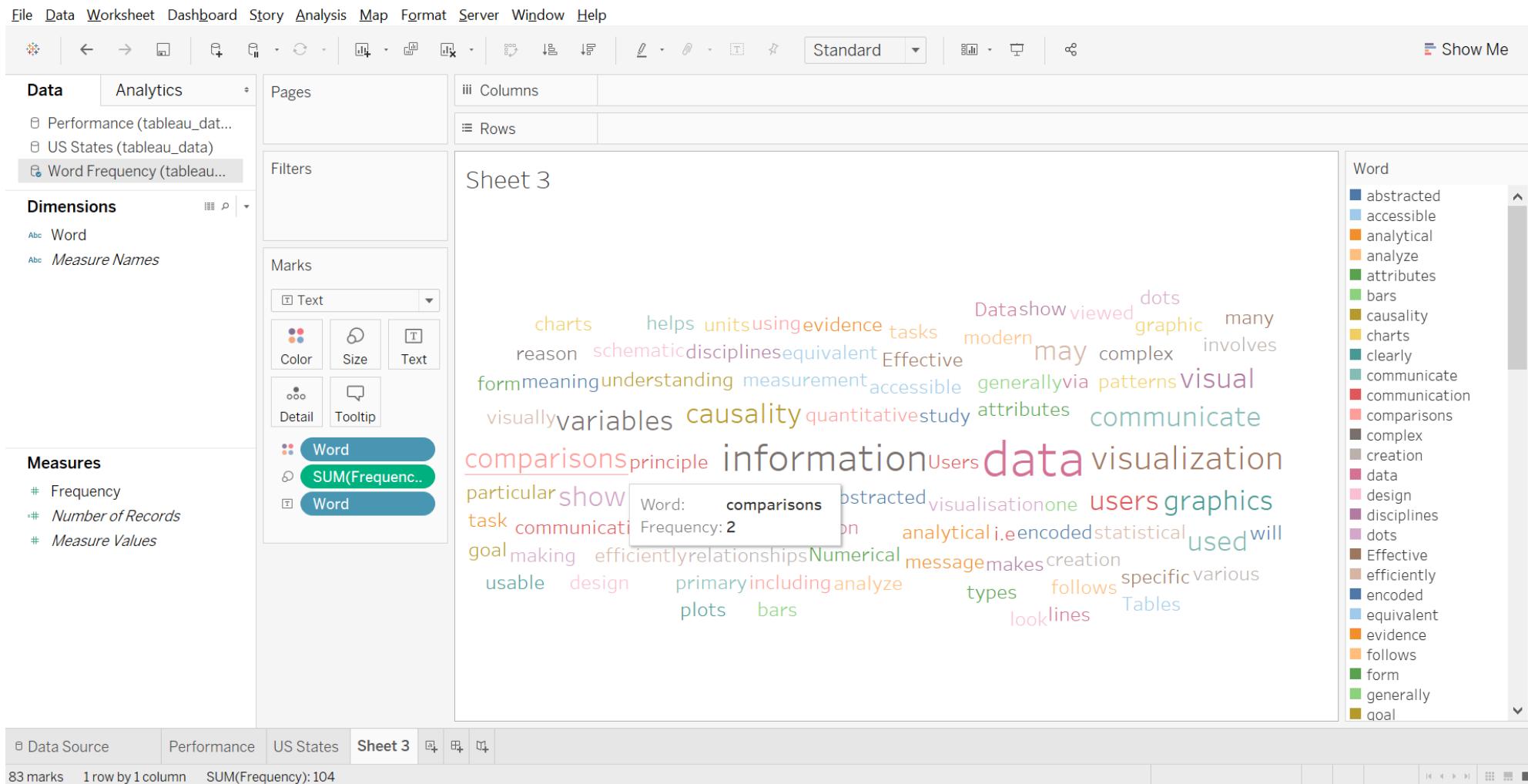


Drag Word (Dimensions) to Color (Marks)

The screenshot shows a Tableau interface with the following components:

- Top Bar:** Tableau - Lab 11, File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, Help.
- Toolbars:** Standard, Show Me.
- Left Sidebar:** Data (selected), Analytics, Pages, Columns, Rows, Filters, Dimensions (Word selected), Measures (Frequency, Number of Records, Measure Values).
- Middle Area:** Marks shelf (Text, Word Color, Size, Text, Detail, Tooltip, SUM(Frequency), Word). The "Word Color" icon is highlighted with a blue oval.
- Sheet 3 View:** A word cloud visualization where words are colored based on their frequency. The most frequent words are large and dark, while less frequent words are smaller and lighter.
- Bottom Bar:** Data Source, Performance, US States, Sheet 3, 83 marks, 1 row by 1 column, SUM(Frequency): 104.

Word cloud with colors

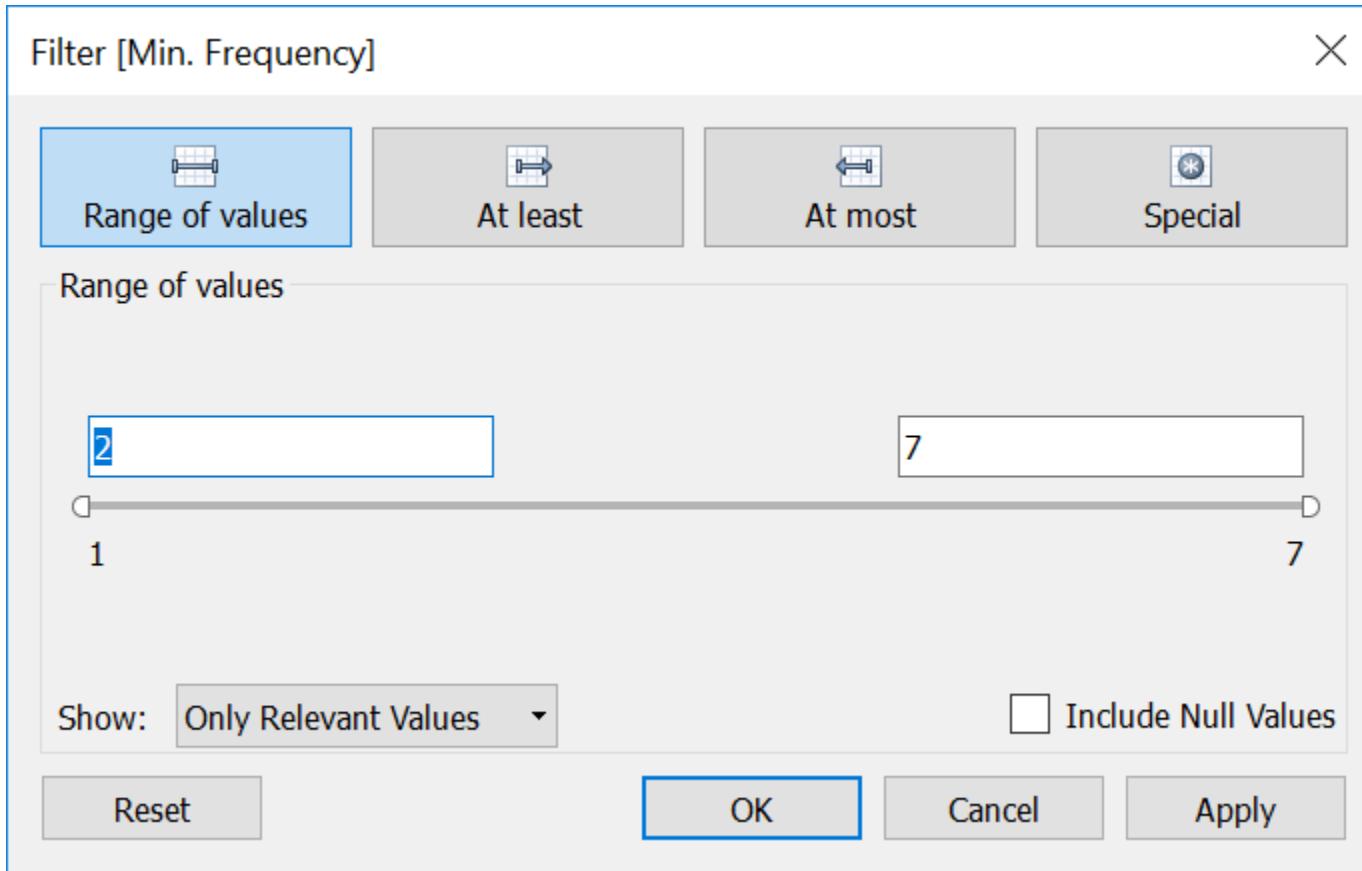


Drag Frequency (Measures) to Filters (Marks)

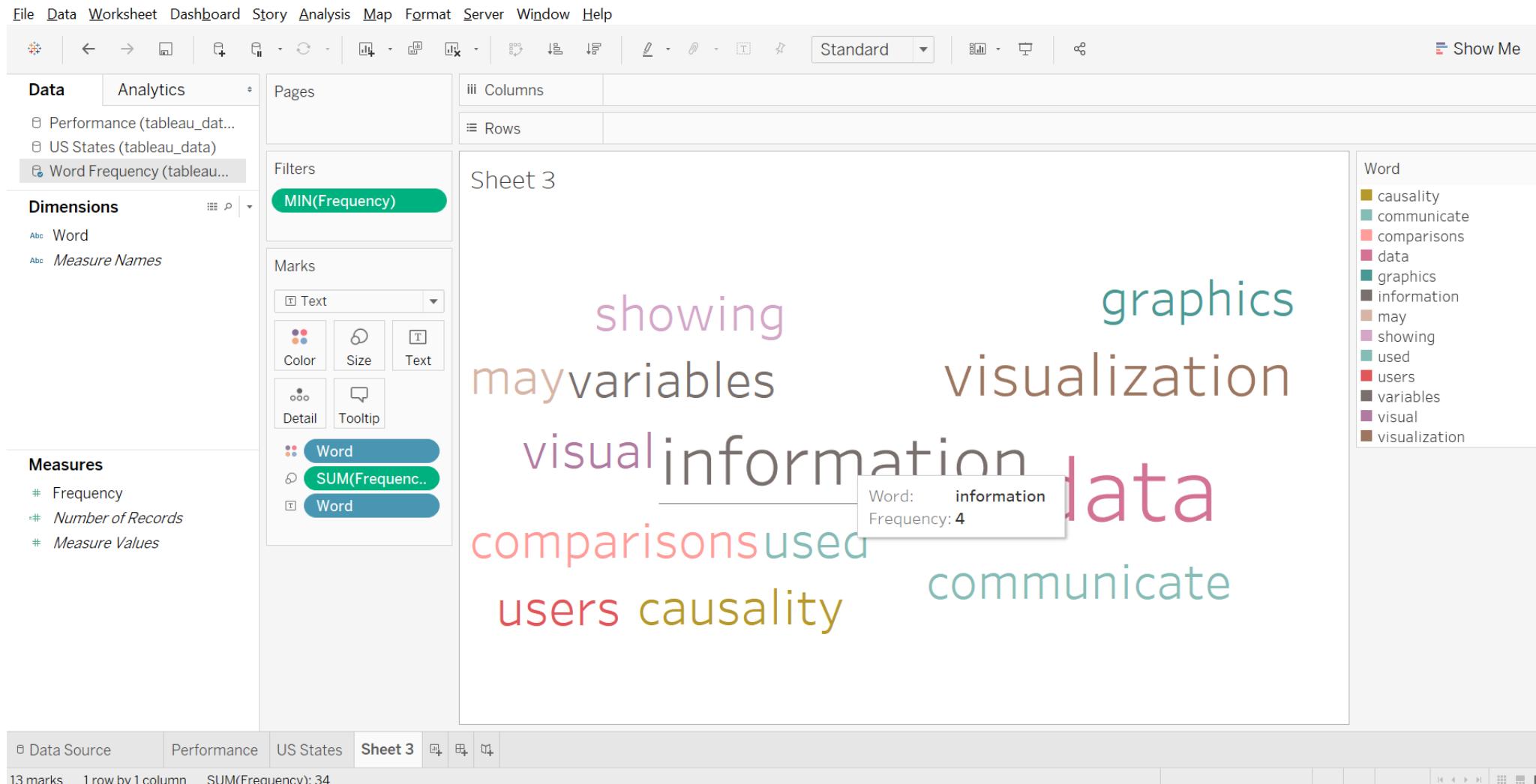
The screenshot shows the Tableau interface with the following components:

- Top Bar:** File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, Help.
- Left Sidebar:** Data (selected), Analytics, Dimensions (Word, Measure Names), Measures (Frequency, Number of Records, Measure Values).
- Middle Area:** Pages, Columns, Rows, Filters (SUM(Frequency)), Marks (Text, Color, Size, Detail, Tooltip), Word Frequency (tableau...).
- Right Area:** A word cloud visualization with a legend titled "Word".
- Dialog Box:** "Filter Field [Frequency]" with the question "How do you want to filter on [Frequency]?" and a list of options:
 - # All values
 - # Sum
 - # Average
 - # Median
 - # Count
 - # Count (Distinct)
 - # Minimum (highlighted with a red box)
 - # Maximum
 - # Standard deviation
 - # Standard deviation (Population)
 - # Variance
 - # Variance (Population)
 - # Attribute
- Bottom Navigation:** Next > and Cancel buttons.

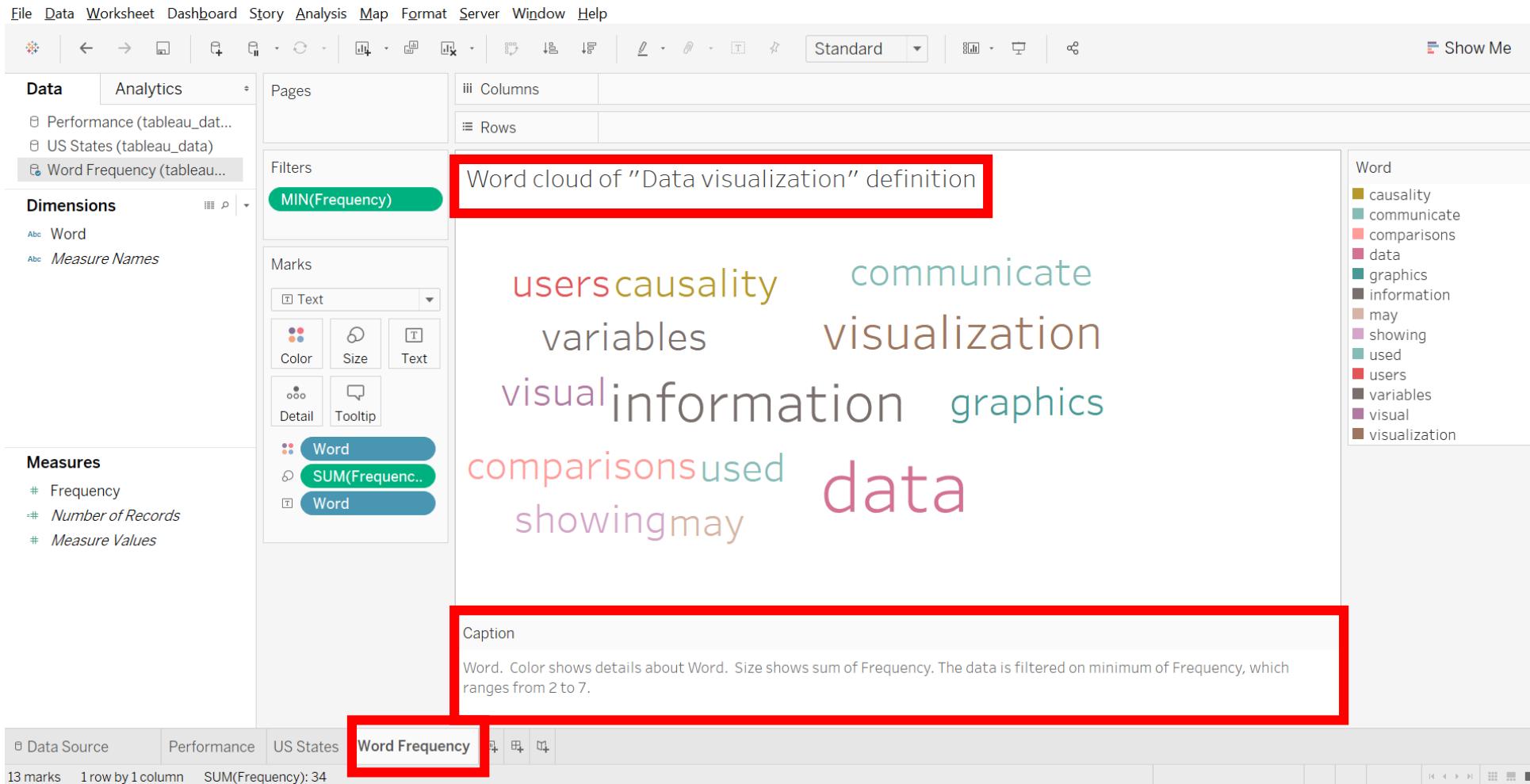
Change the minimum value for Min. Frequency filter



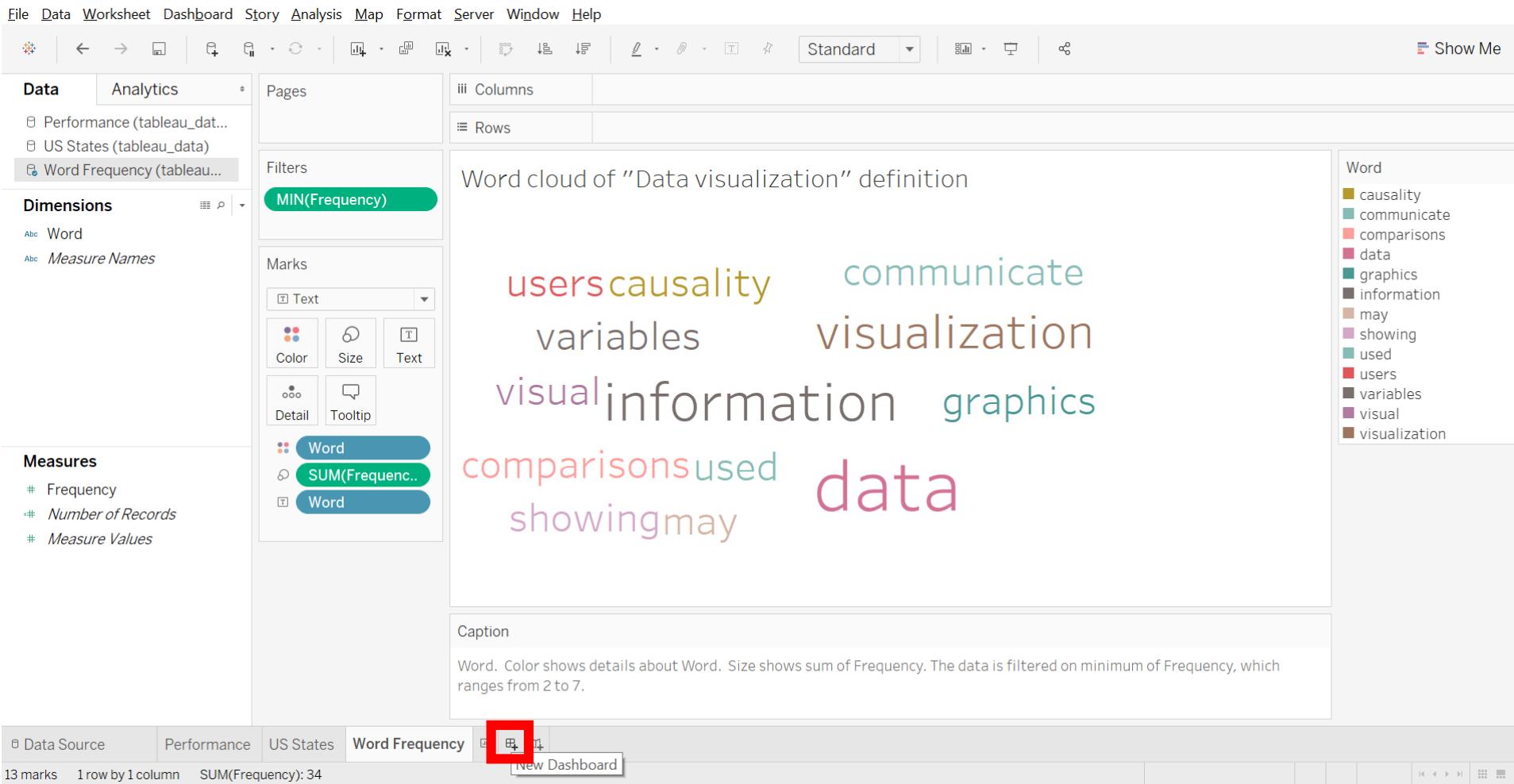
Filtered word cloud with colors



Update chart title and caption and rename worksheet



Create a new Dashboard



Dashboard view

The screenshot shows the Tableau Dashboard view interface. The top navigation bar includes File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, and Help. Below the navigation bar is a toolbar with various icons for zooming, filtering, and data analysis. On the left side, there is a sidebar with the following sections:

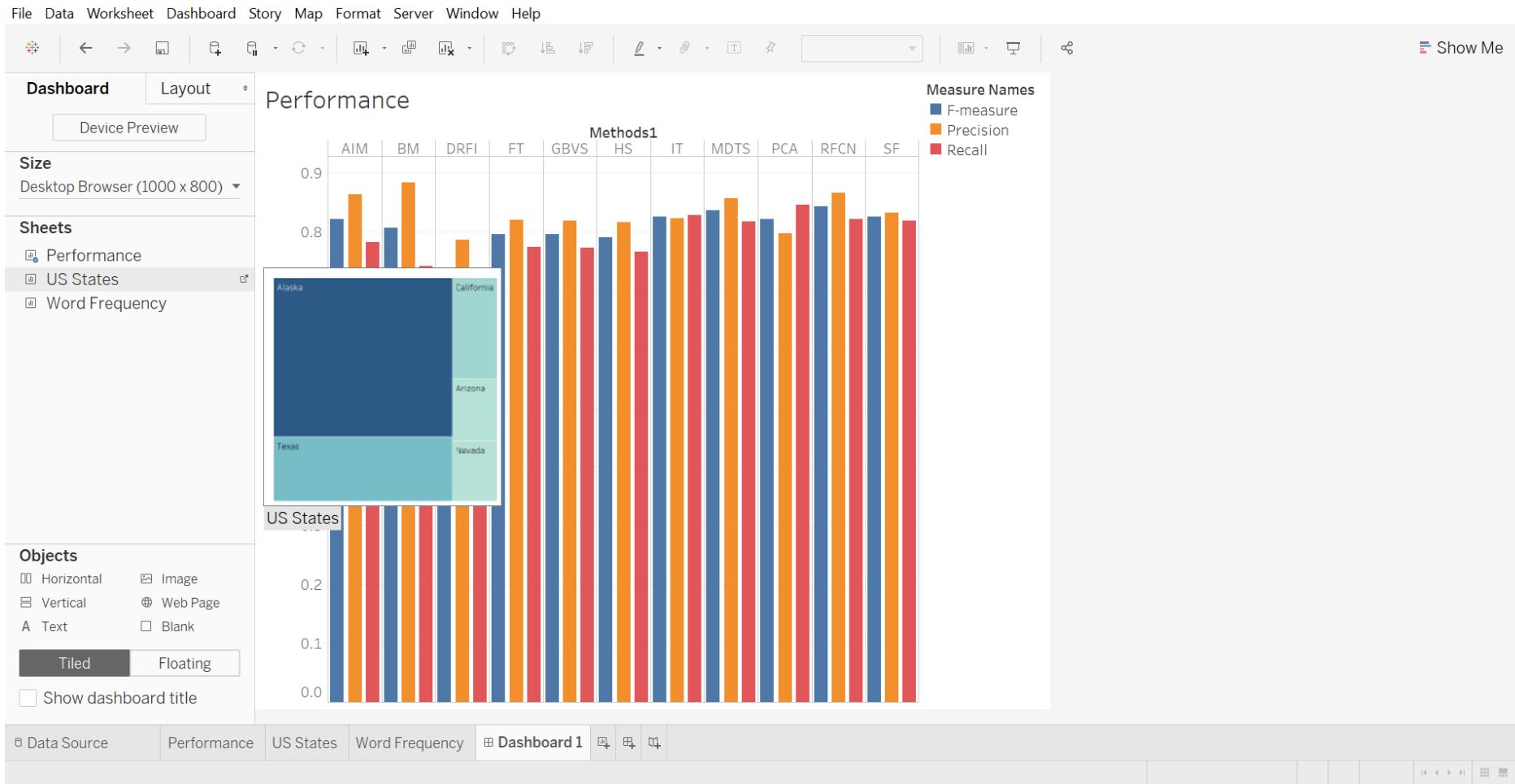
- Dashboard**: Contains a "Device Preview" button.
- Size**: Set to "Desktop Browser (1000 x 800)".
- Sheets**: Lists three sheets: Performance, US States, and Word Frequency.
- Objects**: Lists objects: Horizontal, Vertical, Text, Image, Web Page, Blank, and a Tiled/Floating switch (Tiled is selected).
- Show dashboard title.

In the center workspace, the text "Drop sheets here" is displayed. At the bottom, there is a footer bar with tabs for Data Source, Performance, US States, Word Frequency, and Dashboard 1. The Dashboard 1 tab is active. The bottom right corner of the screen shows the page number 48.

Drag “Performance” Sheet into the view

The screenshot shows the Tableau desktop application interface. The top menu bar includes File, Data, Worksheet, Dashboard, Story, Analysis, Map, Format, Server, Window, and Help. The ribbon bar below the menu has various icons for data sources, worksheets, and dashboard actions. On the left, the sidebar contains sections for Dashboard, Size (set to Desktop Browser (1000 x 800)), Sheets (listing Performance, US States, and Word Frequency), and Objects (with options for Horizontal, Vertical, Text, and Image objects). The main workspace displays a bar chart titled 'Methods1' with categories AIM, BM, DRFI, FT, GBVS, HS, and IT. The Y-axis is labeled 'Value' and ranges from 0.0 to 0.9. The chart shows varying values for each method. Below the chart, a gray box contains the text 'Drop sheets here'. At the bottom of the screen, there is a navigation bar with icons for back, forward, search, and other dashboard controls. The status bar at the very bottom provides information about the current view: 33 marks, 1 row by 33 columns, and SUM of Measure Values: 26.6626.

Similarly, drag “US States” and “Word Frequency” worksheets into the view



Dashboard with multiple worksheets

Tableau - Lab 11

File Data Worksheet Dashboard Story Map Format Server Window Help

Dashboard Layout Device Preview

Size Desktop Browser (1000 x 800)

Sheets Performance US States Word Frequency

Objects Horizontal Image Vertical Web Page Text Blank Tiled Floating

Show dashboard title

Performance

Methods1

Value

	AIM	BM	DRFI	FT	GBVS	HS	IT	MDTS	PCA	RFCN	SF
F-measure	0.82	0.81	0.72	0.81	0.81	0.81	0.82	0.83	0.81	0.83	0.82
Precision	0.85	0.88	0.78	0.84	0.85	0.84	0.85	0.87	0.83	0.86	0.85
Recall	0.78	0.75	0.65	0.78	0.77	0.76	0.81	0.81	0.81	0.81	0.81

Measure Names

- F-measure
- Precision
- Recall

Size

97,814	663K
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Word

- causality
- communicate
- comparisons
- data
- graphics
- information
- may
- showing
- used
- users
- variables
- visual
- visualization

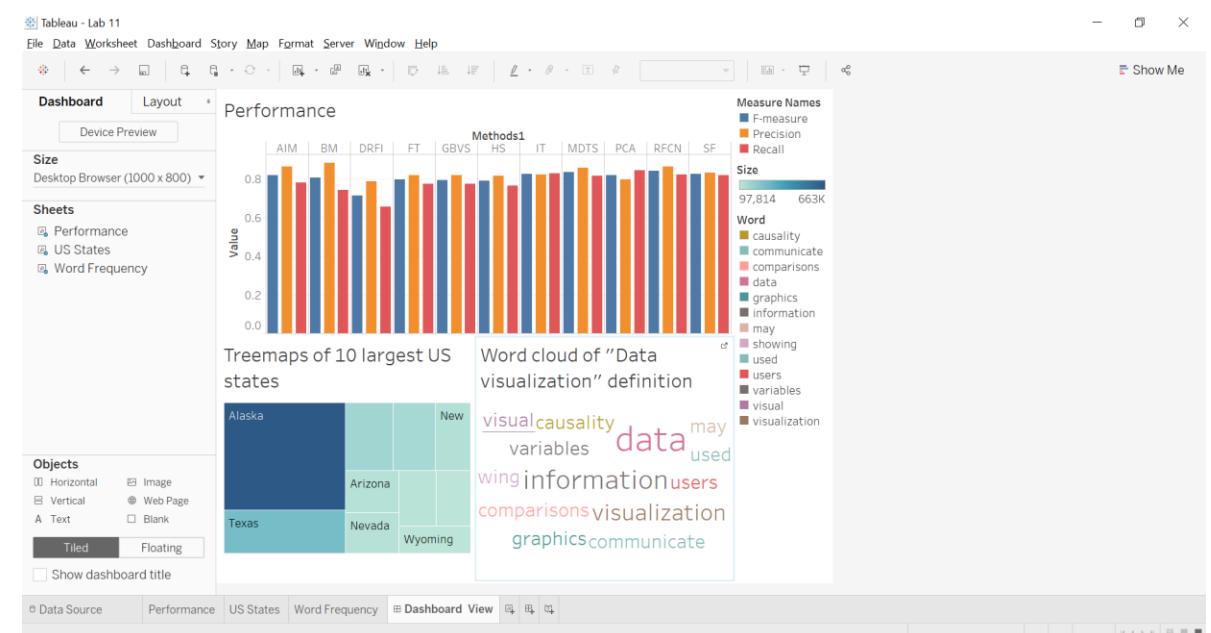
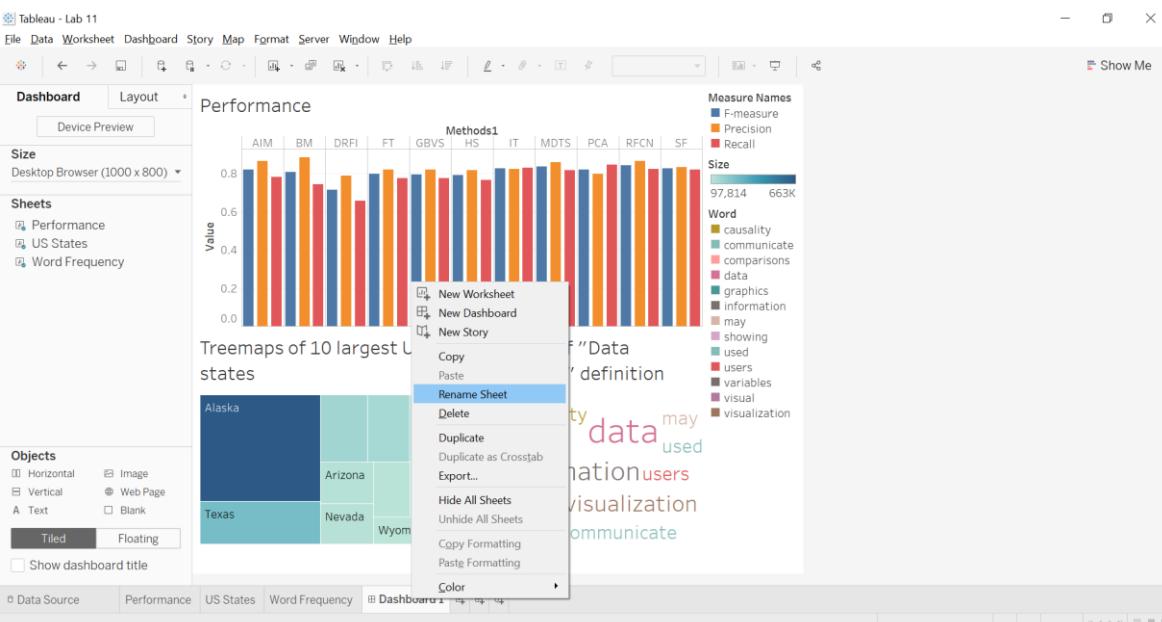
Treemaps of 10 largest US states

Word cloud of "Data visualization" definition

Dashboard 1

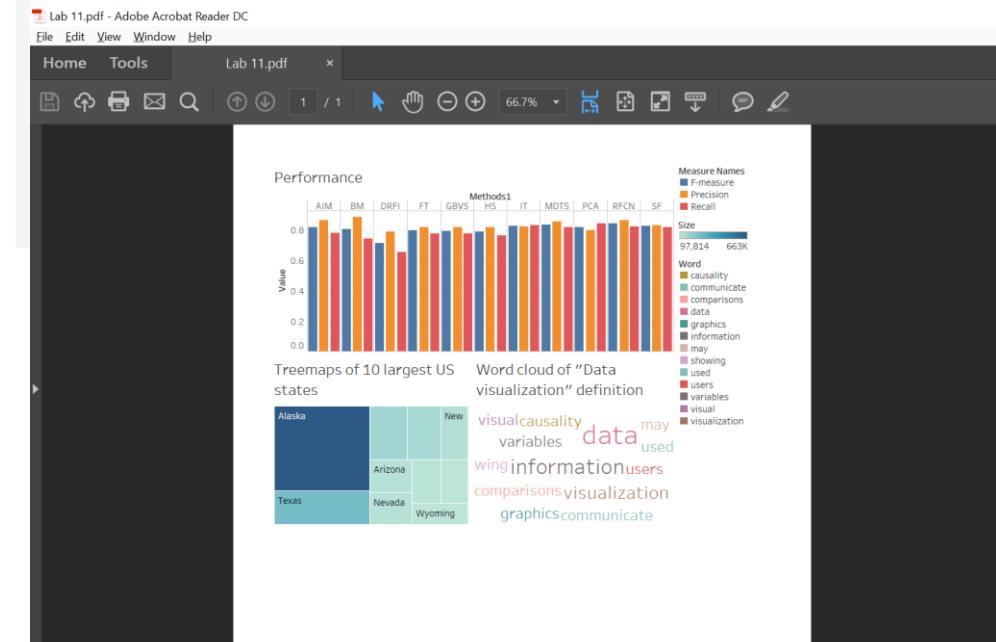
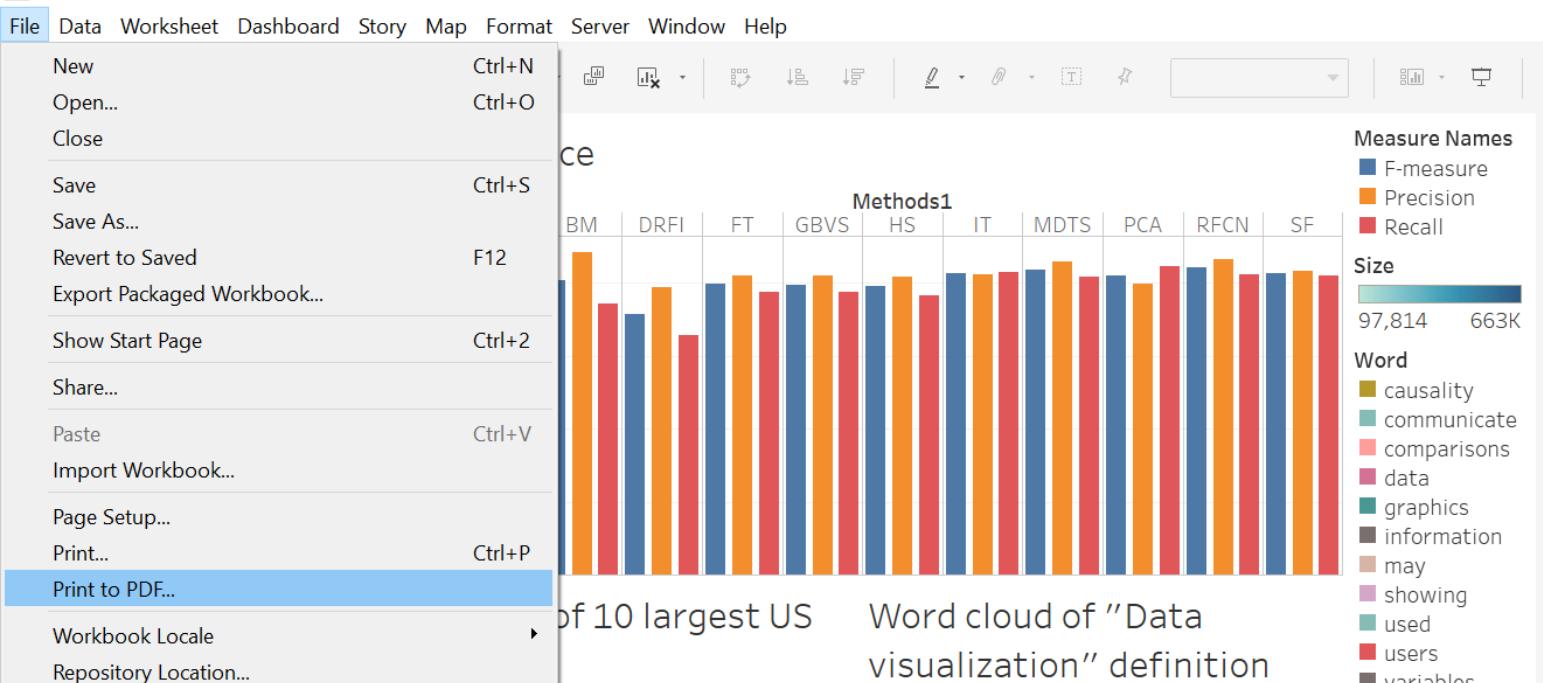
51

Rename the dashboard



Print Dashboard to pdf

Tableau - Lab 11



Summary

- Create visualization charts with Tableau
- Create the new field
- Update title/caption
- Create dashboard with Tableau
- Publish dashboard into pdf