

Communicating with Data – More Advanced Tableau

Dr. Ab Mosca (they/them)

Plan for Today

- Working with multiple datasets
- Customizing the look of a visualization
- Working with filters
- Conditional backgrounds
- Details on demand (external resources)

Want to follow
along?

- Everything used in this demo is available in superhero-demo.zip under in-class on the course website

Running example: superheroes



First dataset: superdata.csv

Tableau - Book1

Connections Add
superdata Text File

Files
superdata.csv superhero-wikis.csv

New Union

superdata

superdata.csv

Sort fields Data source order ▾

Show aliases Show hidden fields 17 rows

Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	Universe
Aquaman	good		63	80	50	80	65	80 DC
Batman	good		100	18	27	42	37	100 DC
Booster Gold	good		56	85	53	50	72	40 DC
Captain America	good		63	19	35	56	46	100 Marvel
Captain Marvel	good		100	100	67	95	62	56 DC
Deadpool	neutral		50	15	30	100	100	100 Marvel
Flash	good		63	10	100	50	57	32 DC
Iron Fist	good		75	23	35	42	43	100 Marvel
Iron Man	good		100	85	58	85	100	64 Marvel
Loki	bad		88	57	47	85	85	56 Marvel
Red Tornado	good		75	38	67	60	92	40 DC
Robin	good		88	11	27	28	32	85 DC
Spider-Man	good		88	55	60	74	58	85 Marvel
Superman	good		100	100	100	100	94	85 DC

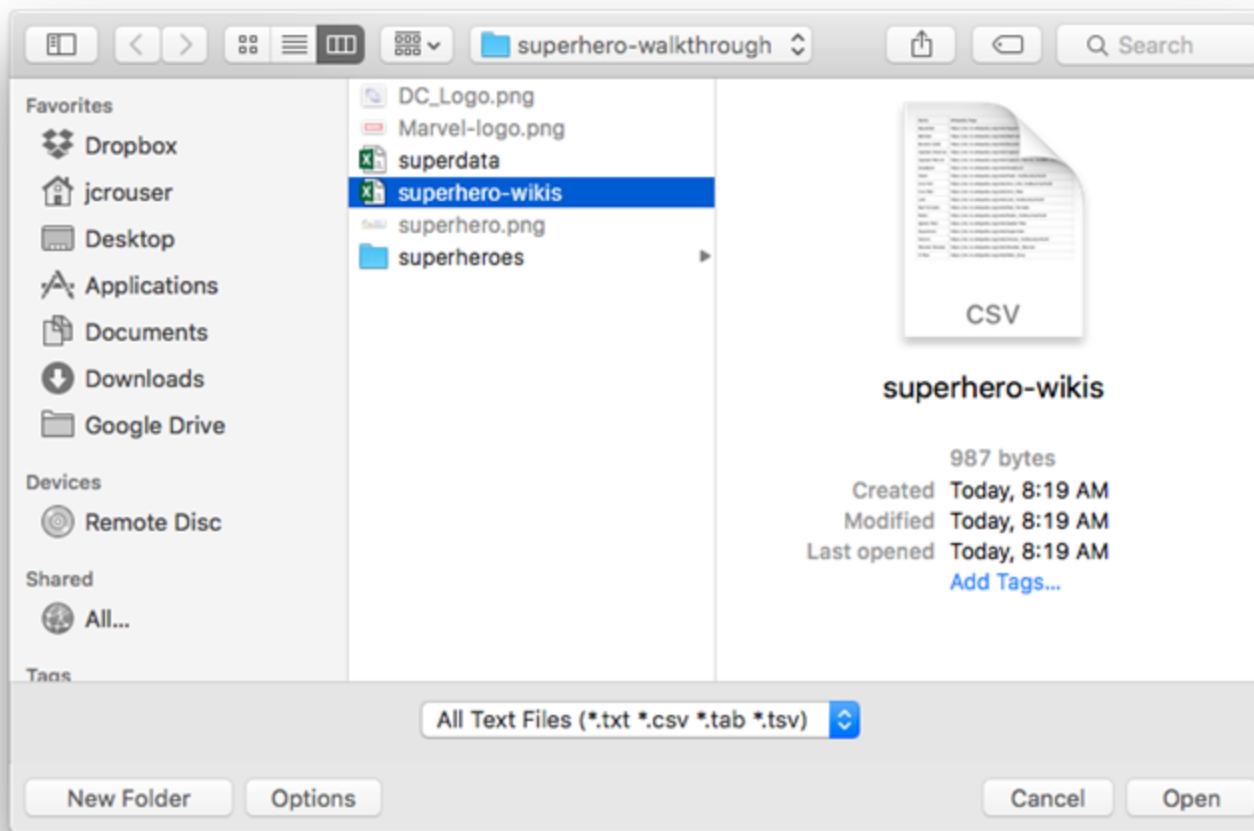
Data Source Sheet 1

Adding more datasets

The screenshot shows the Tableau Data Source dialog with the 'Add' button highlighted. A dropdown menu is open under 'To a File' with 'Text file' selected. The main pane displays a table of superhero statistics from 'superdata.csv'. The table has columns: Name, Good/Bad, Power, Combat, DC/Marvel, and Universe.

Name	Good/Bad	Power	Combat	DC/Marvel	Universe
Iron Fist	good	75	23	35	42
Iron Man	good	100	85	58	85
Loki	bad	88	57	47	85
Red Tornado	good	75	38	67	60
Robin	good	88	11	27	28
Spider-Man	good	88	55	60	74
Superman	good	100	100	100	100

Adding more datasets



Second dataset: superhero-wikis.csv

Tableau - Book1

Connections

- superdata
- superhero-wikis

Files

- superdata.csv
- superhero-wikis.csv
- New Union

superhero-wikis.csv (Multiple Connections)

Connection: Live | Extract

Filters: 0 | Add

Sort fields: Data source order

Show aliases | Show hidden fields | 17 rows

Name	Wikipedia Page
Aquaman	https://en.m.wikipedia.org/wiki/Aquaman
Batman	https://en.m.wikipedia.org/wiki/Batman
Booster Gold	https://en.m.wikipedia.org/wiki/Booster_Gold
Captain America	https://en.m.wikipedia.org/wiki/Captain_America
Captain Marvel	https://en.m.wikipedia.org/wiki/Captain_Marvel,_%28DC_Comics%29
Deadpool	https://en.m.wikipedia.org/wiki/Deadpool
Flash	https://en.m.wikipedia.org/wiki/Flash_%28comics%29
Iron Fist	https://en.m.wikipedia.org/wiki/Iron_Fist,_%28comics%29
Iron Man	https://en.m.wikipedia.org/wiki/Iron_Man
Loki	https://en.m.wikipedia.org/wiki/Loki,_%28comics%29

Joining the two

Tableau - superhero

superdata.csv+ (Multiple Connections)

Connection Live Extract

Filters 0 | Add

superdata.csv

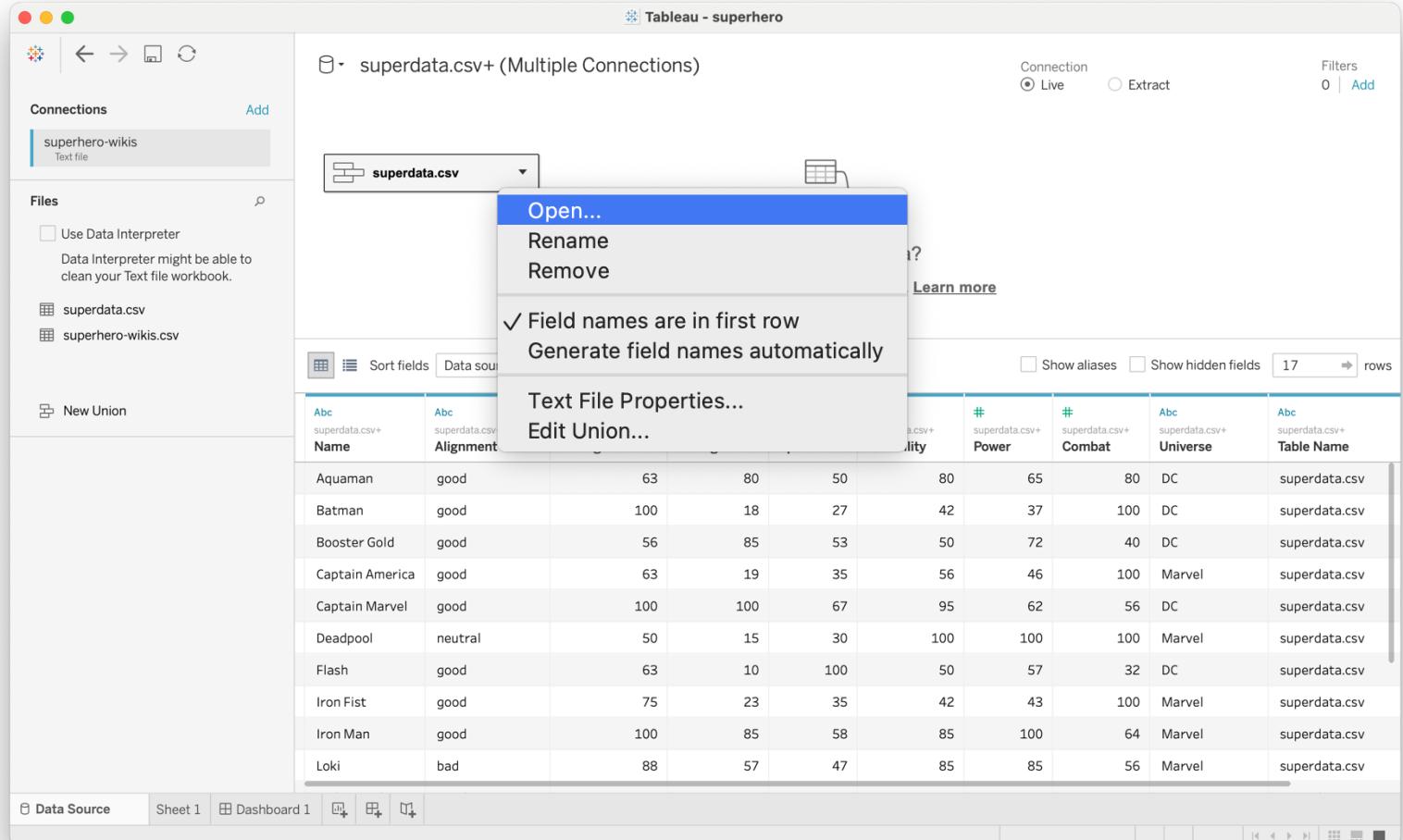
Open... Rename Remove

✓ Field names are in first row Generate field names automatically

Text File Properties... Edit Union...

Name	Alignment	Power	#	Combat	#	Universe	Table Name
Aquaman	good	63	80	50	80	65	80 DC superdata.csv
Batman	good	100	18	27	42	37	100 DC superdata.csv
Booster Gold	good	56	85	53	50	72	40 DC superdata.csv
Captain America	good	63	19	35	56	46	100 Marvel superdata.csv
Captain Marvel	good	100	100	67	95	62	56 DC superdata.csv
Deadpool	neutral	50	15	30	100	100	100 Marvel superdata.csv
Flash	good	63	10	100	50	57	32 DC superdata.csv
Iron Fist	good	75	23	35	42	43	100 Marvel superdata.csv
Iron Man	good	100	85	58	85	100	64 Marvel superdata.csv
Loki	bad	88	57	47	85	85	56 Marvel superdata.csv

Data Source Sheet 1 Dashboard 1



Joining the two

Tableau - superhero

superdata.csv+ (Multiple Connections)

superdata.csv is made of 2 tables. ⚡

superdata.csv+ → superhero-wikis.csv

Join

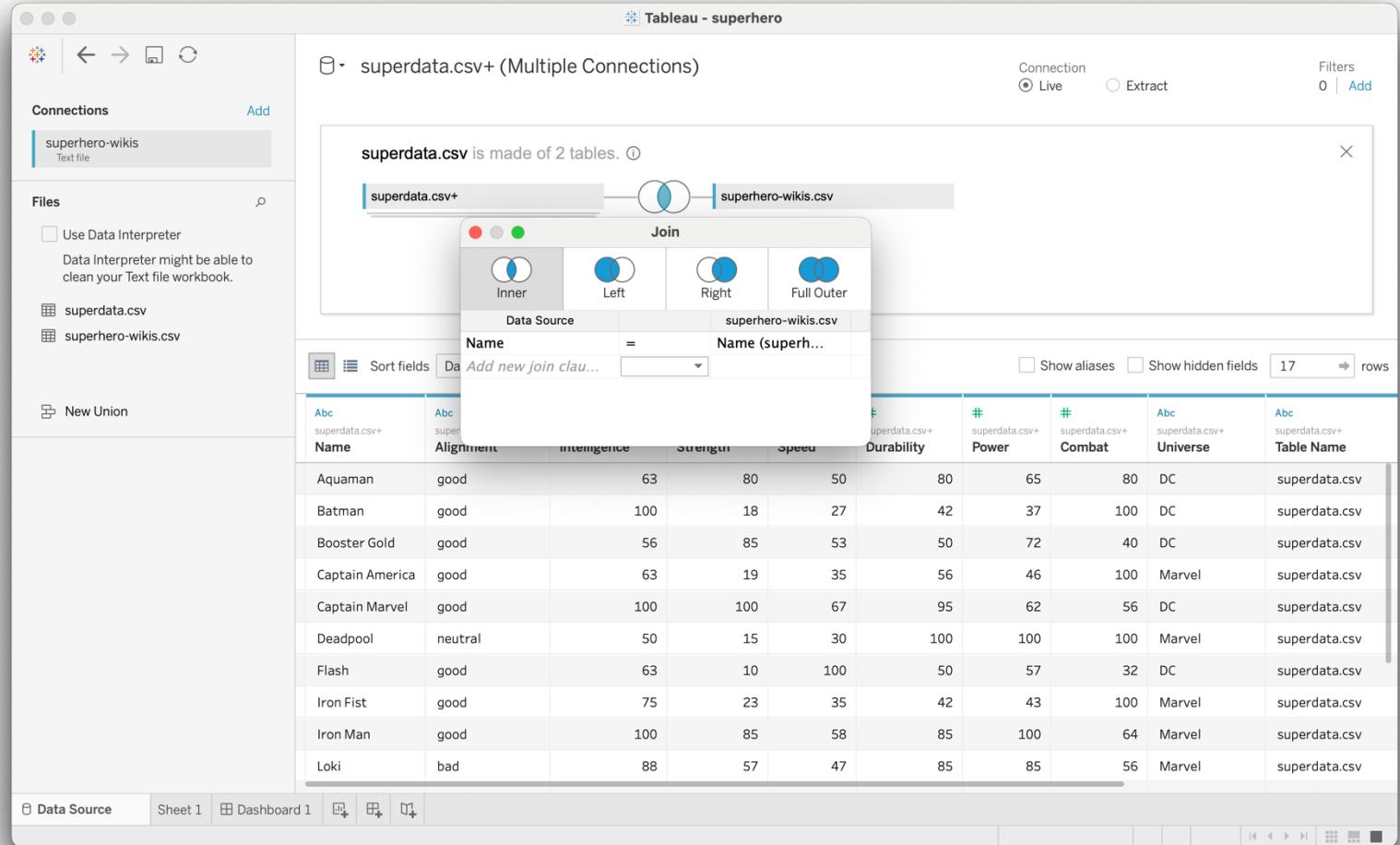
Inner Left Right Full Outer

Name = Name (superher...)

Show aliases Show hidden fields 17 rows

Name	Alignment	Intelligence	Strength	Speed	Durability	Power	Combat	Universe	Table Name	
Aquaman	good		63	80	50	80	65	80	DC	superdata.csv
Batman	good		100	18	27	42	37	100	DC	superdata.csv
Booster Gold	good		56	85	53	50	72	40	DC	superdata.csv
Captain America	good		63	19	35	56	46	100	Marvel	superdata.csv
Captain Marvel	good		100	100	67	95	62	56	DC	superdata.csv
Deadpool	neutral		50	15	30	100	100	100	Marvel	superdata.csv
Flash	good		63	10	100	50	57	32	DC	superdata.csv
Iron Fist	good		75	23	35	42	43	100	Marvel	superdata.csv
Iron Man	good		100	85	58	85	100	64	Marvel	superdata.csv
Loki	bad		88	57	47	85	85	56	Marvel	superdata.csv

Data Source Sheet 1 Dashboard 1



Joining the two

Tableau - superhero

superhero-wikis Text file

superdata.csv

superhero-wikis.csv

New Union

Strength Speed Durability Power Combat Universe Table Name

#	#	#	#	#	Abc	Abc	
superdata.csv+	Table Name						
63	80	50	80	65	80	DC	superdata.csv
100	18	27	42	37	100	DC	superdata.csv
56	85	53	50	72	40	DC	superdata.csv
63	19	35	56	46	100	Marvel	superdata.csv
100	100	67	95	62	56	DC	superdata.csv
50	15	30	100	100	100	Marvel	superdata.csv
63	10	100	50	57	32	DC	superdata.csv
75	23	35	42	43	100	Marvel	superdata.csv
100	85	58	85	100	64	Marvel	superdata.csv
88	57	47	85	85	56	Marvel	superdata.csv

Need more data?
Drag tables here to relate them. [Learn more](#)

Show aliases Show hidden fields 17 rows

Abc
superhero-wikis.csv
Name (superhero-...
Wikipedia Page

Aquaman https://en.m.wikipedia.org/w/index.php?title=Aquaman&oldid=910000000
Batman https://en.m.wikipedia.org/w/index.php?title=Batman&oldid=910000000
Booster Gold https://en.m.wikipedia.org/w/index.php?title=Booster_Gold&oldid=910000000
Captain America https://en.m.wikipedia.org/w/index.php?title=Captain_America_(Marvel)&oldid=910000000
Captain Marvel https://en.m.wikipedia.org/w/index.php?title=Captain_Marvel_(Marvel_Comics)&oldid=910000000
Deadpool https://en.m.wikipedia.org/w/index.php?title=Deadpool_(Marvel)&oldid=910000000
Flash https://en.m.wikipedia.org/w/index.php?title=Flash_(Marvel)&oldid=910000000
Iron Fist https://en.m.wikipedia.org/w/index.php?title=Iron_Fist_(Marvel)&oldid=910000000
Iron Man https://en.m.wikipedia.org/w/index.php?title=Iron_Man_(Marvel)&oldid=910000000
Loki https://en.m.wikipedia.org/w/index.php?title=Loki_(Marvel)&oldid=910000000

Data Source Sheet 1 Dashboard 1

The screenshot shows the Tableau desktop interface with a project titled 'superhero'. On the left, the 'Connections' pane lists 'superhero-wikis' (Text file) and 'superdata.csv'. Below it, the 'Files' pane shows 'superdata.csv' and 'superhero-wikis.csv'. A 'New Union' section is visible. The main workspace displays a data grid with columns: Strength, Speed, Durability, Power, Combat, Universe, and Table Name. The 'Table Name' column lists 'superdata.csv' for all rows. To the right of the grid, a red box highlights a list of superhero names with their corresponding Wikipedia URLs. The top right corner of the interface shows connection status ('Live') and filter settings.

Hiding unnecessary data

Tableau - superhero

superhero-wikis Text file

superdata.csv

superhero-wikis.csv

New Union

Strength Speed Durability Power Combat Universe Table Name Name Wikipedia Page

#	#	#	#	#	Abc	Abc	Abc	Abc
superdata.csv+	superhero-wikis.csv	superhero-wikis.csv						
Strength	Speed	Durability	Power	Combat	Universe	Table Name	Name (superhero-...)	Wikipedia Page
63	80	50	80	65	80	DC	Aquaman	Rename
100	18	27	42	37	100	DC	Batman	Copy Values
56	85	53	50	72	40	DC	Booster Go	Hide
63	19	35	56	46	100	Marvel	Captain Am	
100	100	67	95	62	56	DC	Captain Ma	
50	15	30	100	100	100	Marvel	Deadpool	
63	10	100	50	57	32	DC	Flash	
75	23	35	42	43	100	Marvel	Iron Fist	Pivot (select multiple fields)
100	85	58	85	100	64	Marvel	Iron Man	Describe...
88	57	47	85	85	56	Marvel	Loki	https://en.m.wikipedia...

Need more data?
Drag tables here to relate them. [Learn more](#)

Show aliases Show hidden fields 17 rows

Connections Add
superhero-wikis Text file

superdata.csv

superhero-wikis.csv

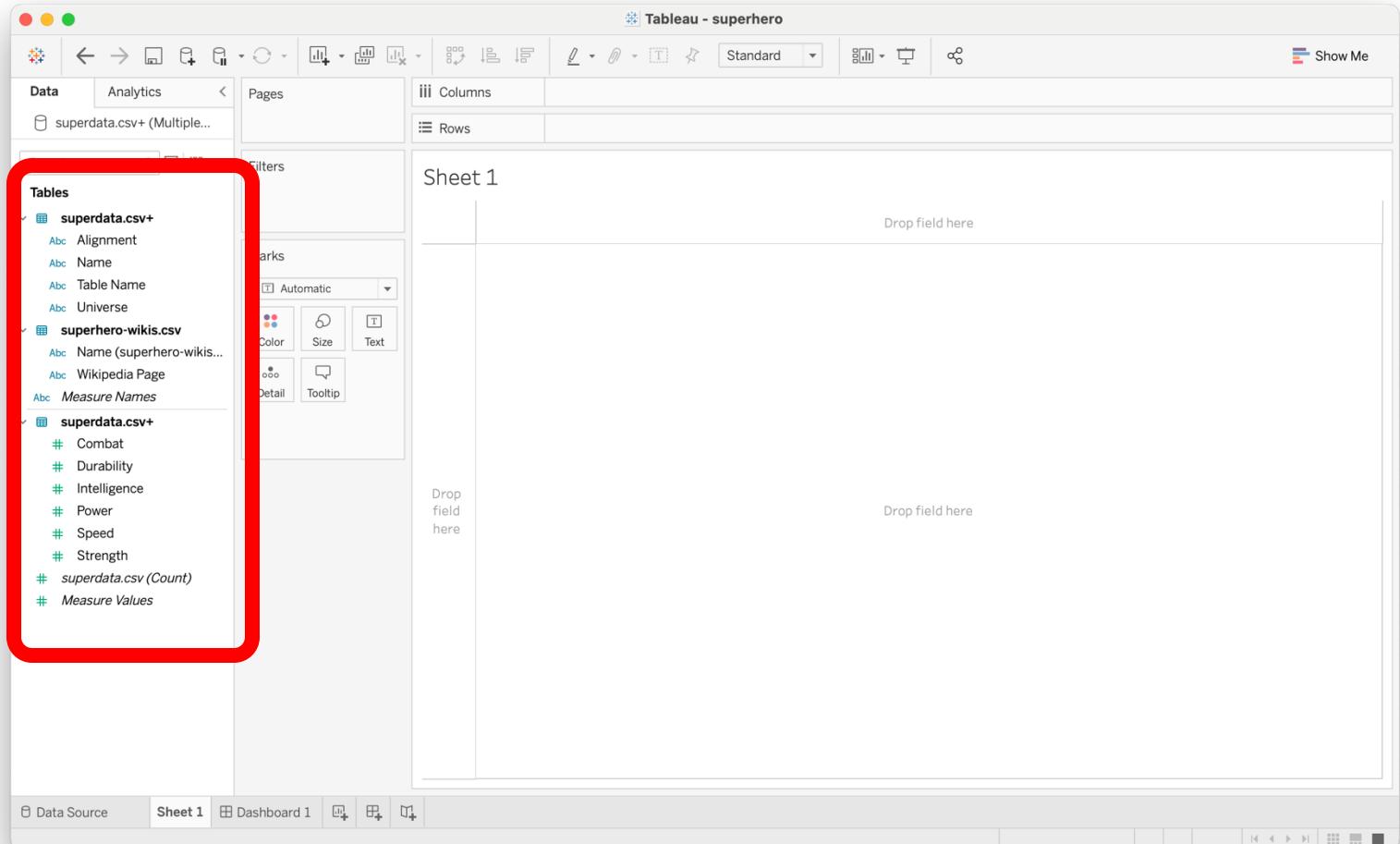
New Union

Sort fields Data source order

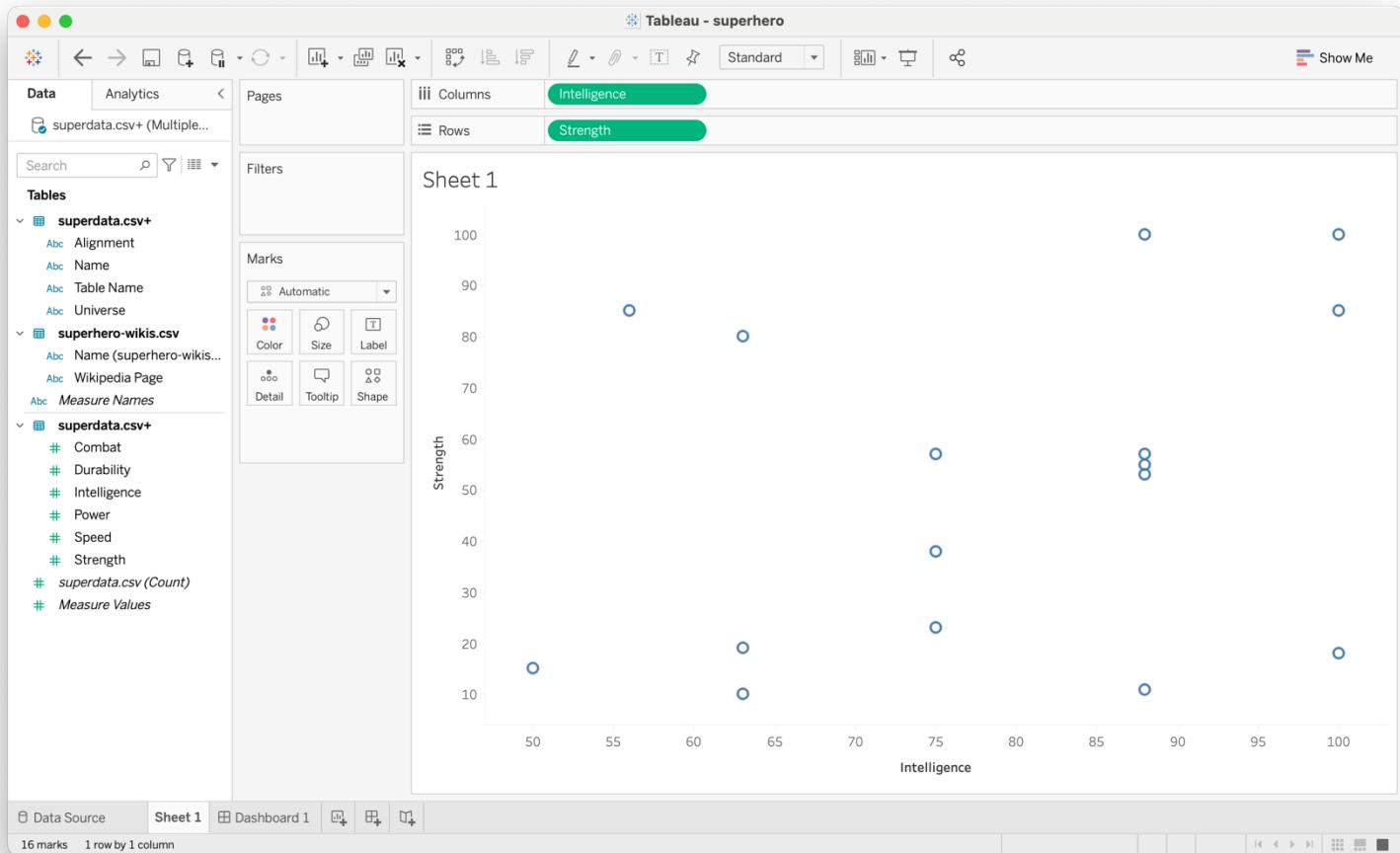
Connection Live Extract Filters 0 | Add

Data Source Sheet 1 Dashboard 1

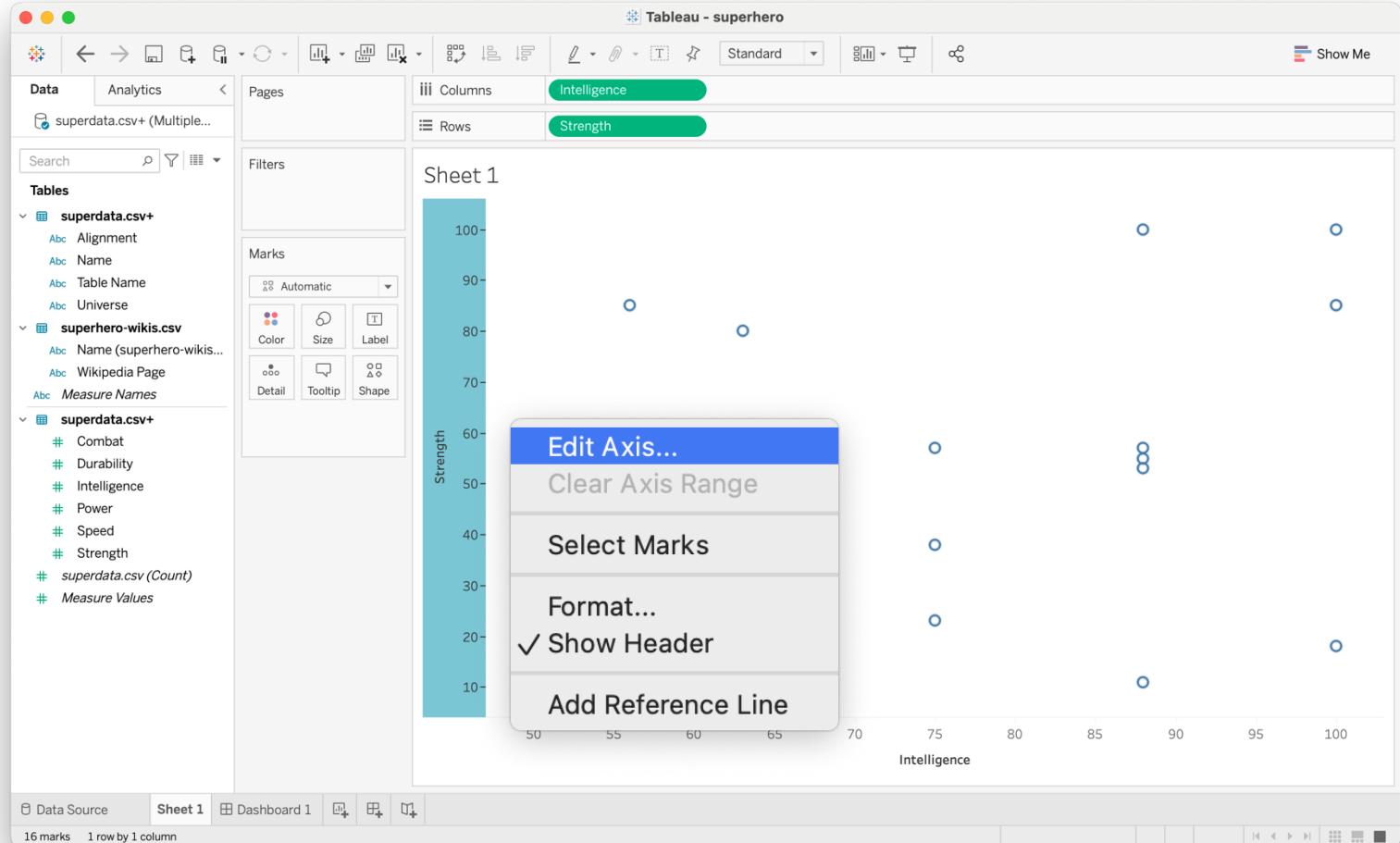
Over to Sheet1



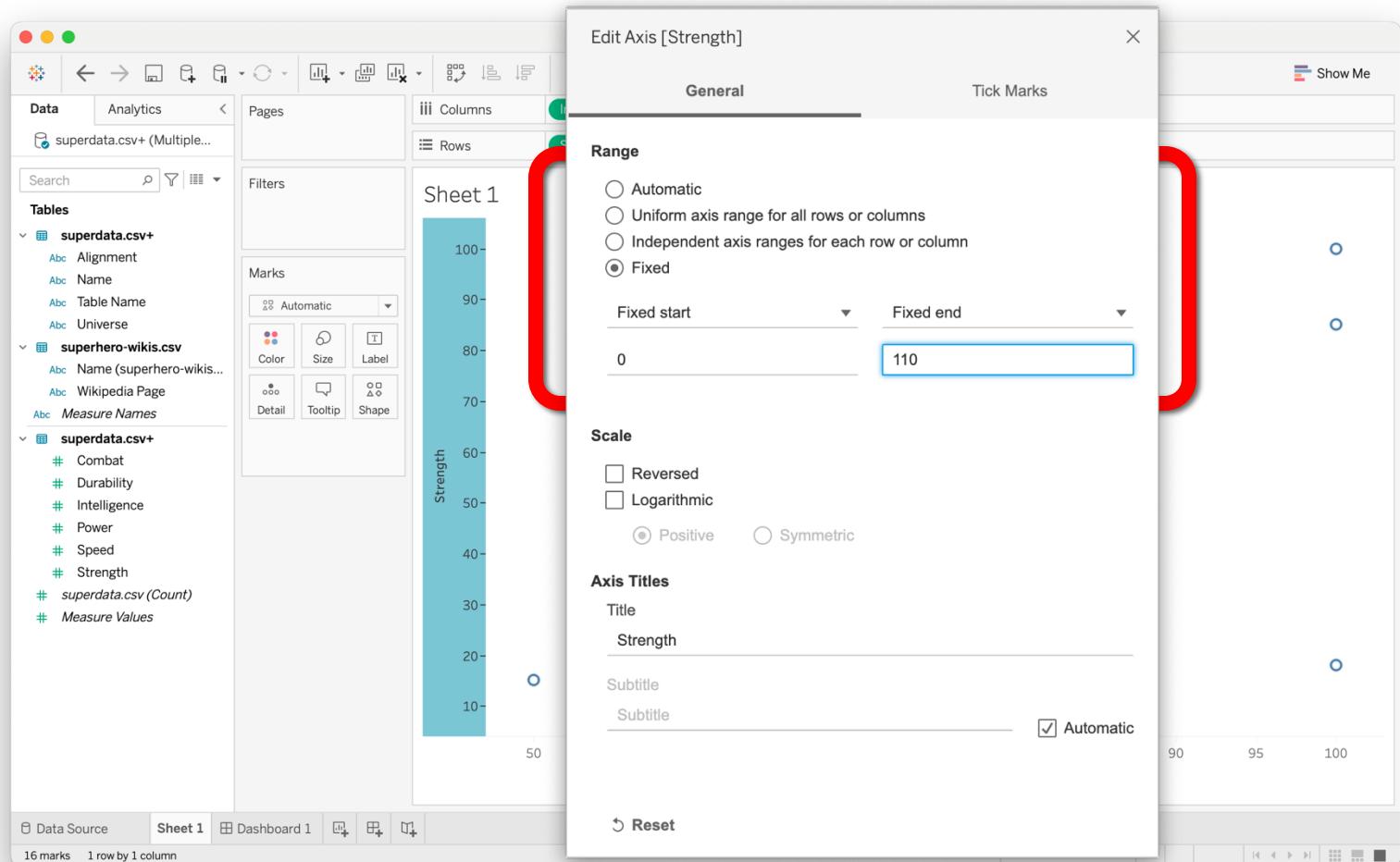
Simple scatterplot



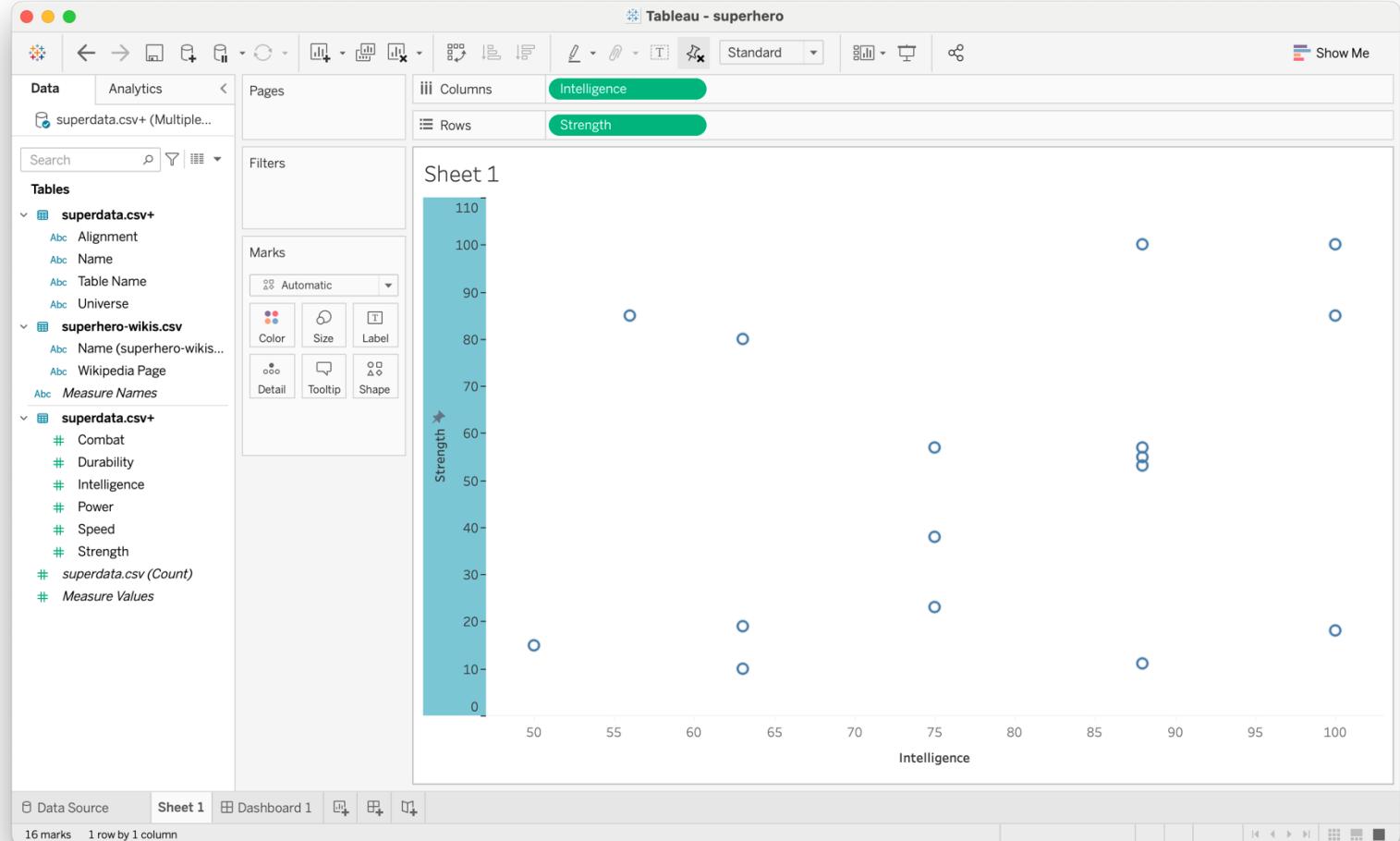
Editing axis values



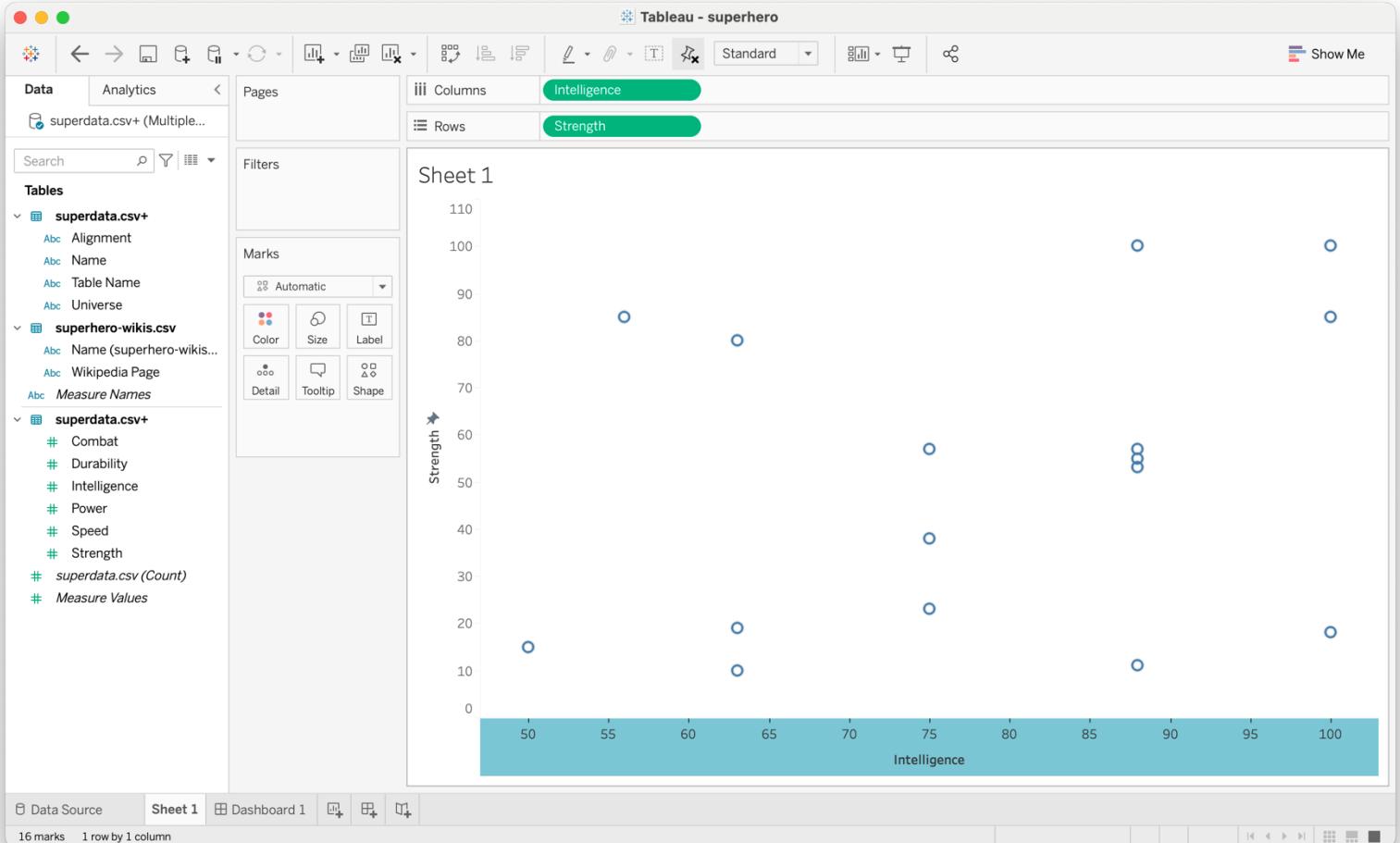
Editing axis values



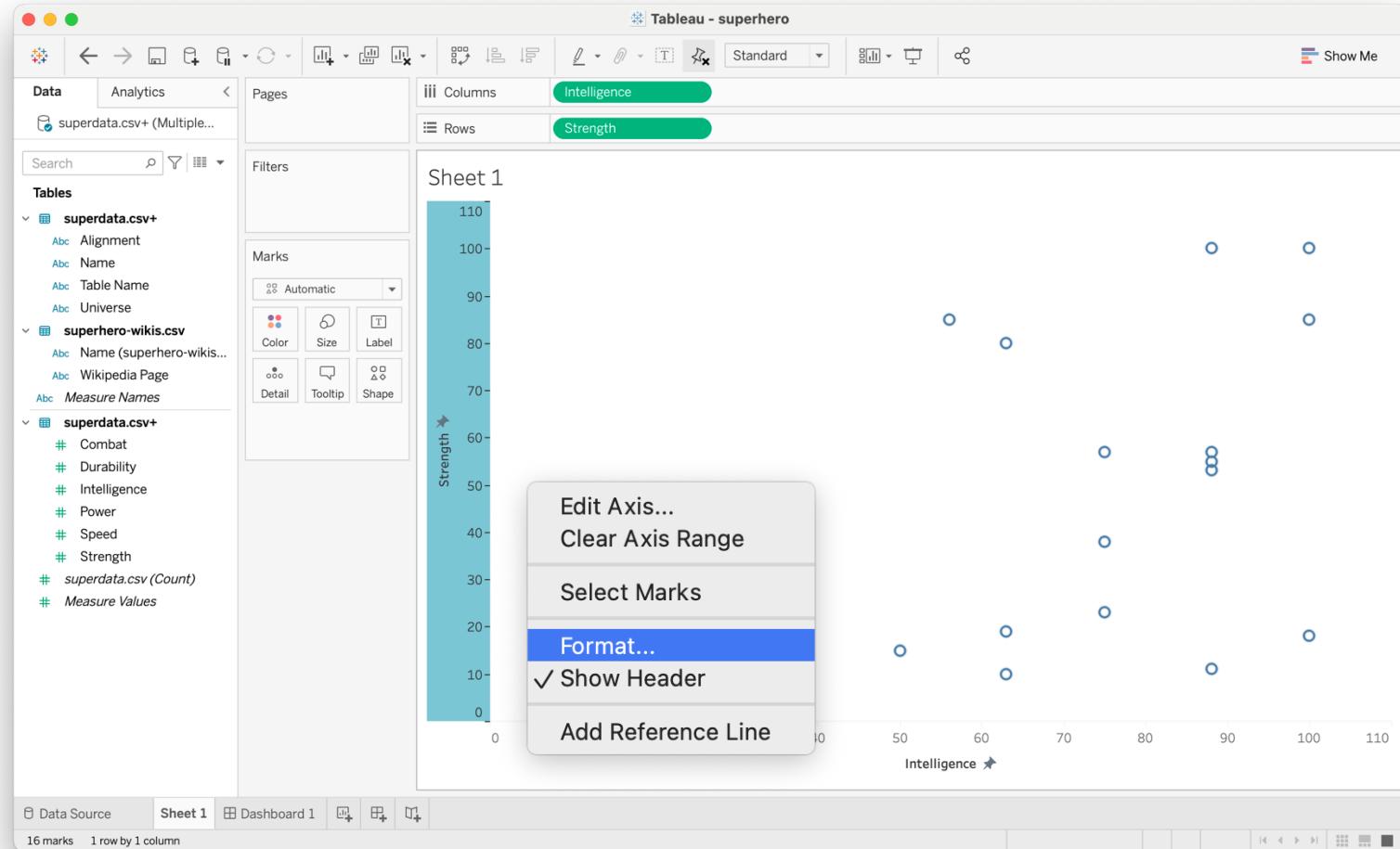
Editing axis values



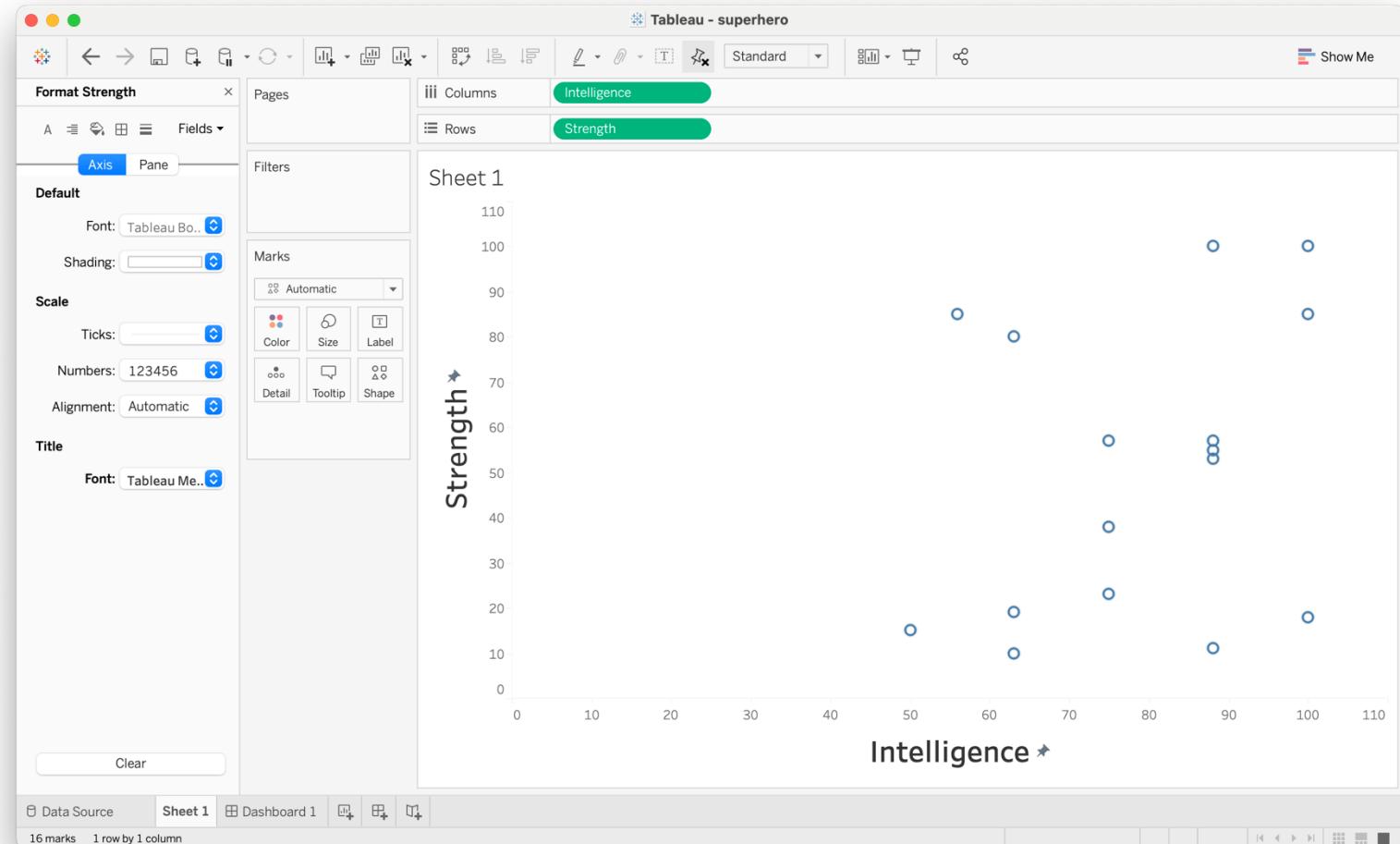
Editing axis values



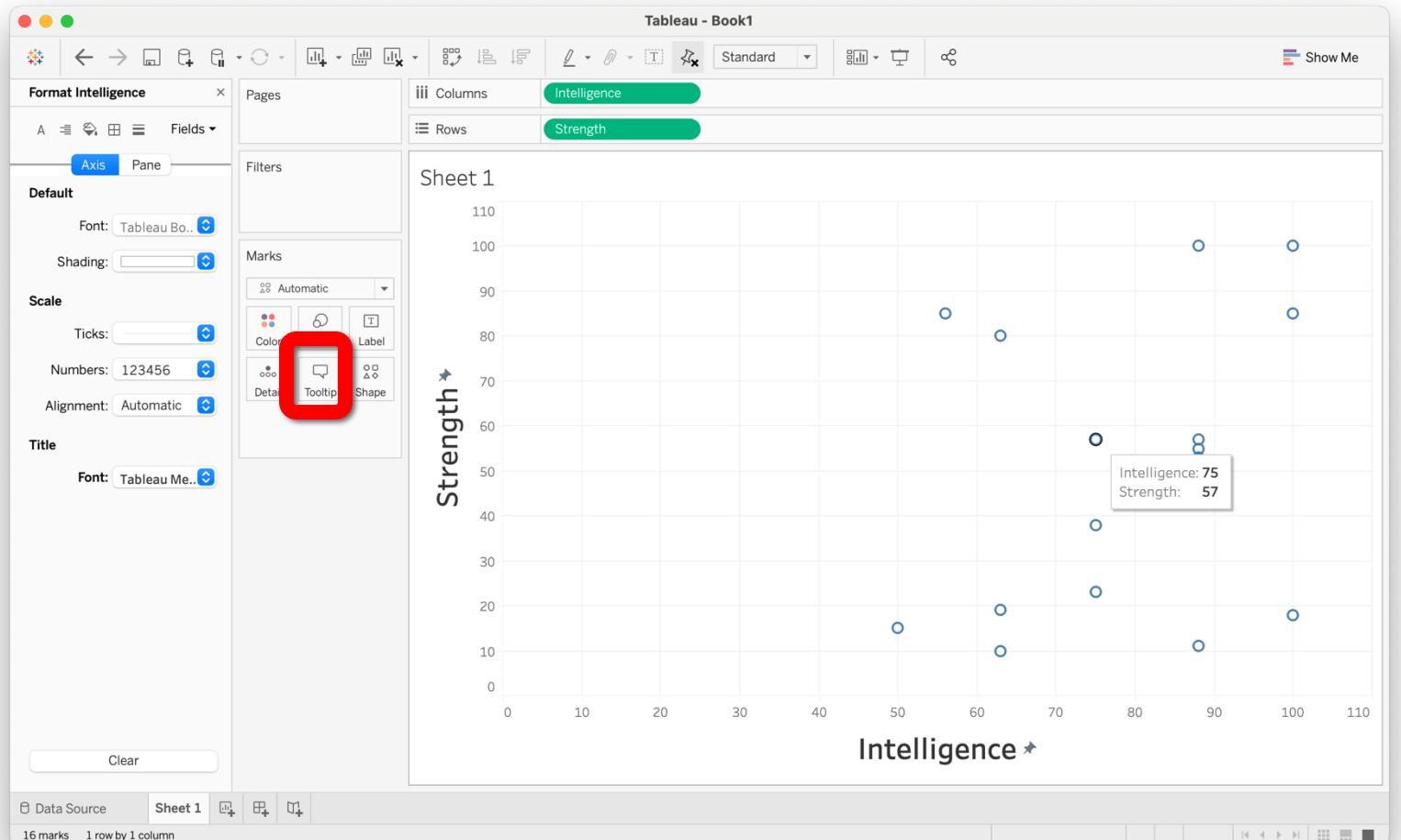
Format axis title



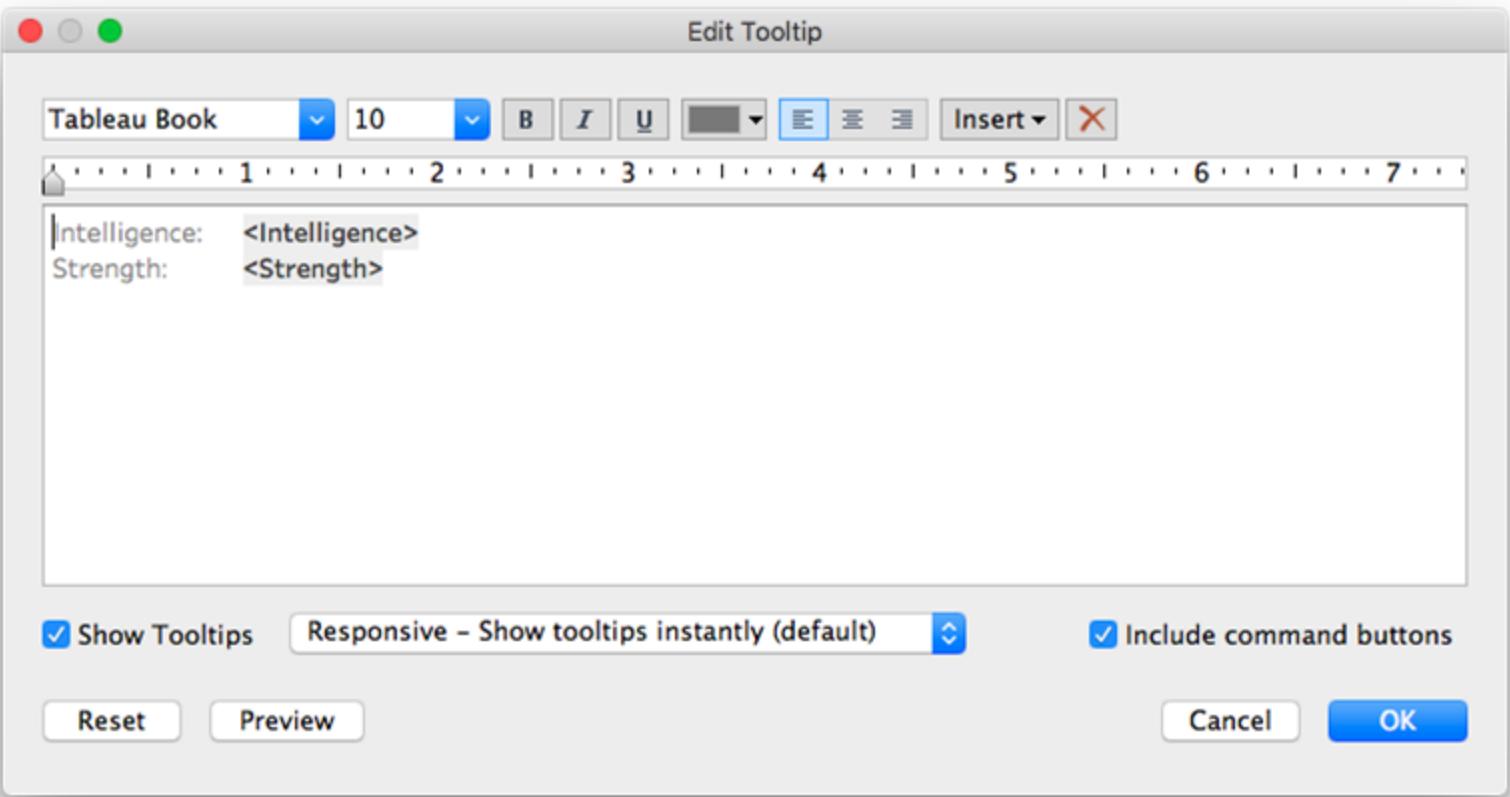
Format axis title



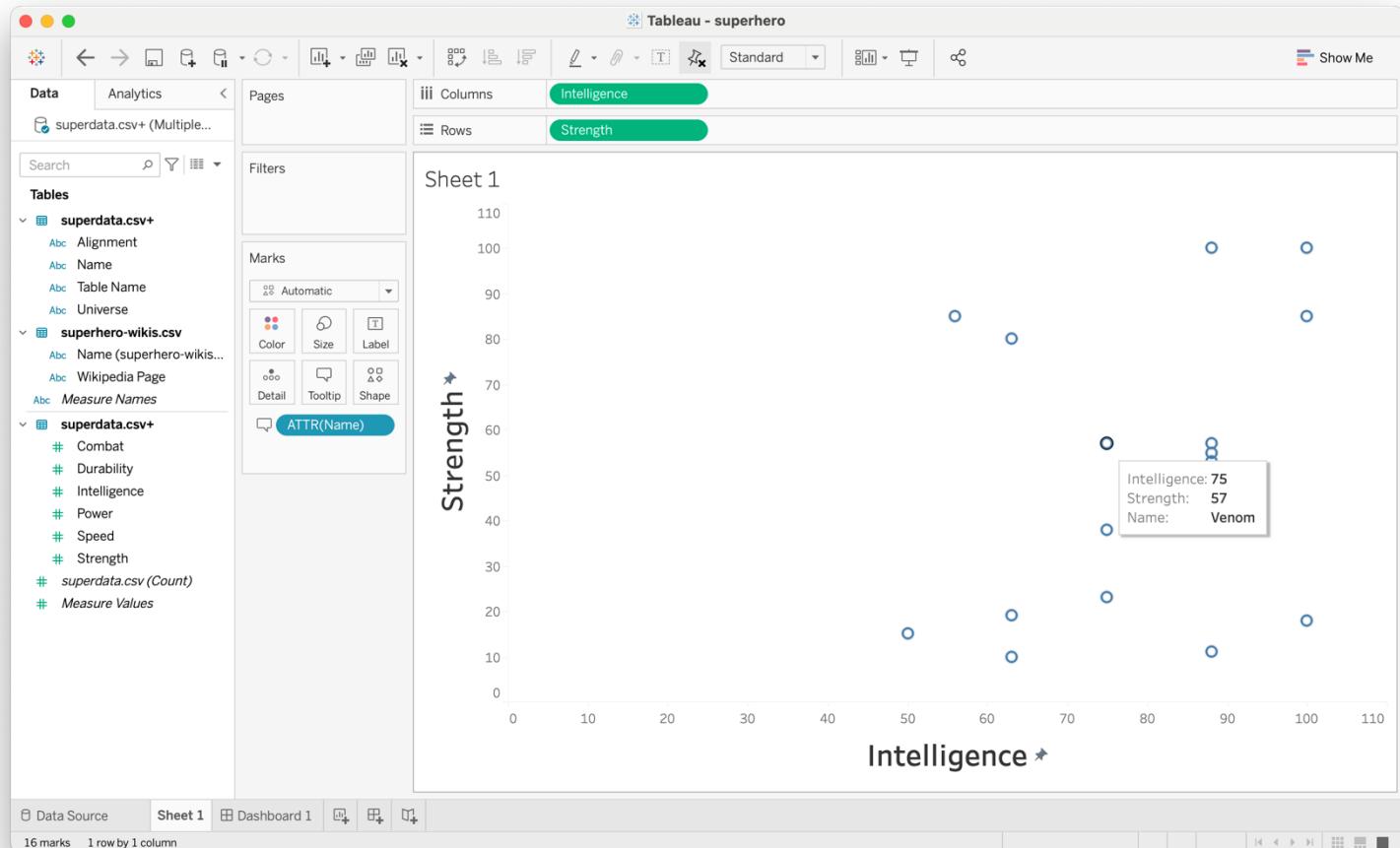
More interesting tooltips



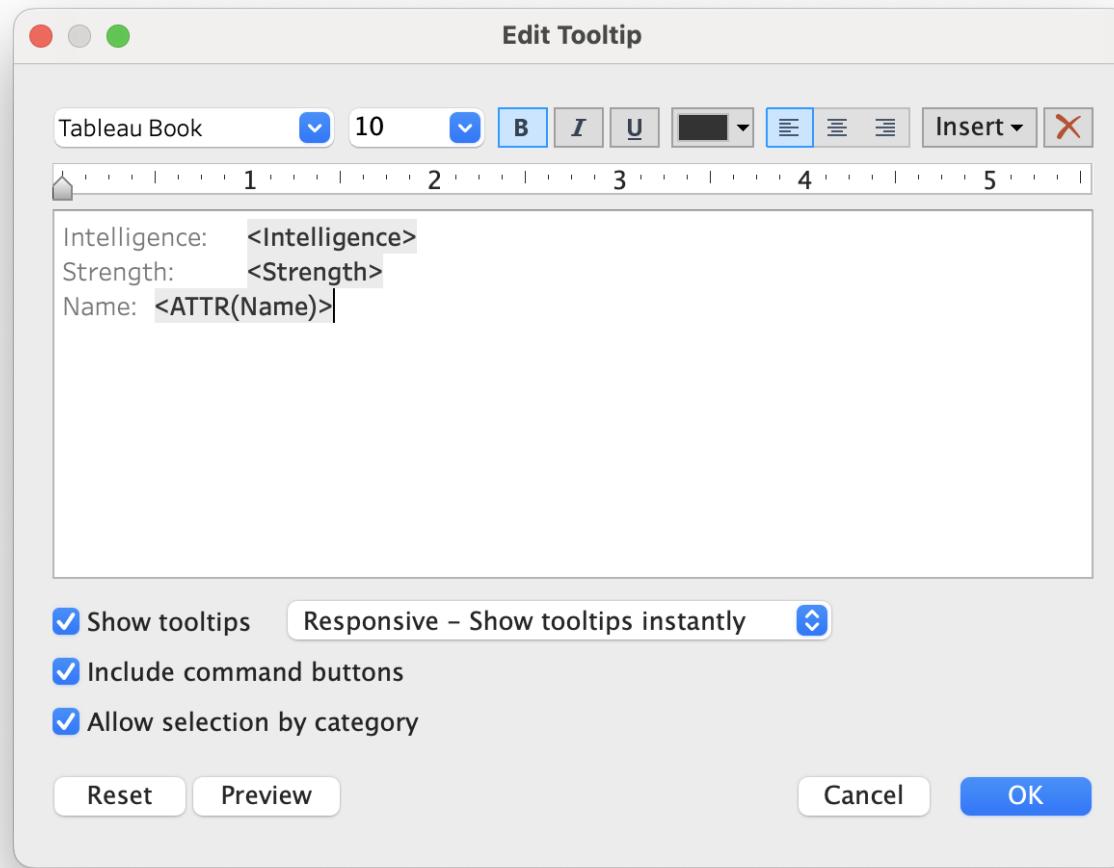
More interesting tooltips



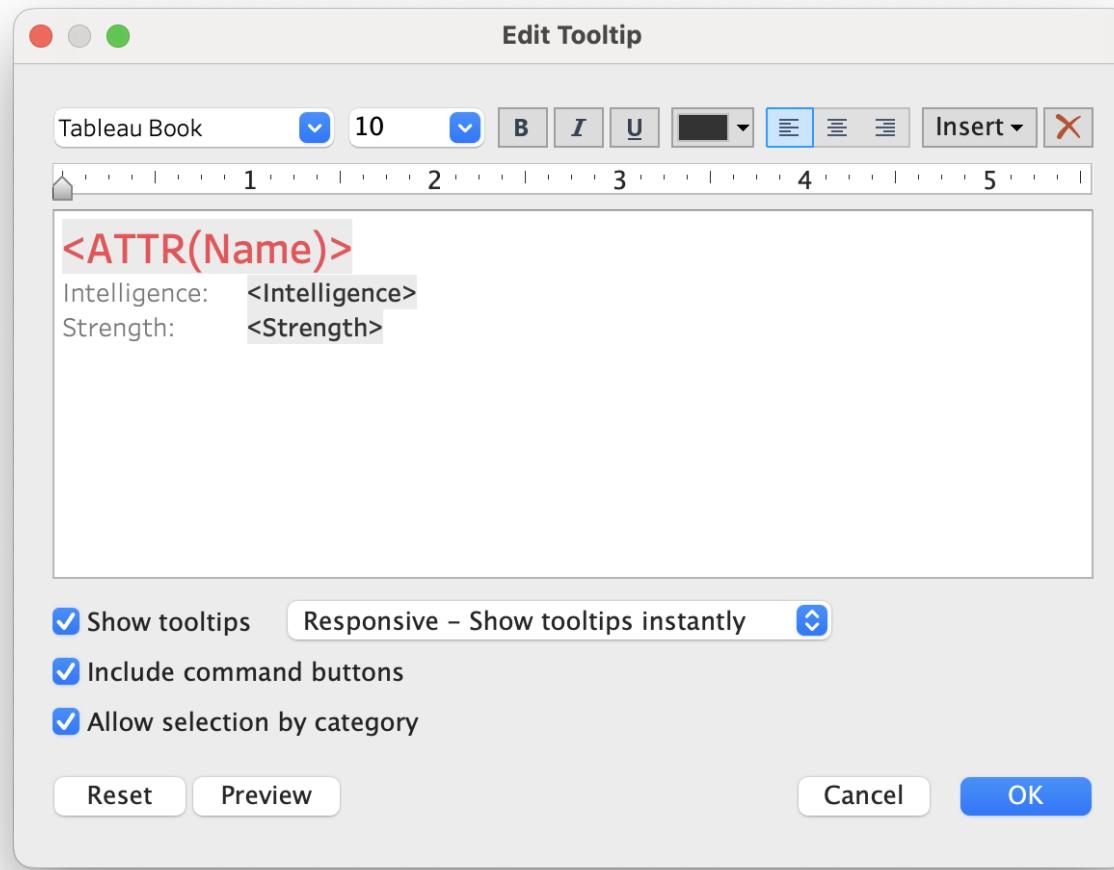
More interesting tooltips



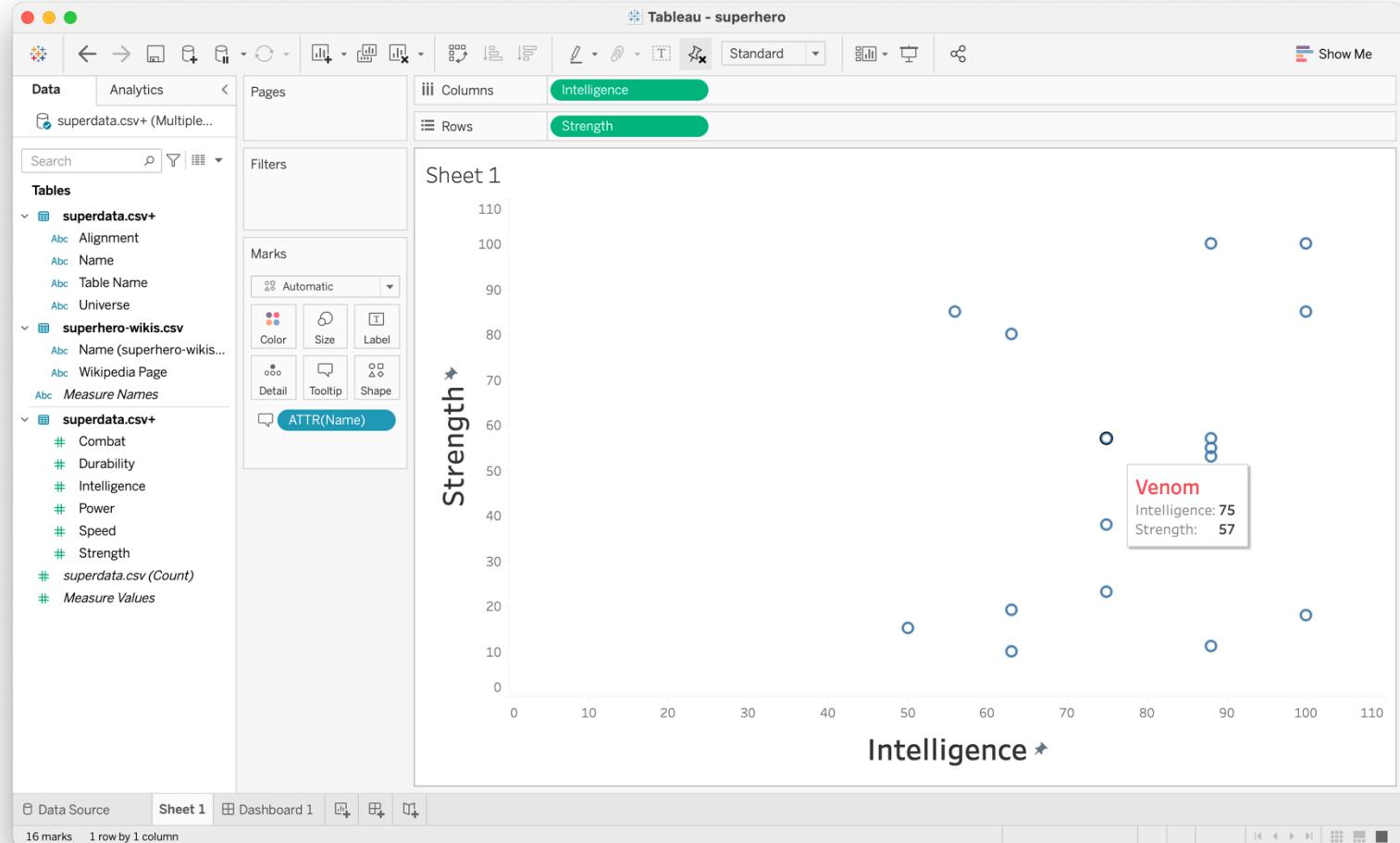
More interesting tooltips



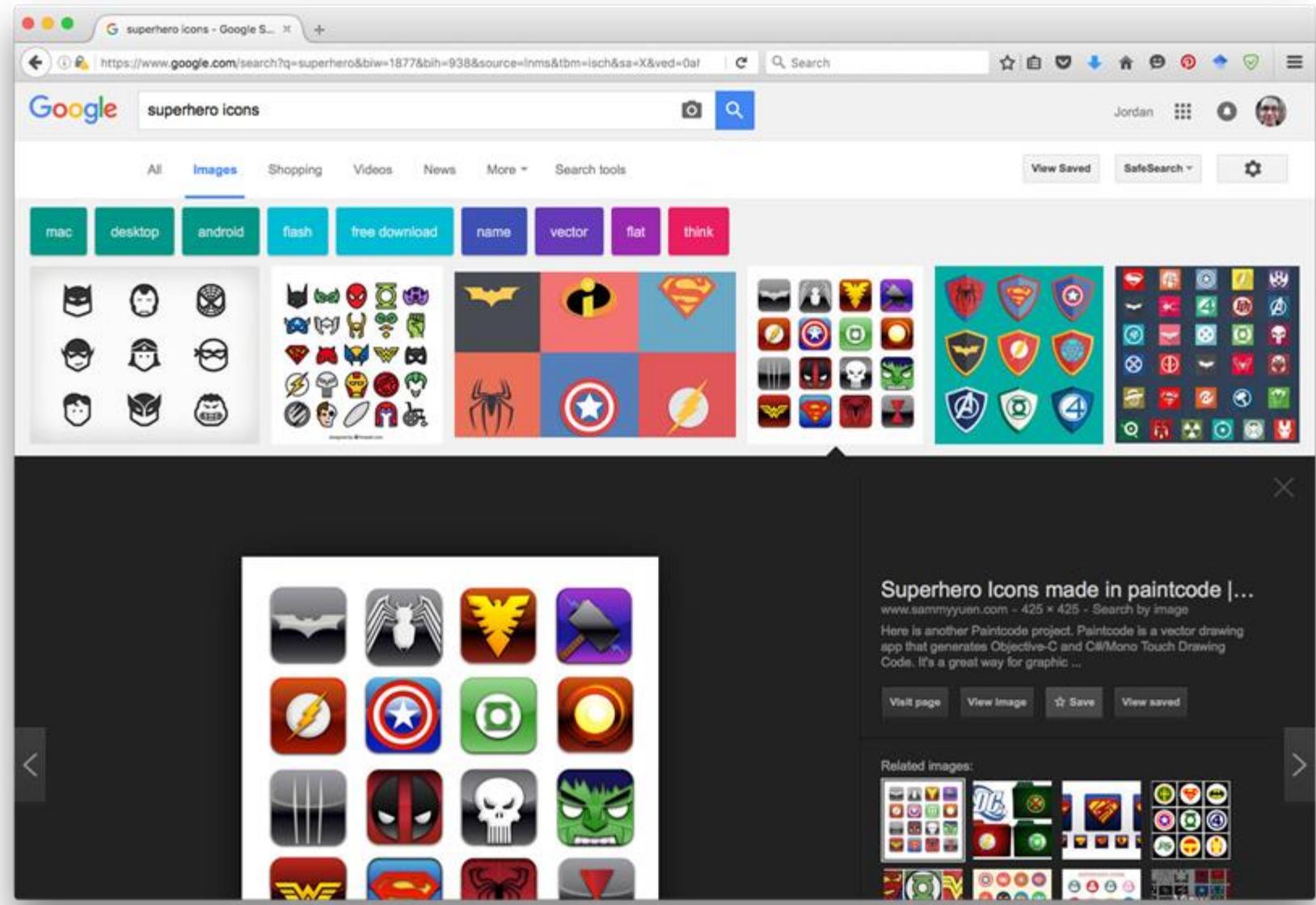
More interesting tooltips



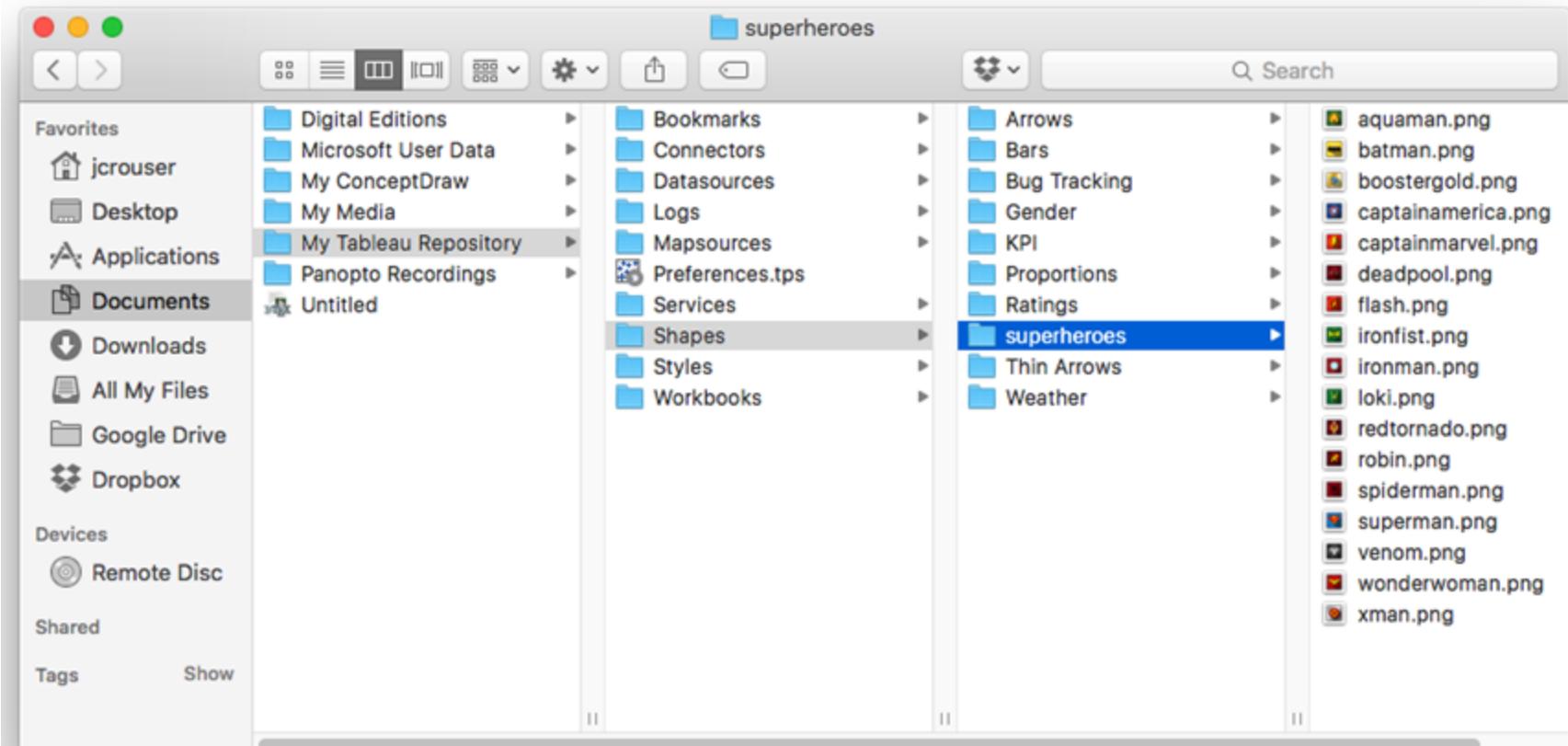
More interesting tooltips



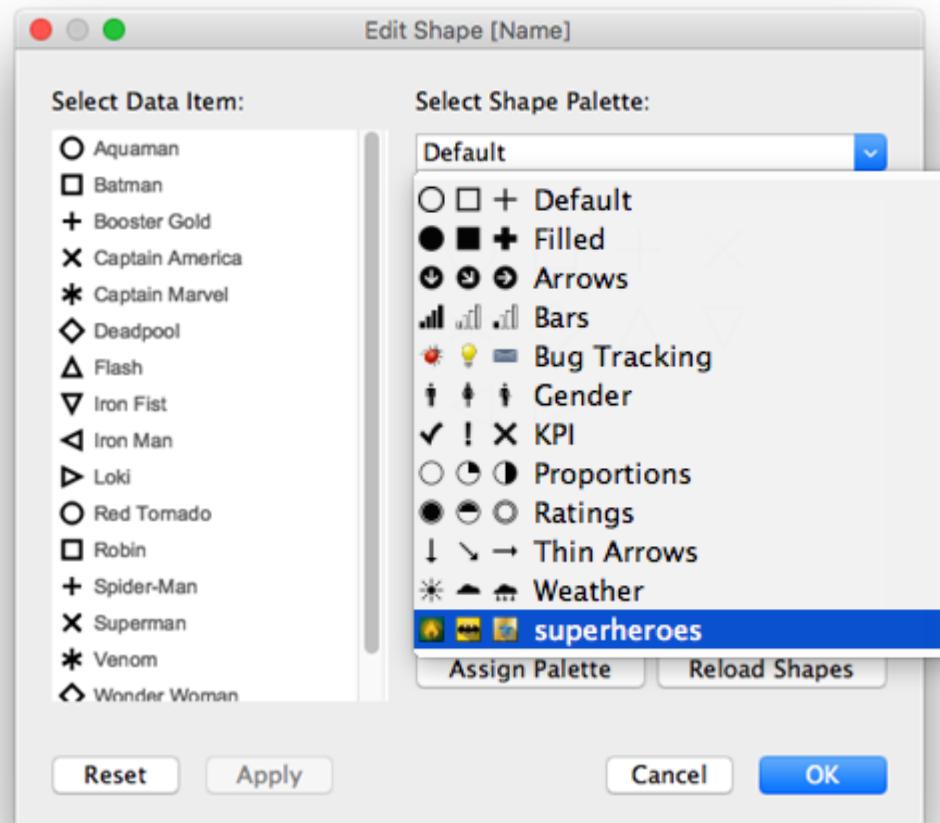
Adding custom shapes



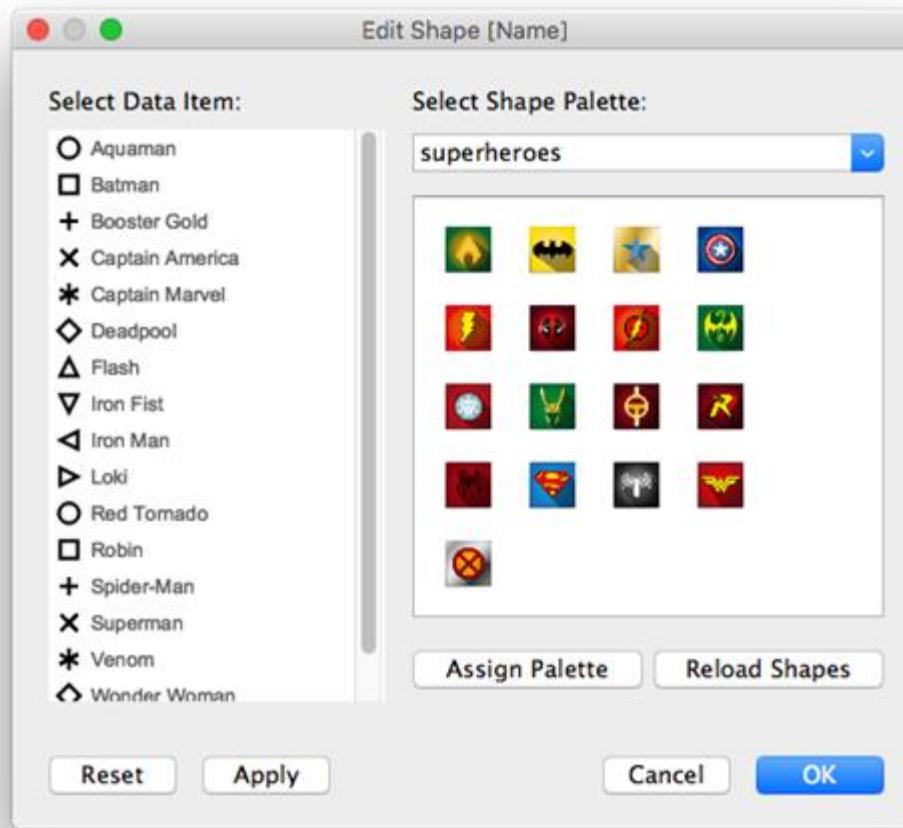
Adding custom shapes



Adding custom shapes



Adding custom shapes



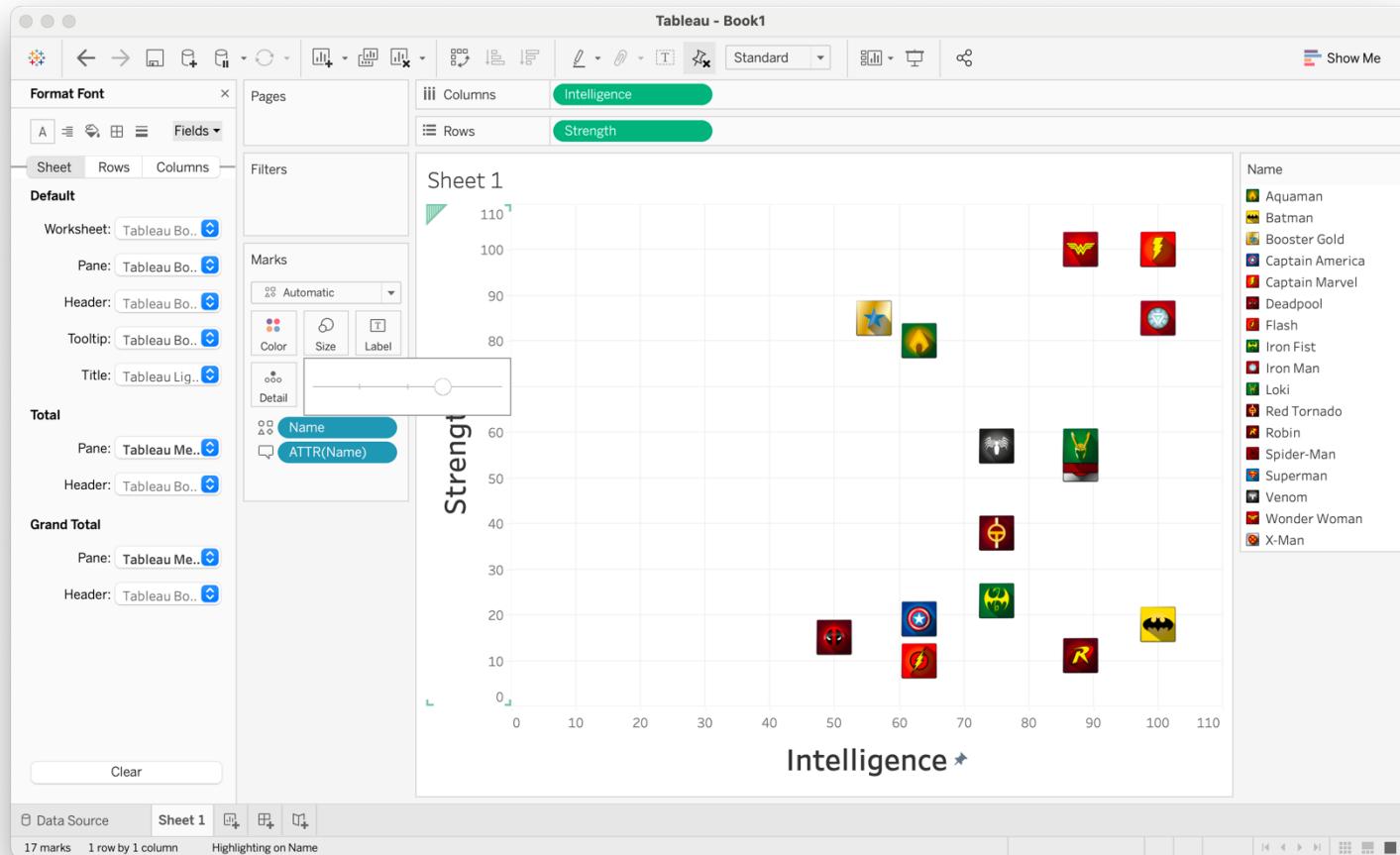
Adding custom shapes



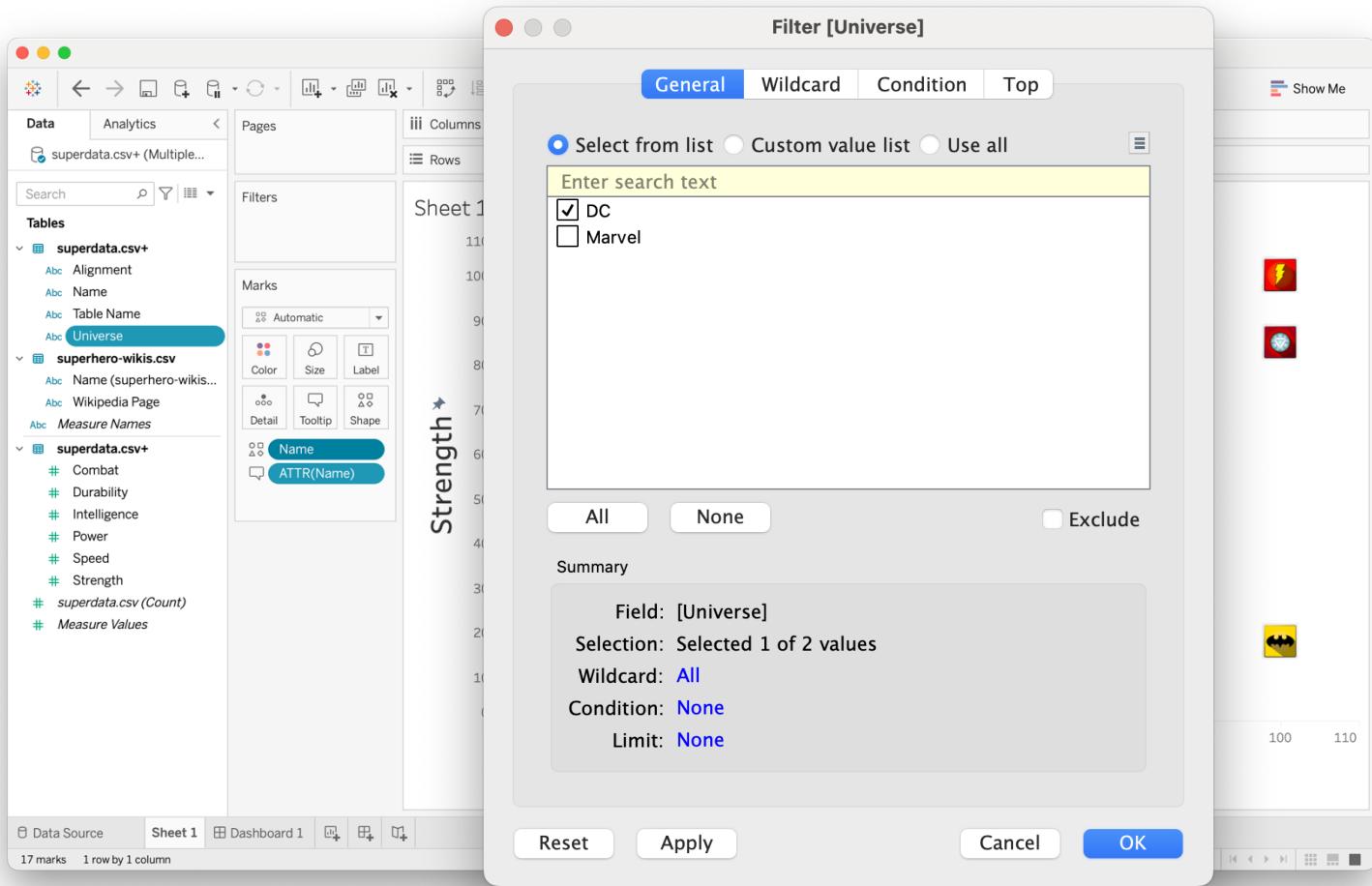
Adding custom shapes



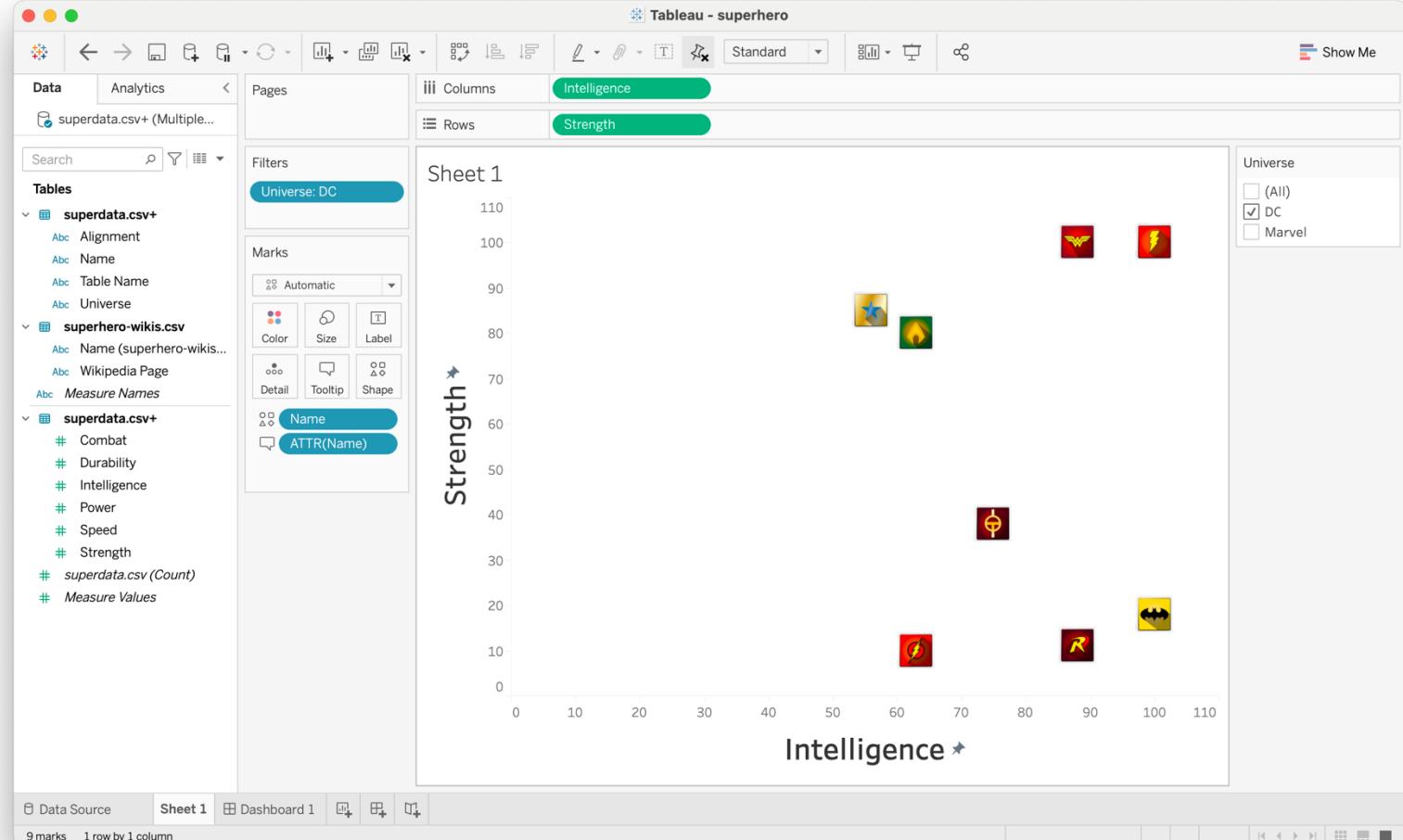
Scatterplot with custom shapes



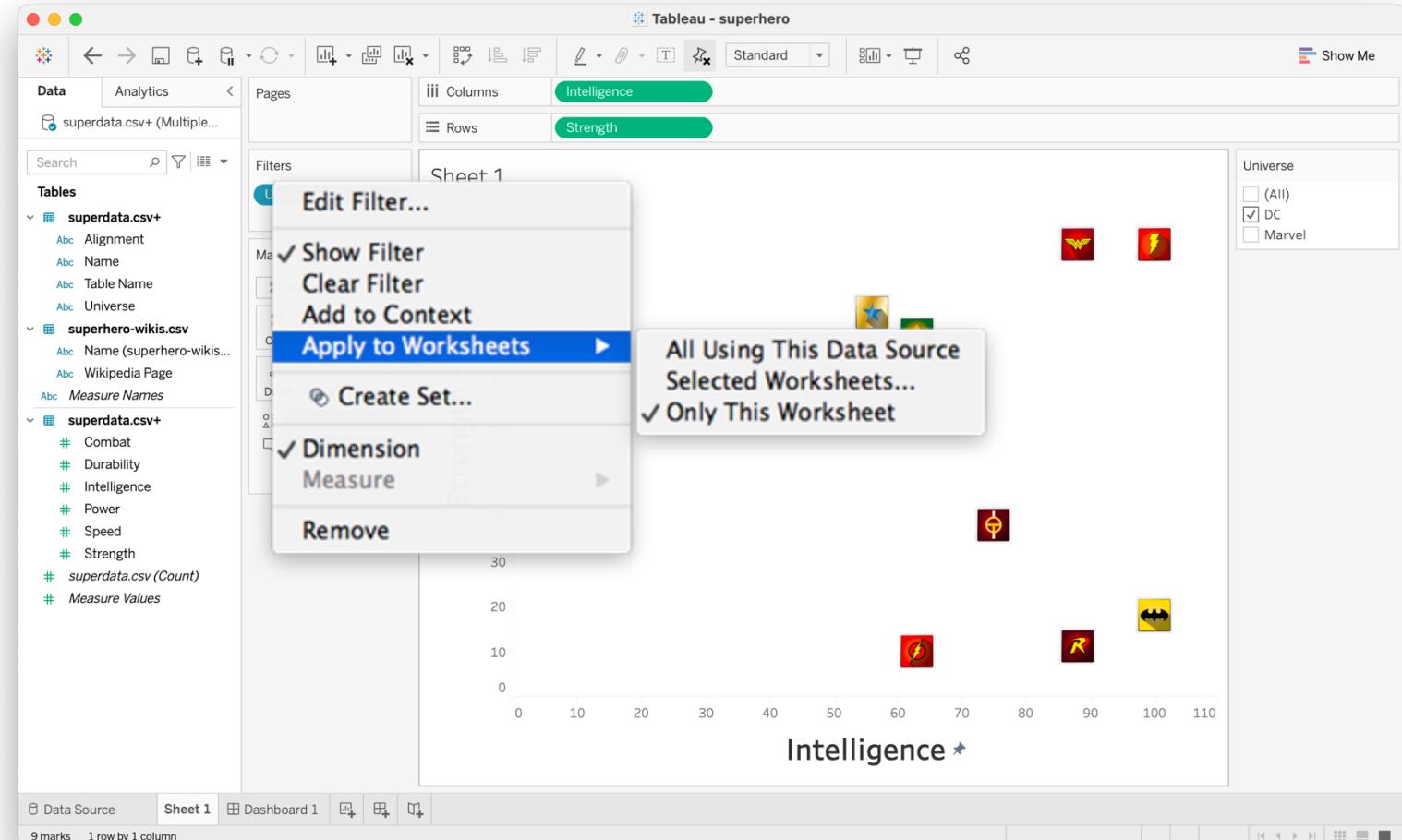
Working with filters



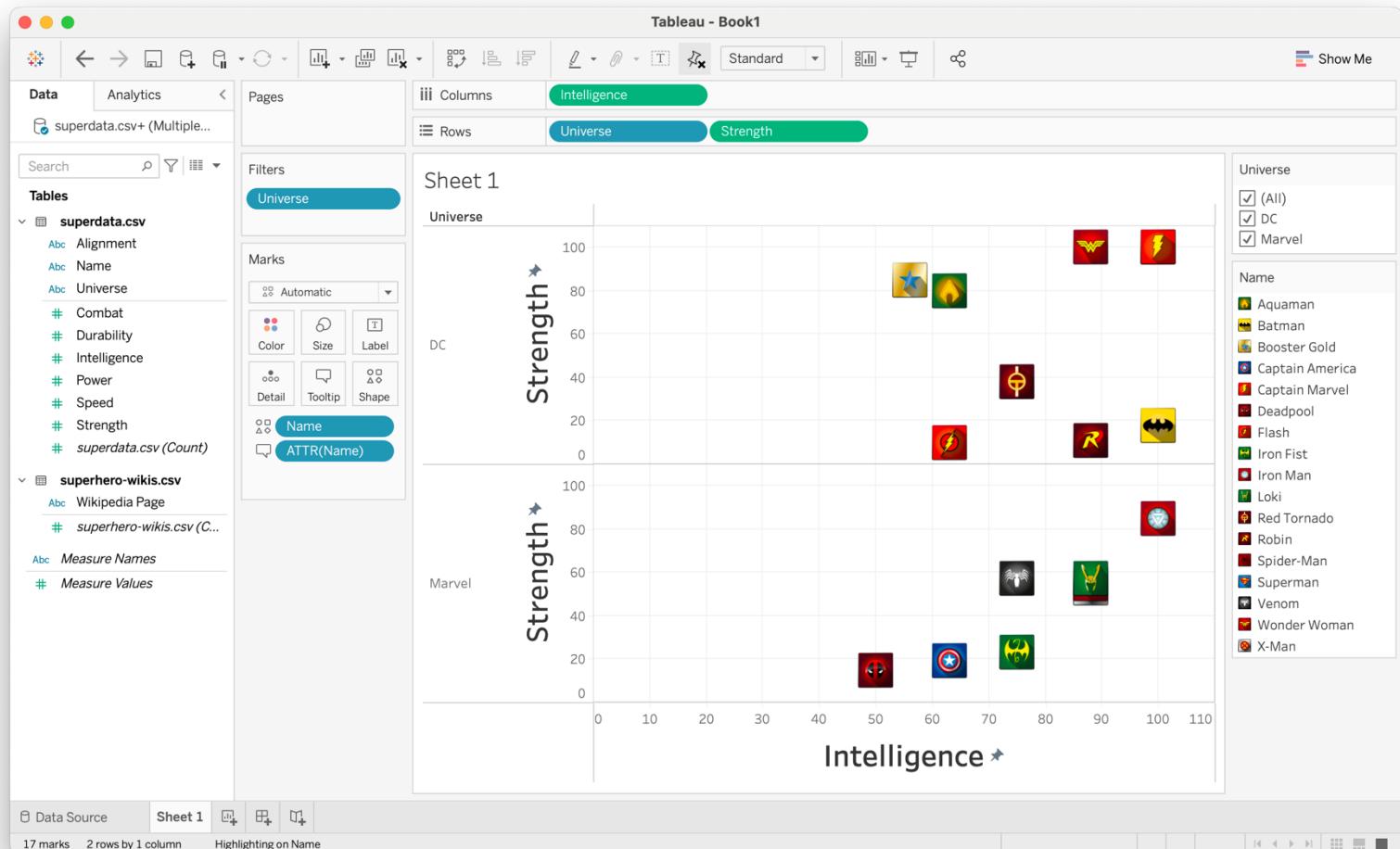
Working with filters



Changing a filter's scope



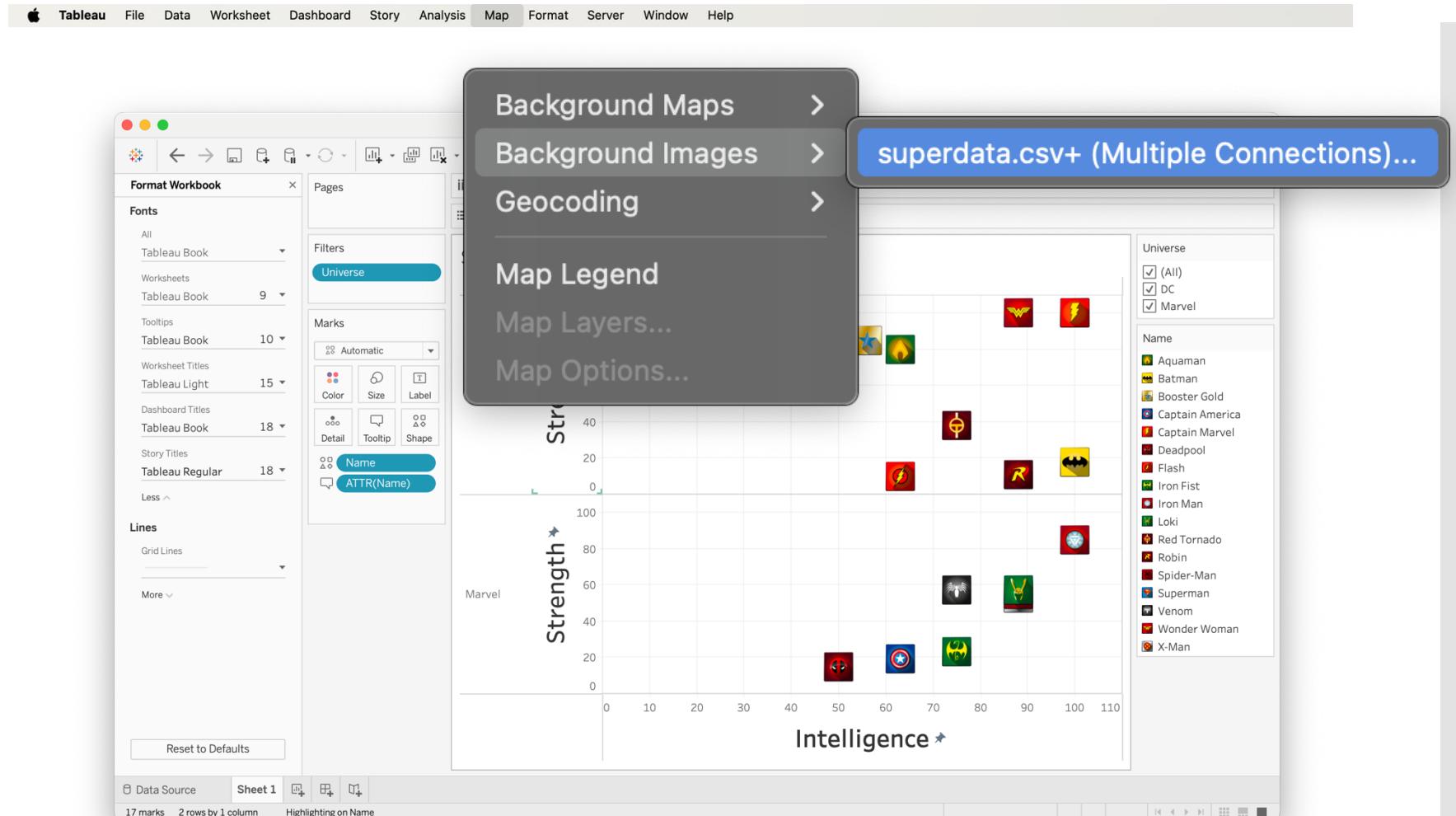
Implicit filtering (side-by-side comparison)



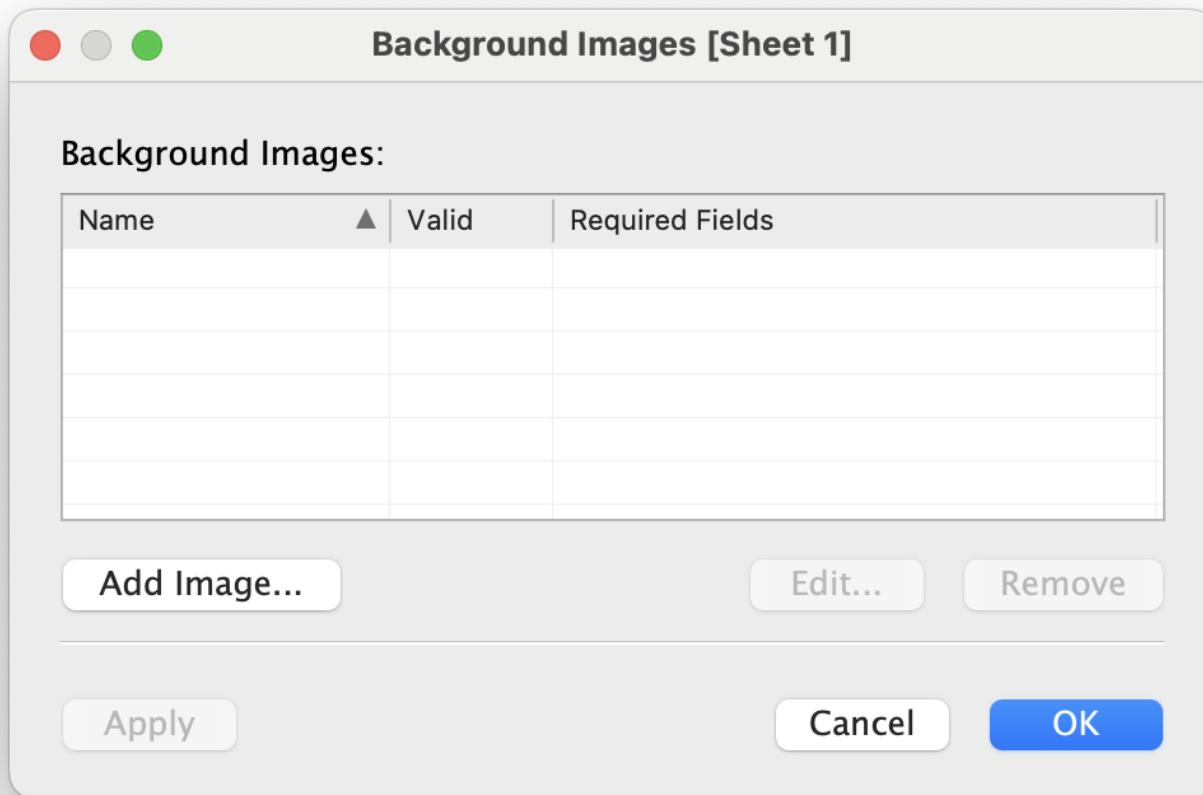
Adding
background
images



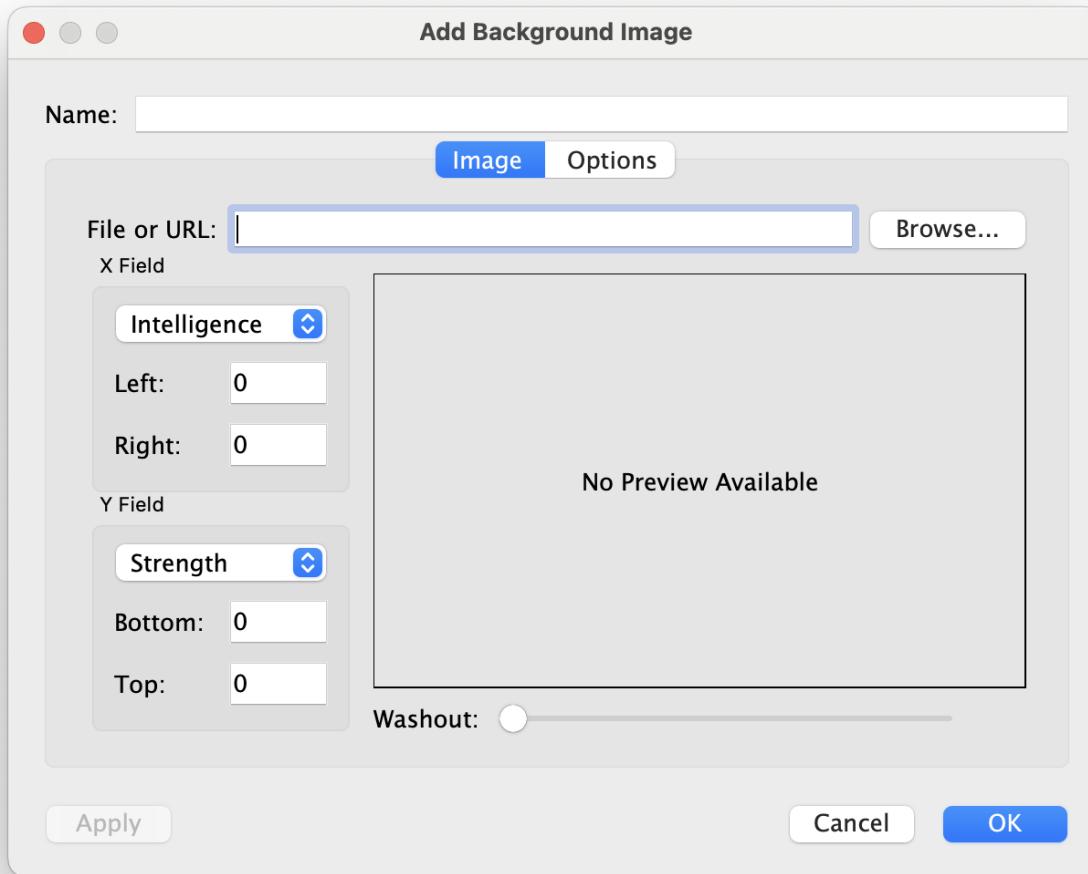
Adding background images



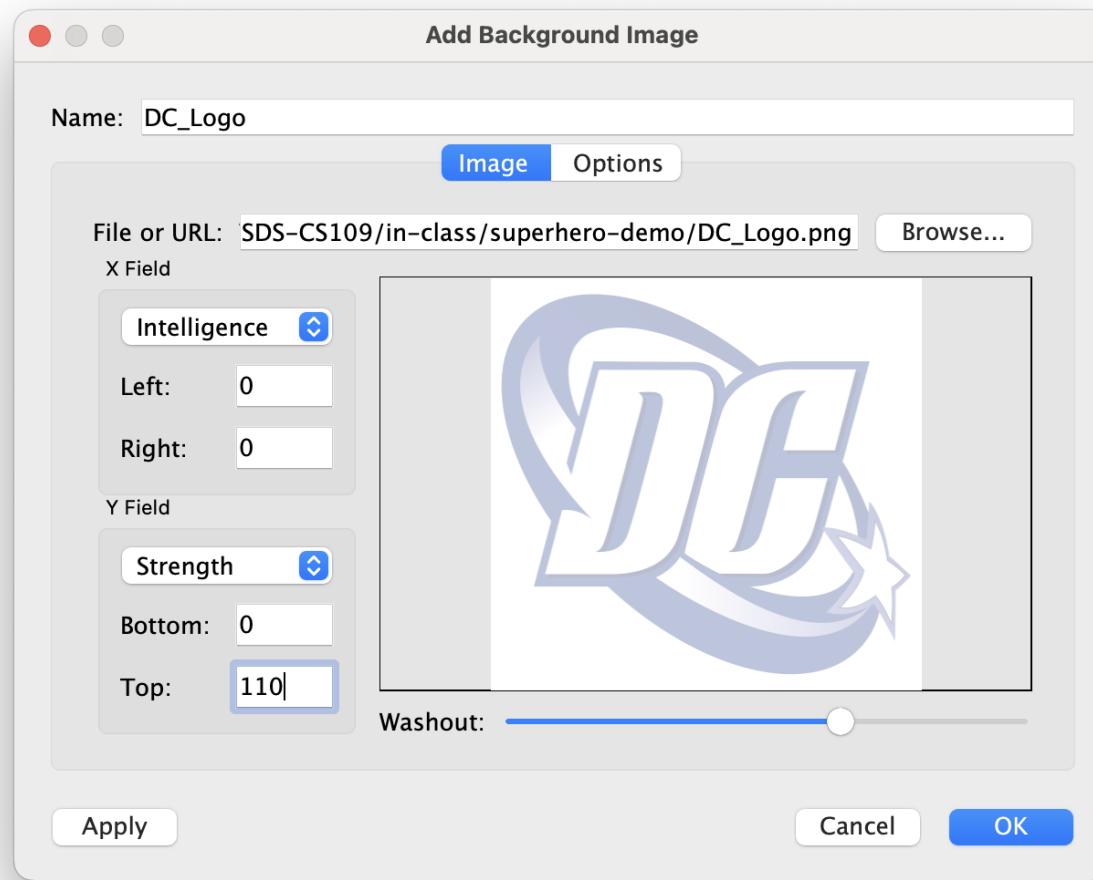
Adding background images



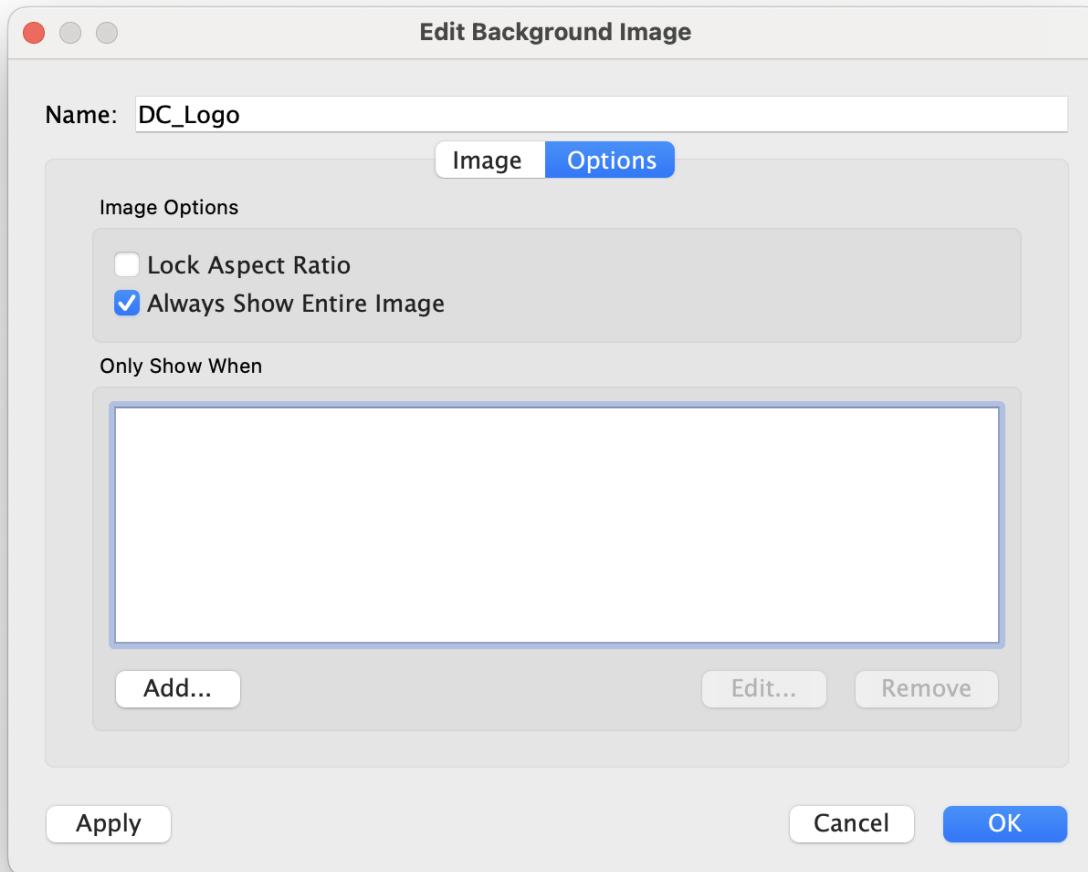
Adding background images



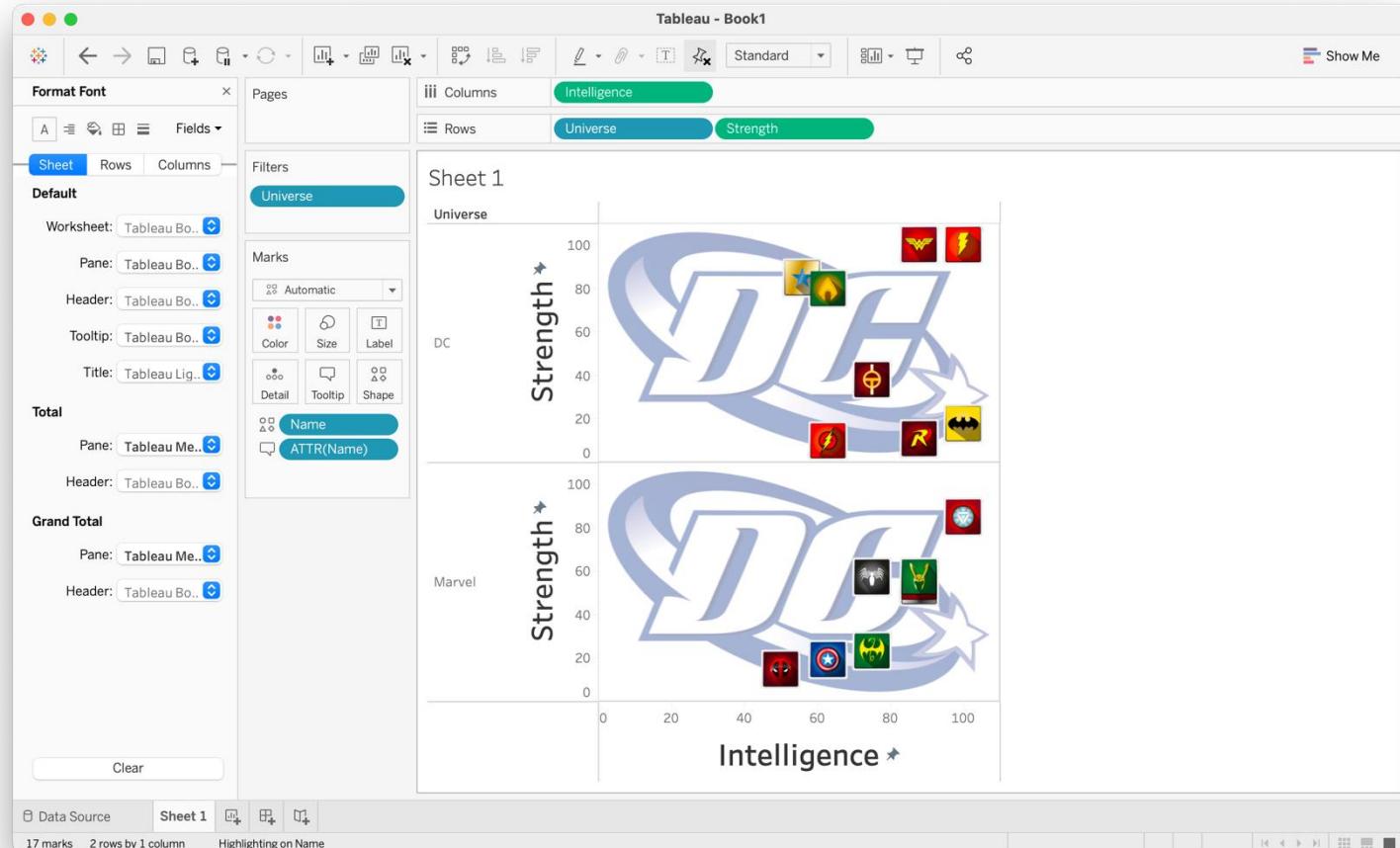
Adding background images



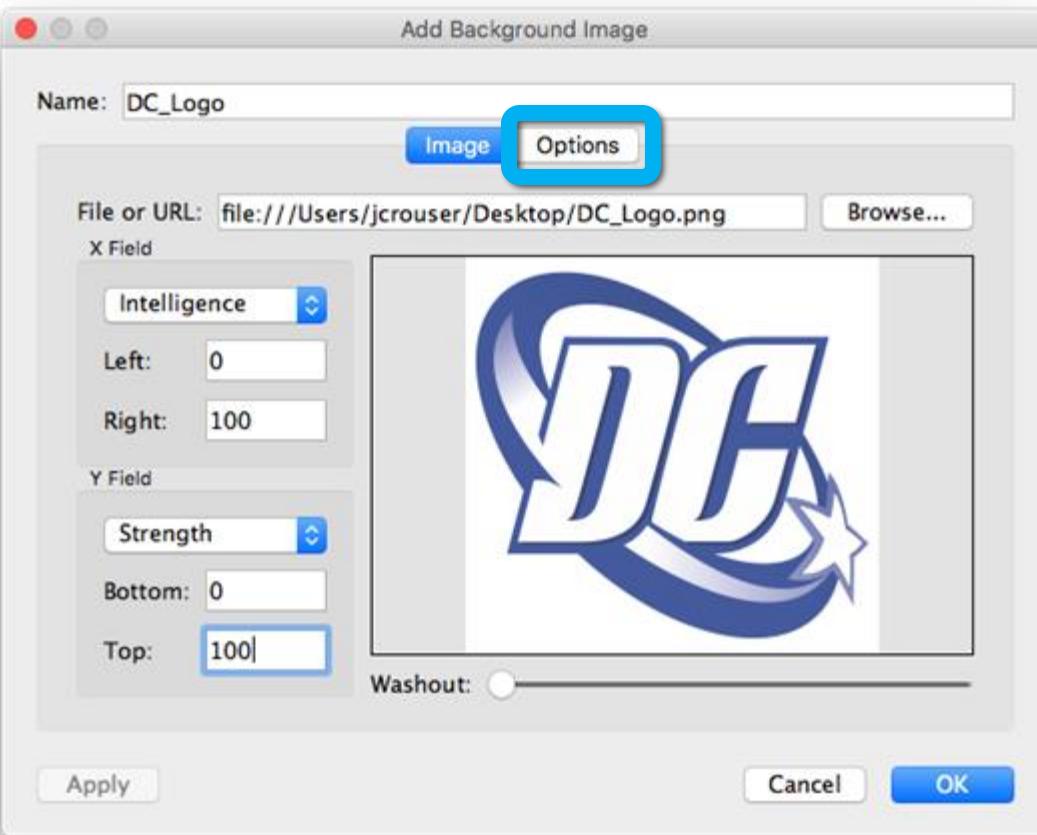
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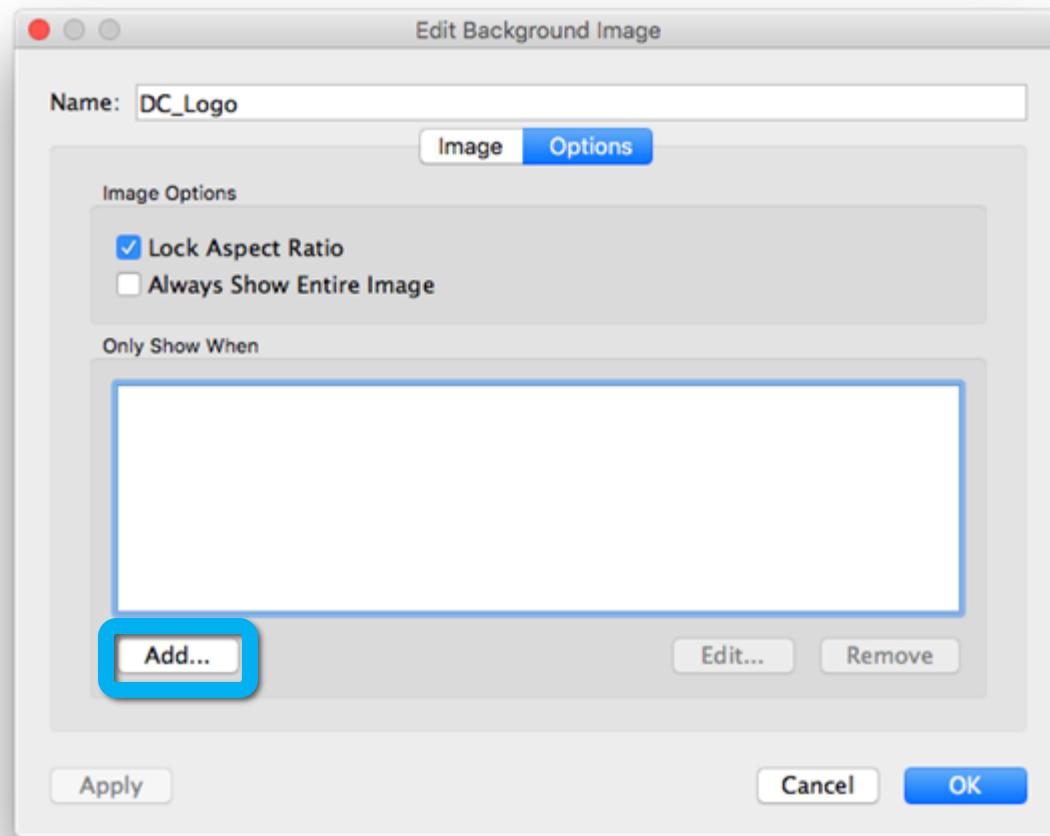
Adding background images



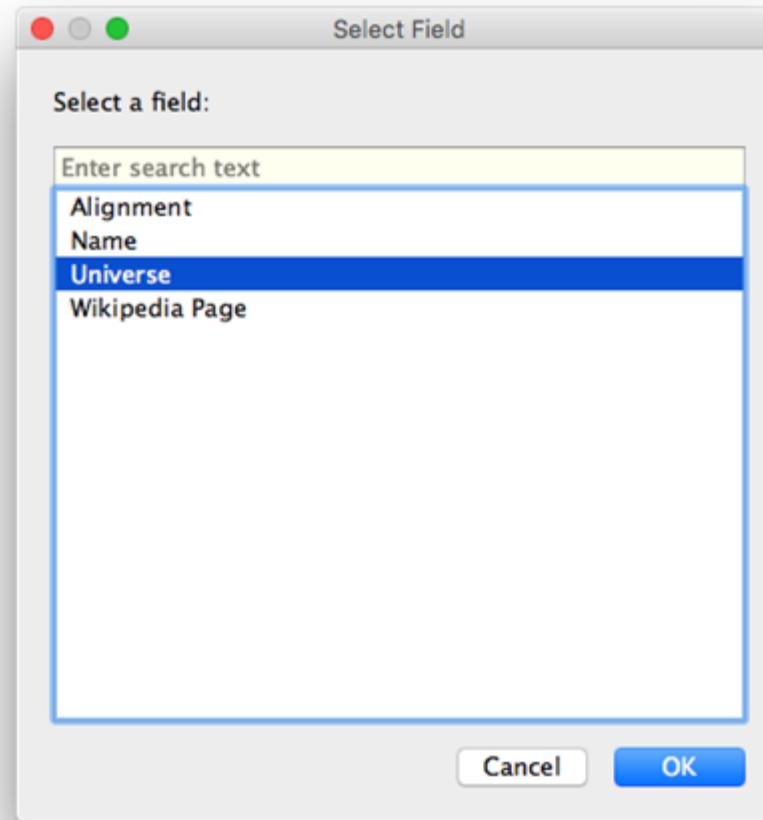
Adding background images



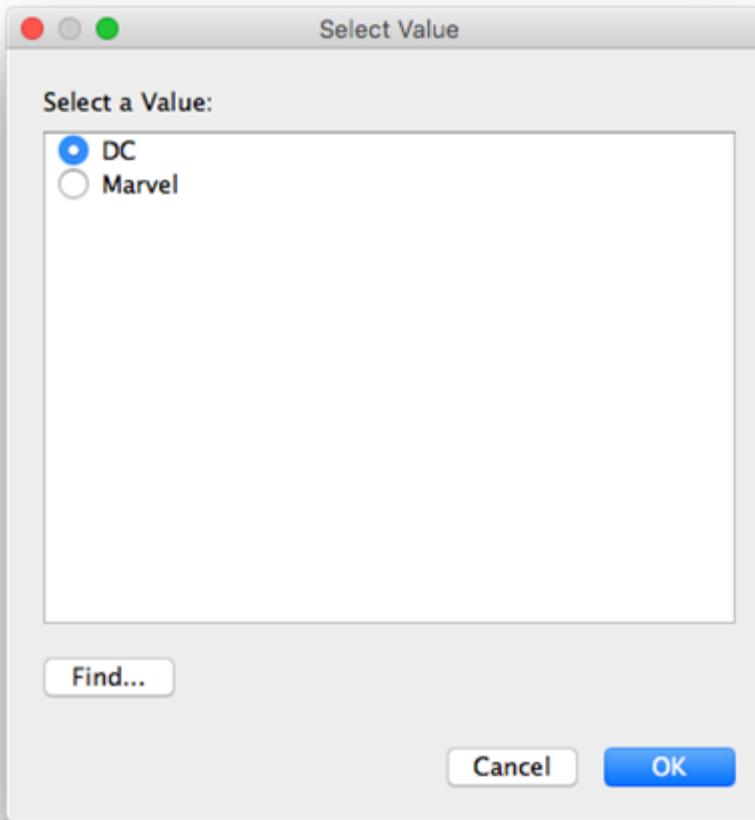
Adding background images



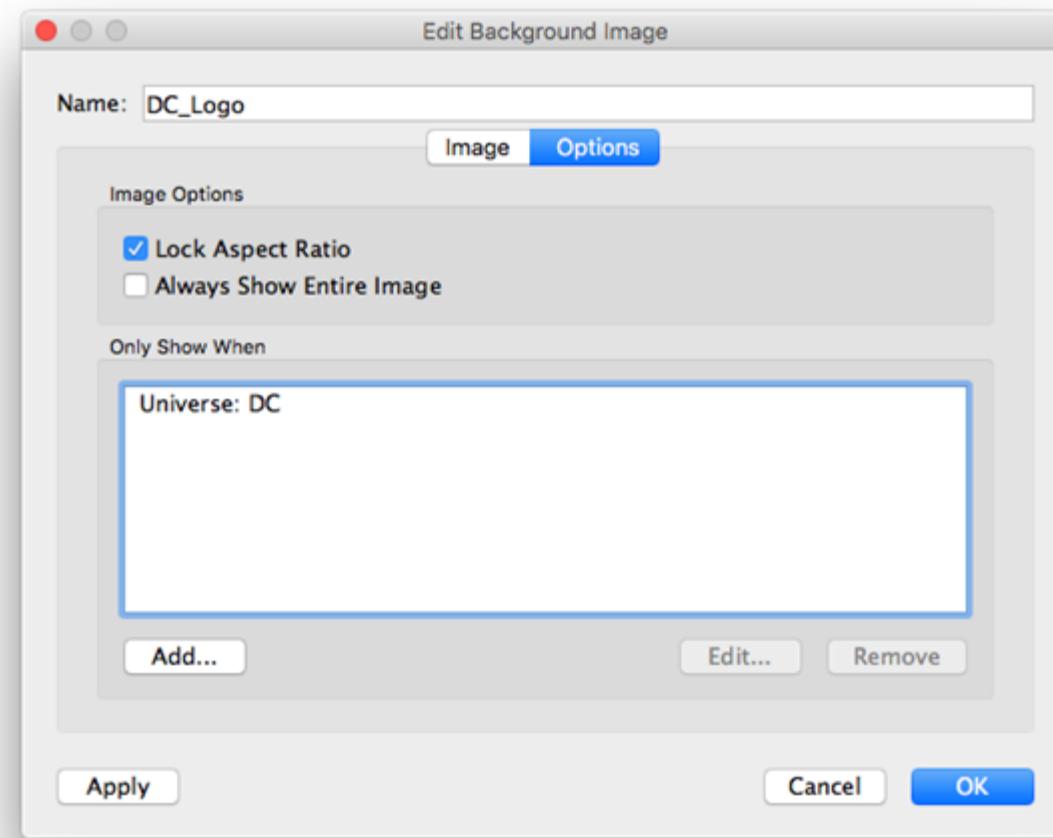
Adding background images



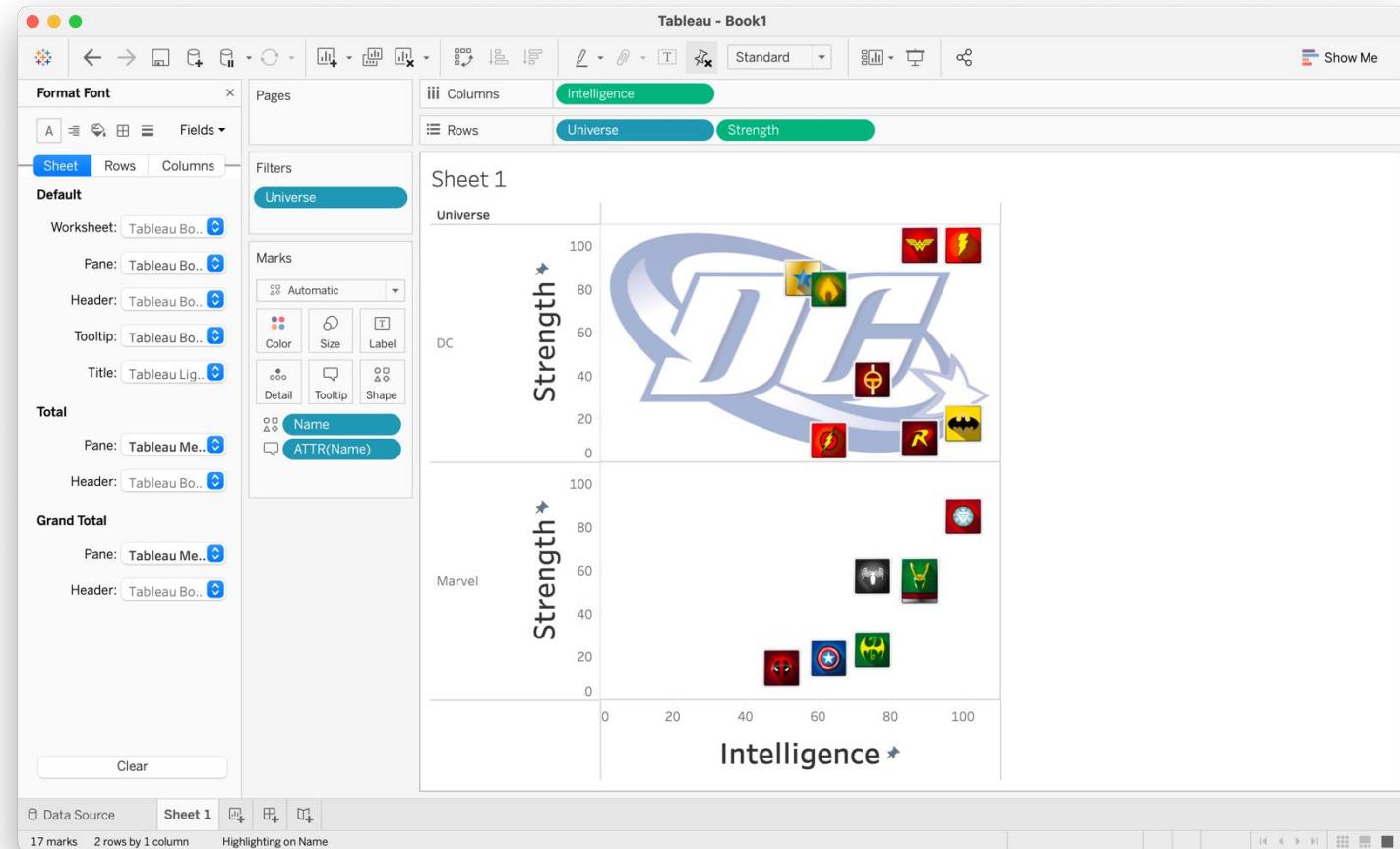
Adding background images



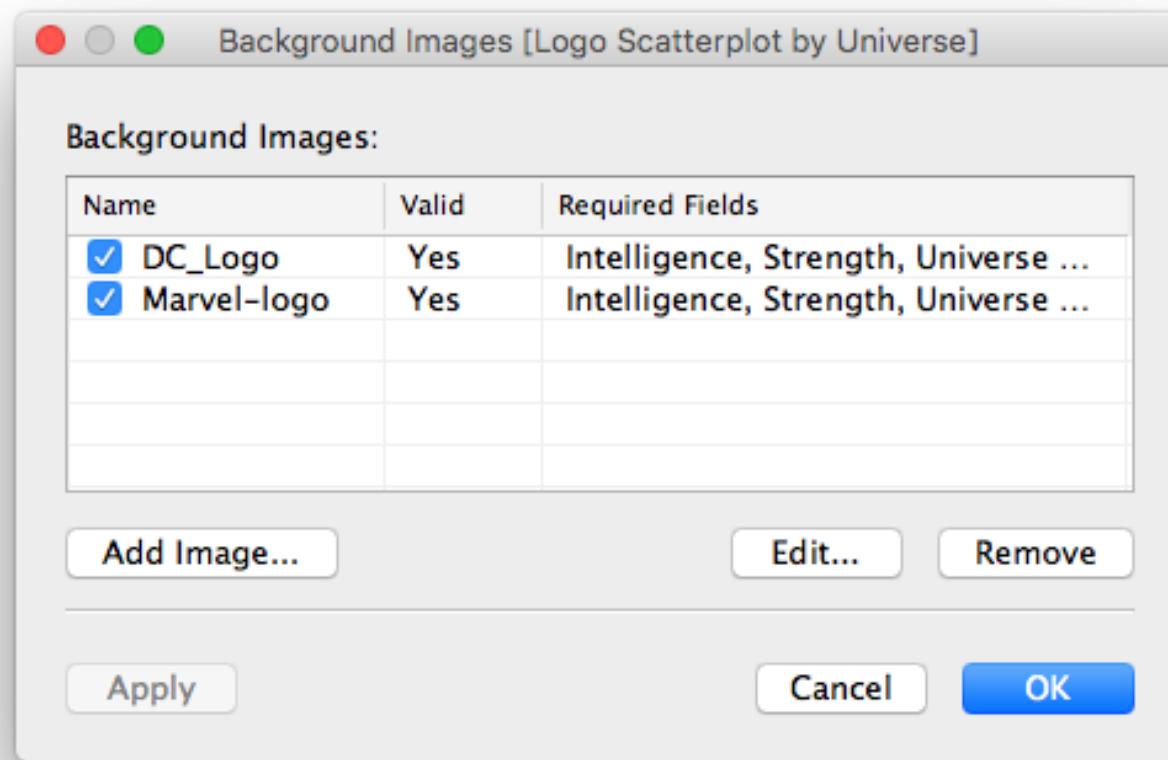
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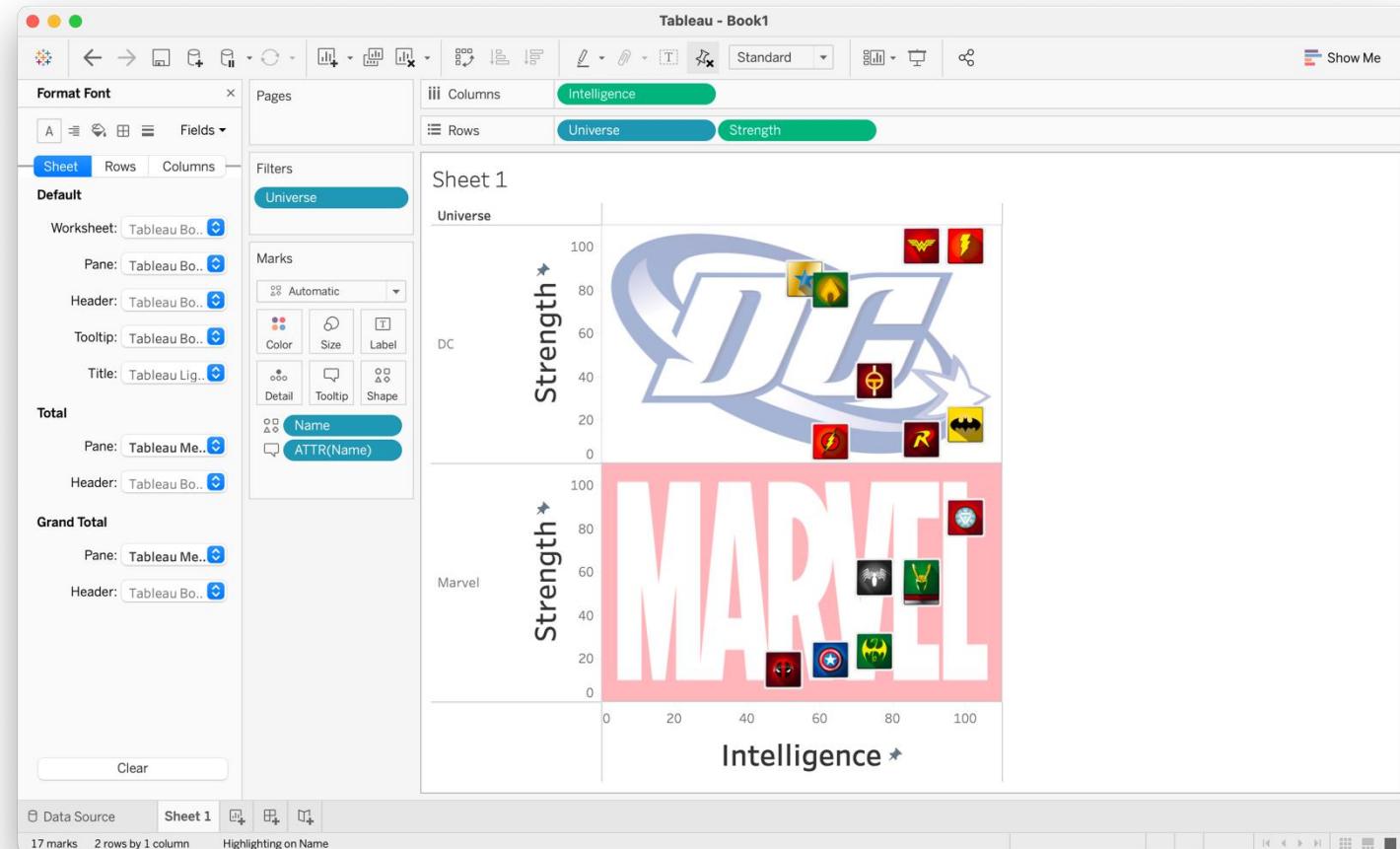
Adding background images



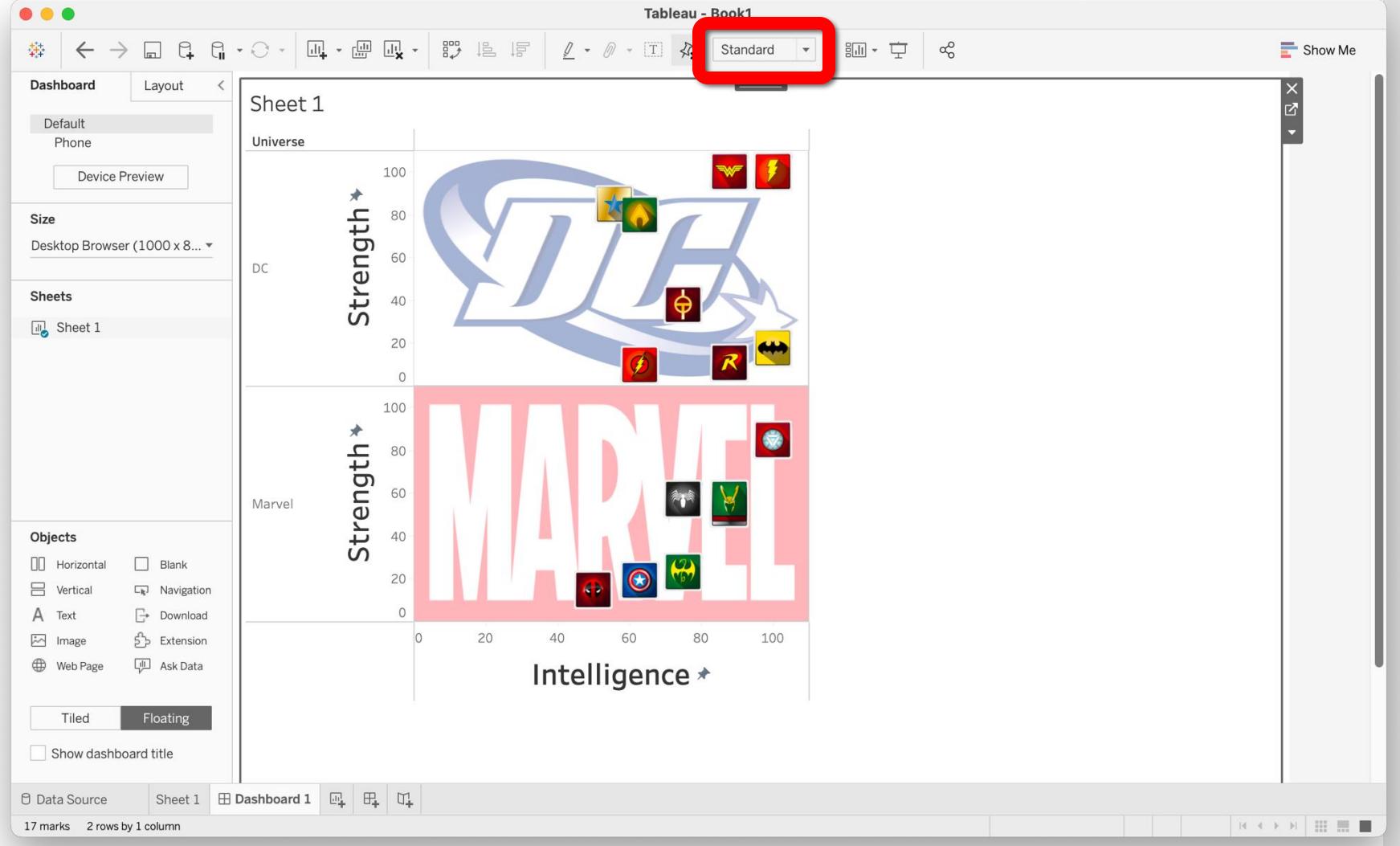
Adding background images



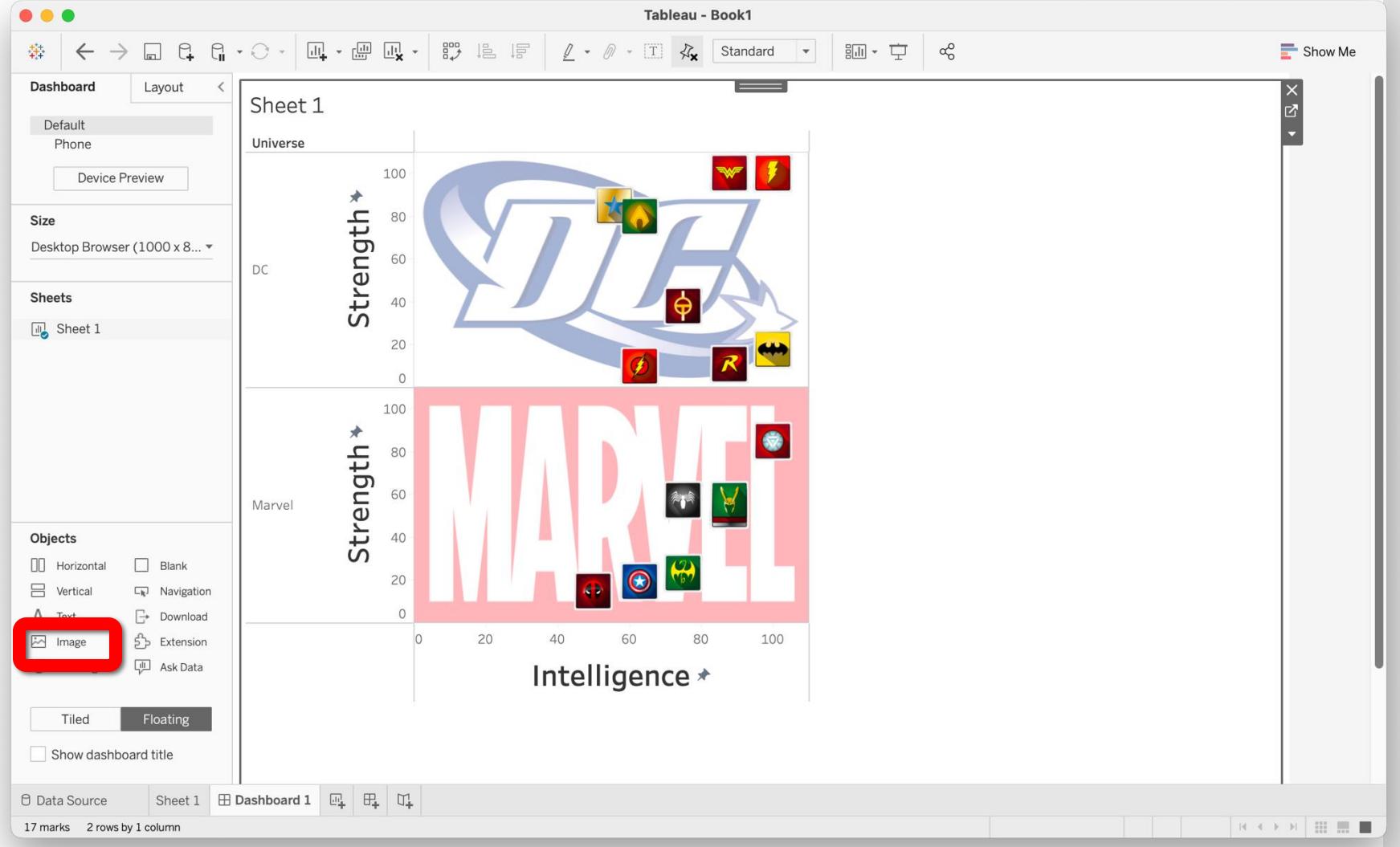
Adding background images



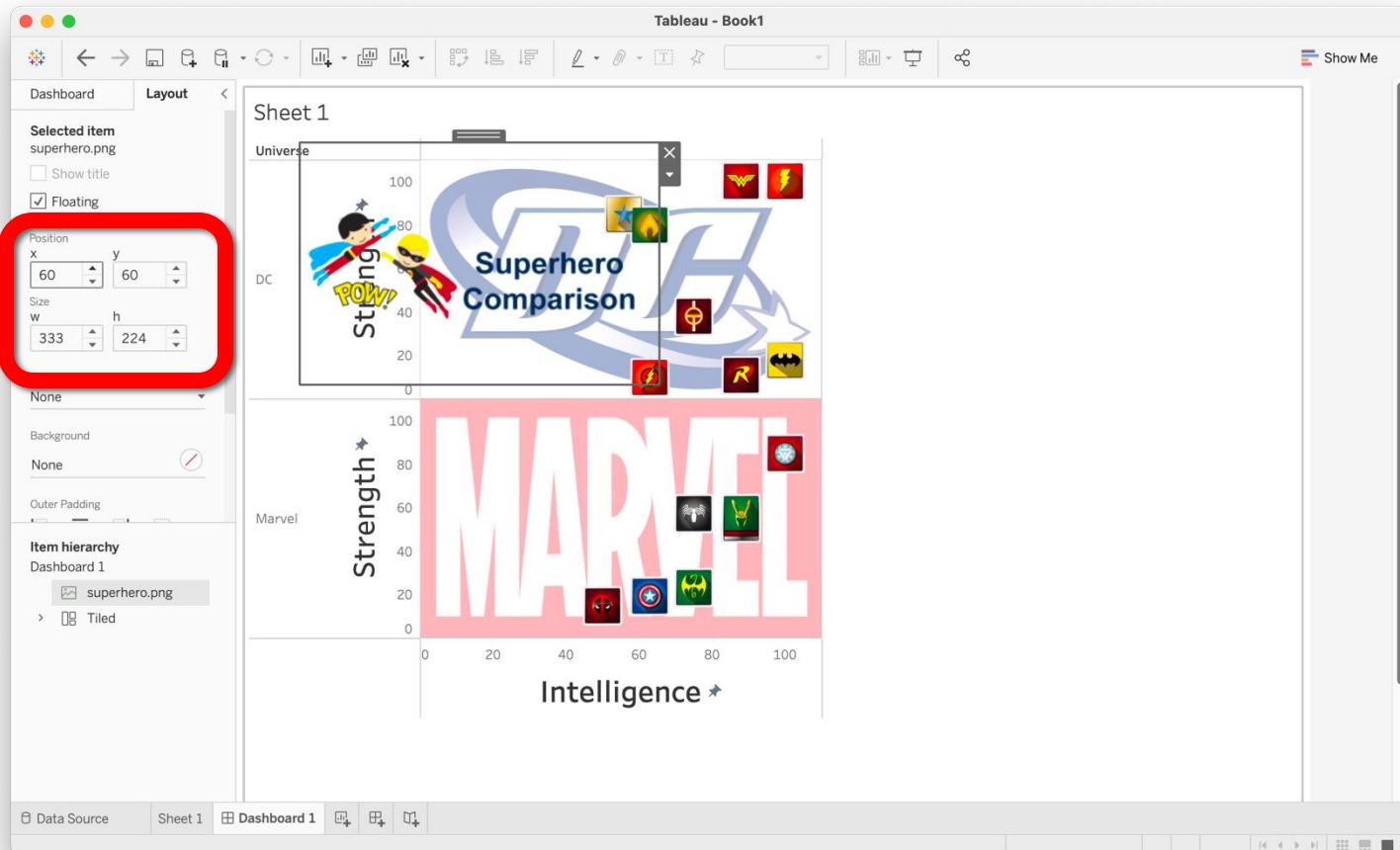
Customizing a dashboard



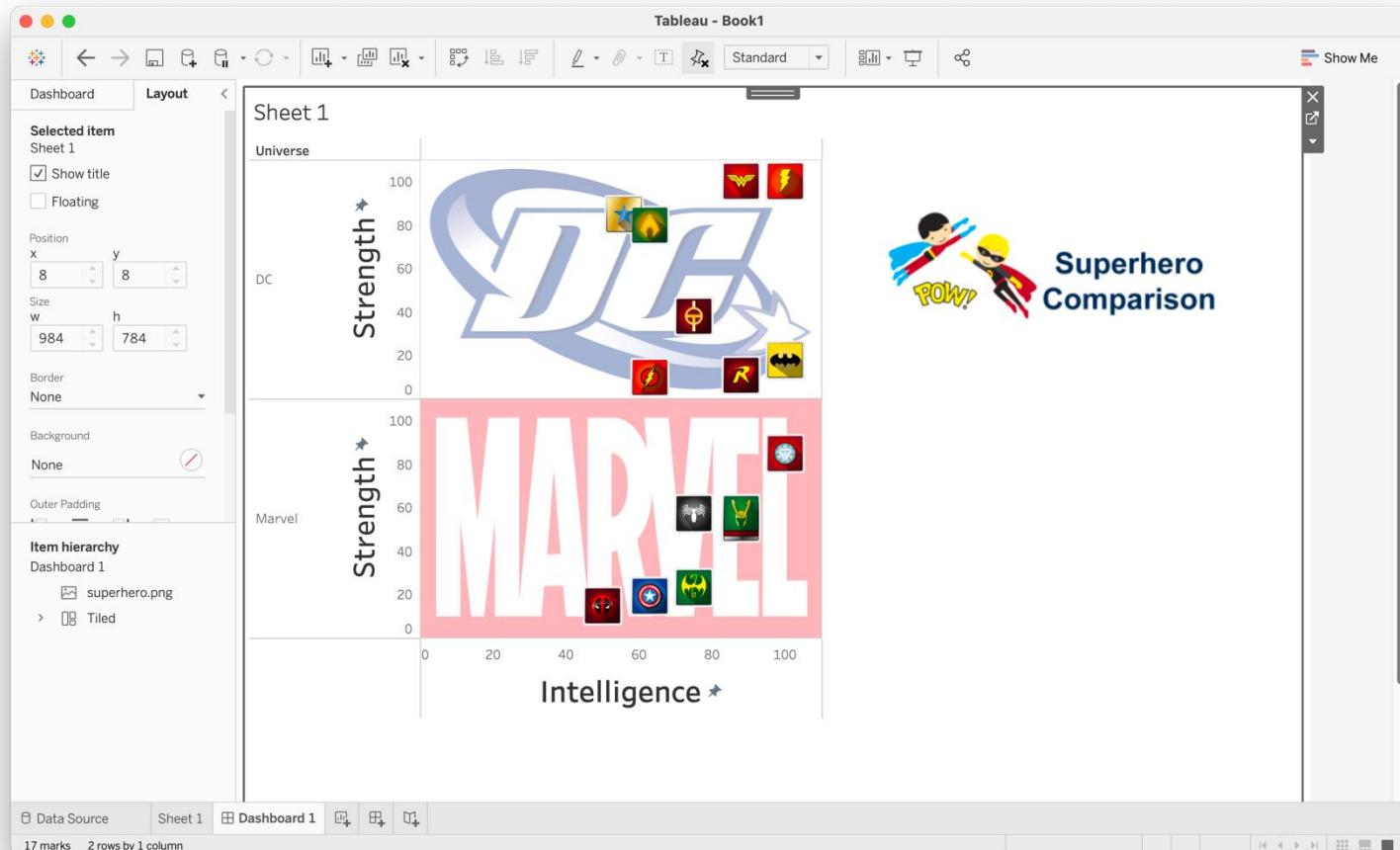
Customizing a dashboard



Customizing a dashboard



Customizing a dashboard



Flashback: dataset

Tableau - Book1

Connections

- superdata
- superhero-wikis

Files

- superdata.csv
- superhero-wikis.csv

superdata.csv+ (Multiple Connections)

superdata.csv

superhero-wikis.csv

Connection: Live

Filters: 0 | Add

Sort fields Data source order

Show aliases Show hidden fields 17 rows

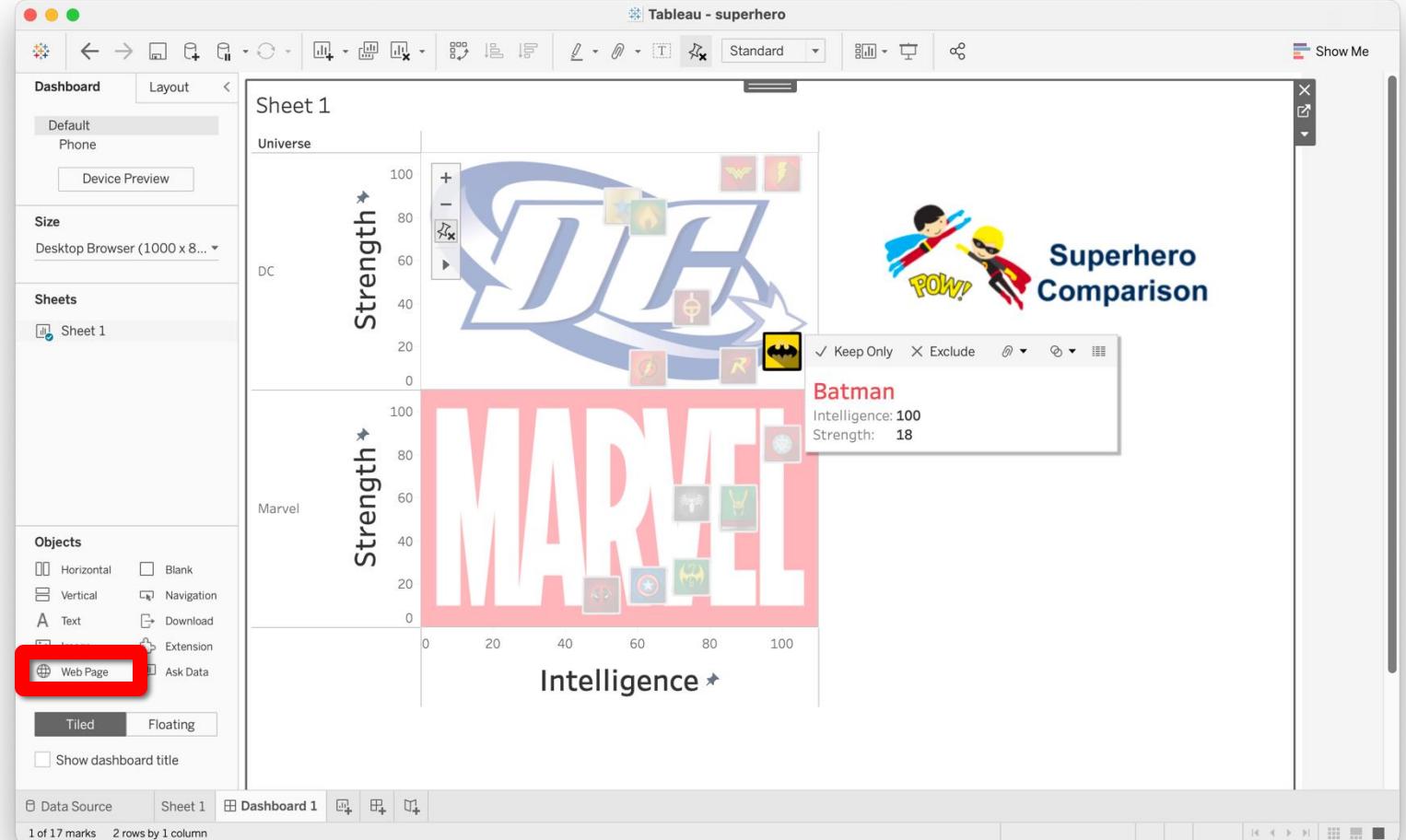
superdata.csv	superhero-wikis.csv							
Intelligence	Strength	Speed	Durability	Power	Combat	Abc	Universe	Name (superhero-wikis.csv)
63	80	50	80	65	80	DC	Aquaman	https://en.m.wikipedia.org/wiki/Aquaman_(DC_Comics)
100	18	27	42	37	100	DC	Batman	https://en.m.wikipedia.org/wiki/Batman
56	85	53	50	72	40	DC	Booster Gold	https://en.m.wikipedia.org/wiki/Booster_Gold
63	19	35	56	46	100	Marvel	Captain America	https://en.m.wikipedia.org/wiki/Captain_America
100	100	67	95	62	56	DC	Captain Marvel	https://en.m.wikipedia.org/wiki/Captain_Marvel_(Marvel_Comics)
50	15	30	100	100	100	Marvel	Deadpool	https://en.m.wikipedia.org/wiki/Deadpool
63	10	100	50	57	32	DC	Flash	https://en.m.wikipedia.org/wiki/The_Flash
75	23	35	42	43	100	Marvel	Iron Fist	https://en.m.wikipedia.org/wiki/Iron_Fist
100	85	58	85	100	64	Marvel	Iron Man	https://en.m.wikipedia.org/wiki/Iron_Man
88	57	47	85	85	56	Marvel	Loki	https://en.m.wikipedia.org/wiki/Loki

Data Source Sheet 1

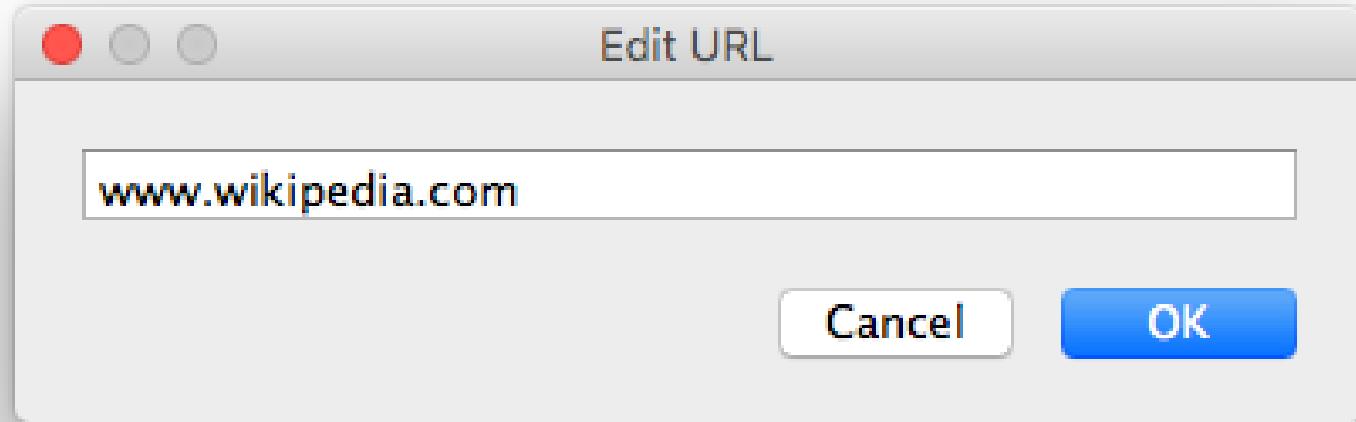
superhero-wikis.csv
Wikipedia Page

- [https://en.m.wikipedia.org/wiki/Aquaman_\(DC_Comics\)](https://en.m.wikipedia.org/wiki/Aquaman_(DC_Comics))
- <https://en.m.wikipedia.org/wiki/Batman>
- https://en.m.wikipedia.org/wiki/Booster_Gold
- https://en.m.wikipedia.org/wiki/Captain_America
- [https://en.m.wikipedia.org/wiki/Captain_Marvel_\(Marvel_Comics\)](https://en.m.wikipedia.org/wiki/Captain_Marvel_(Marvel_Comics))
- <https://en.m.wikipedia.org/wiki/Deadpool>
- https://en.m.wikipedia.org/wiki/The_Flash
- https://en.m.wikipedia.org/wiki/Iron_Fist
- https://en.m.wikipedia.org/wiki/Iron_Man
- <https://en.m.wikipedia.org/wiki/Loki>

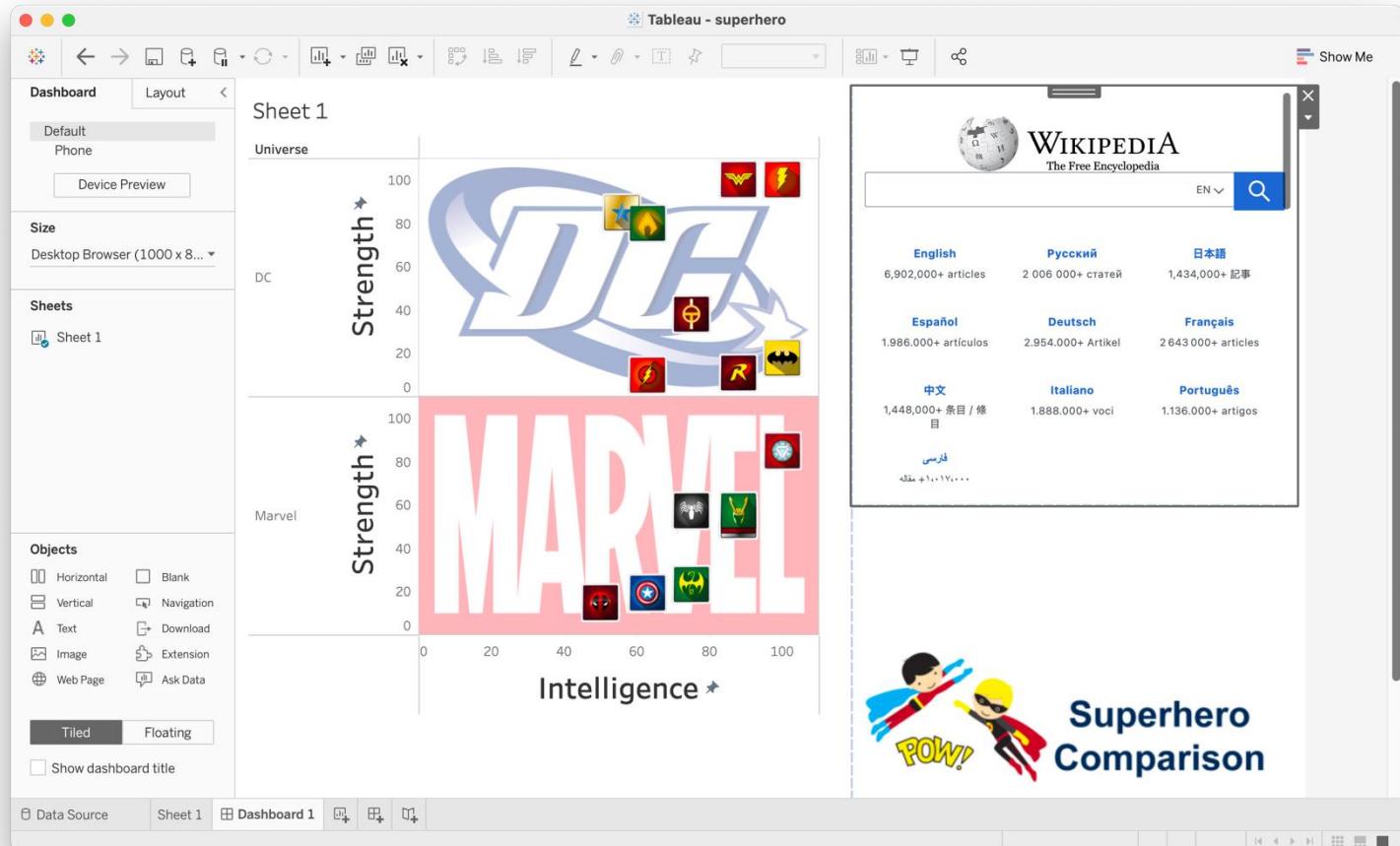
Load external data on click



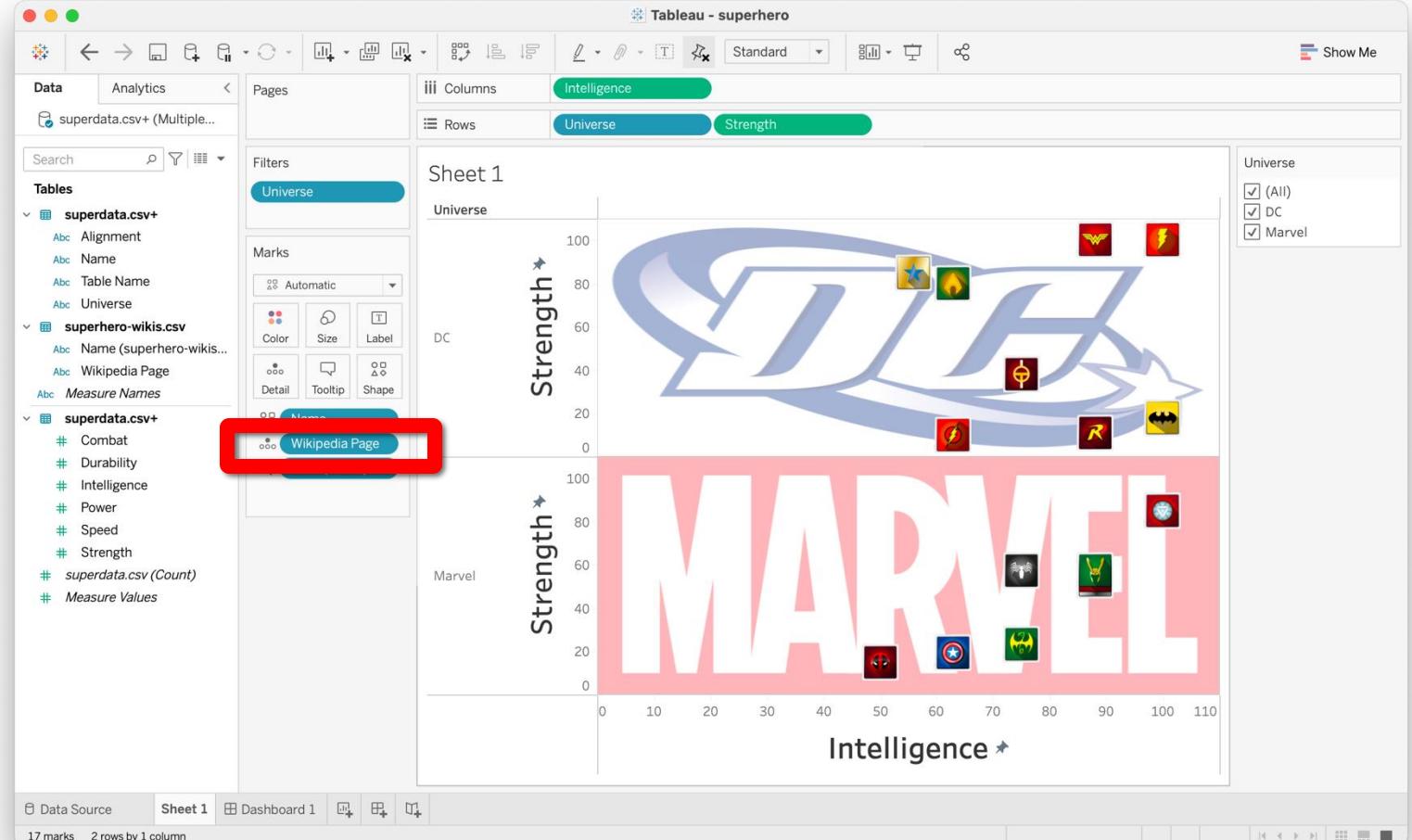
Load external
data on click



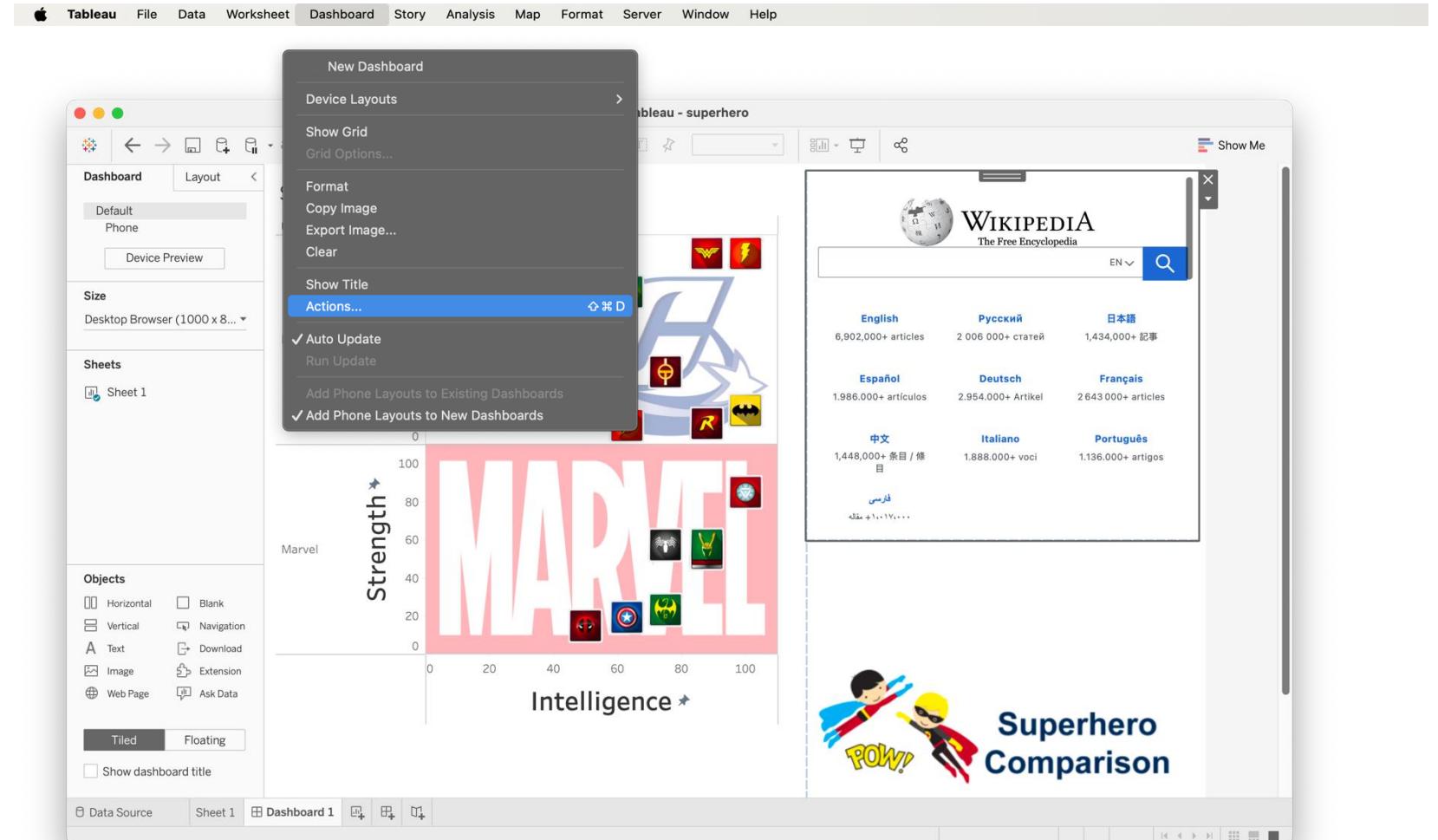
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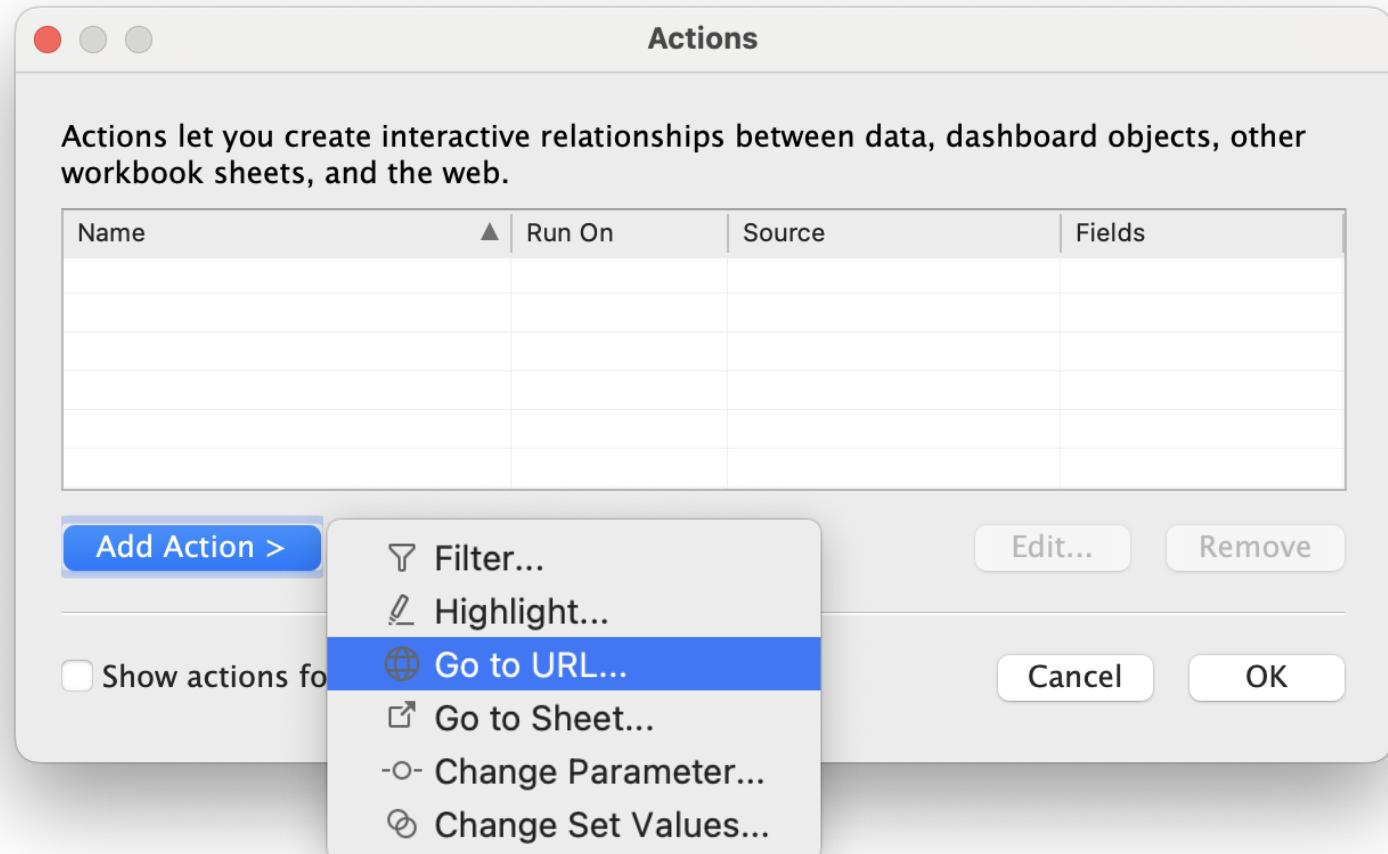
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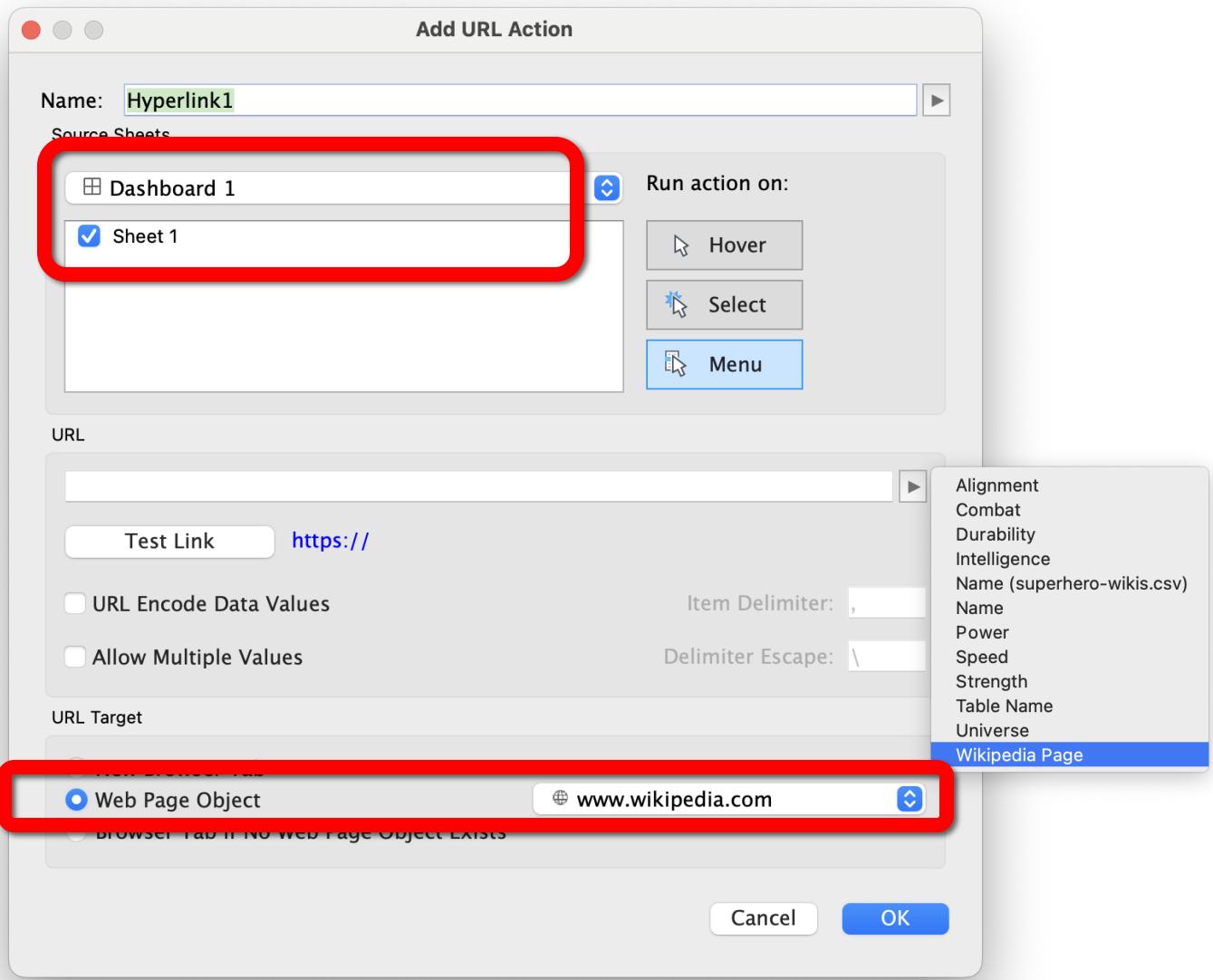
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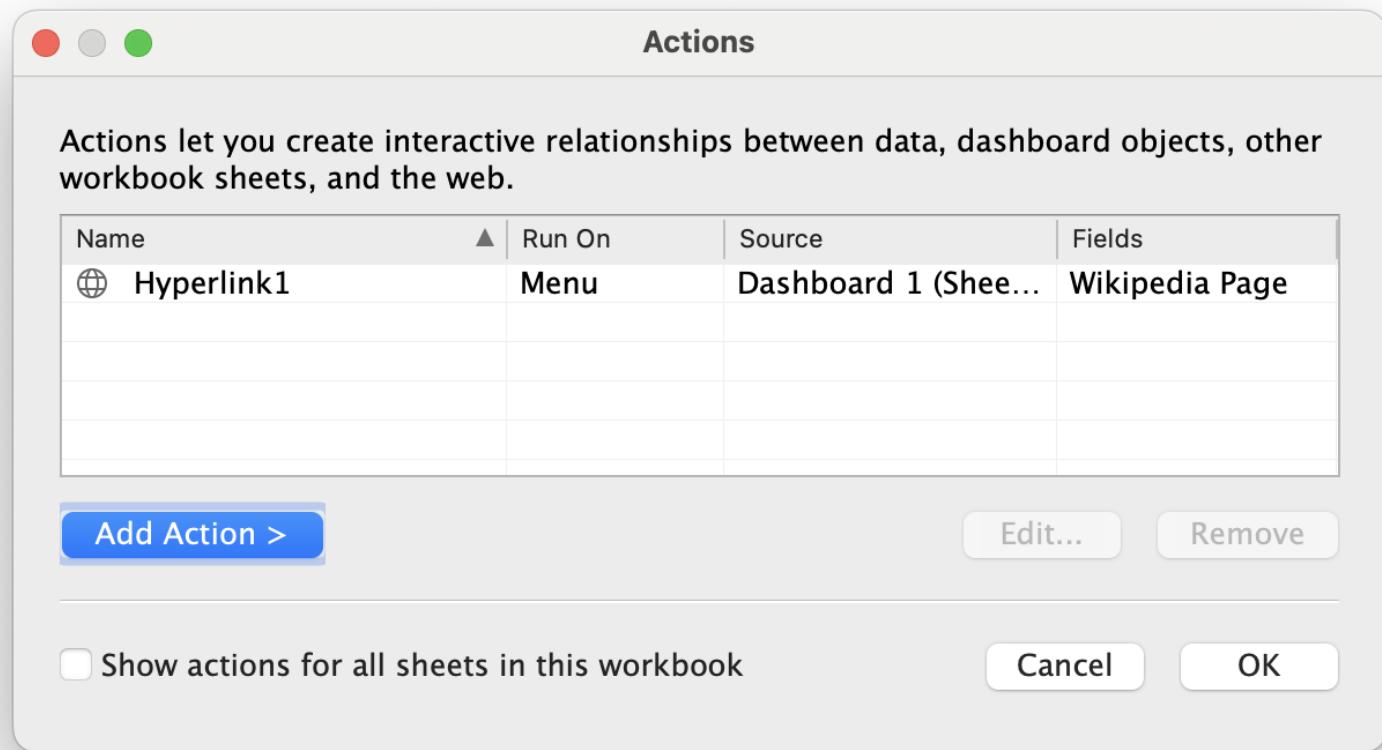
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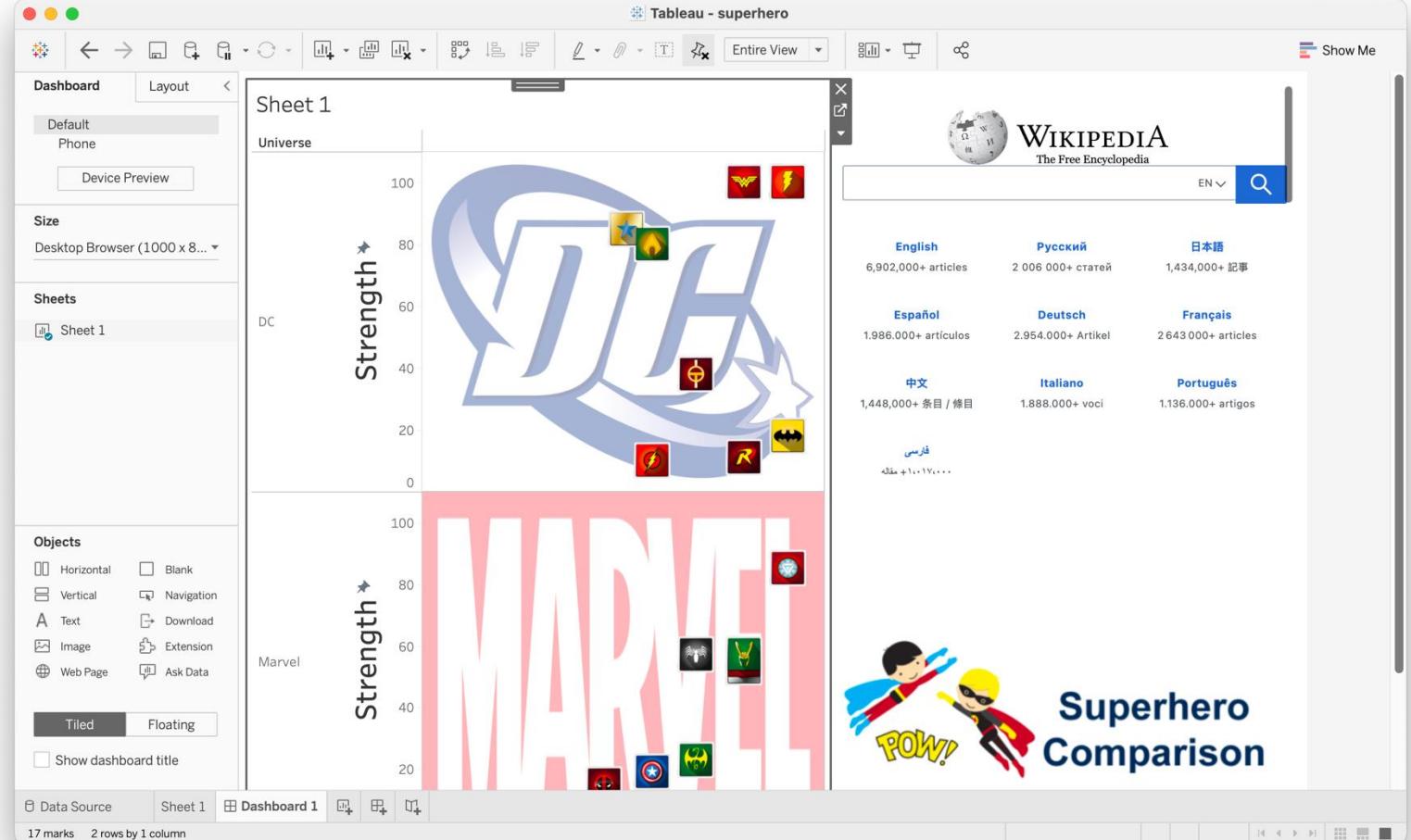
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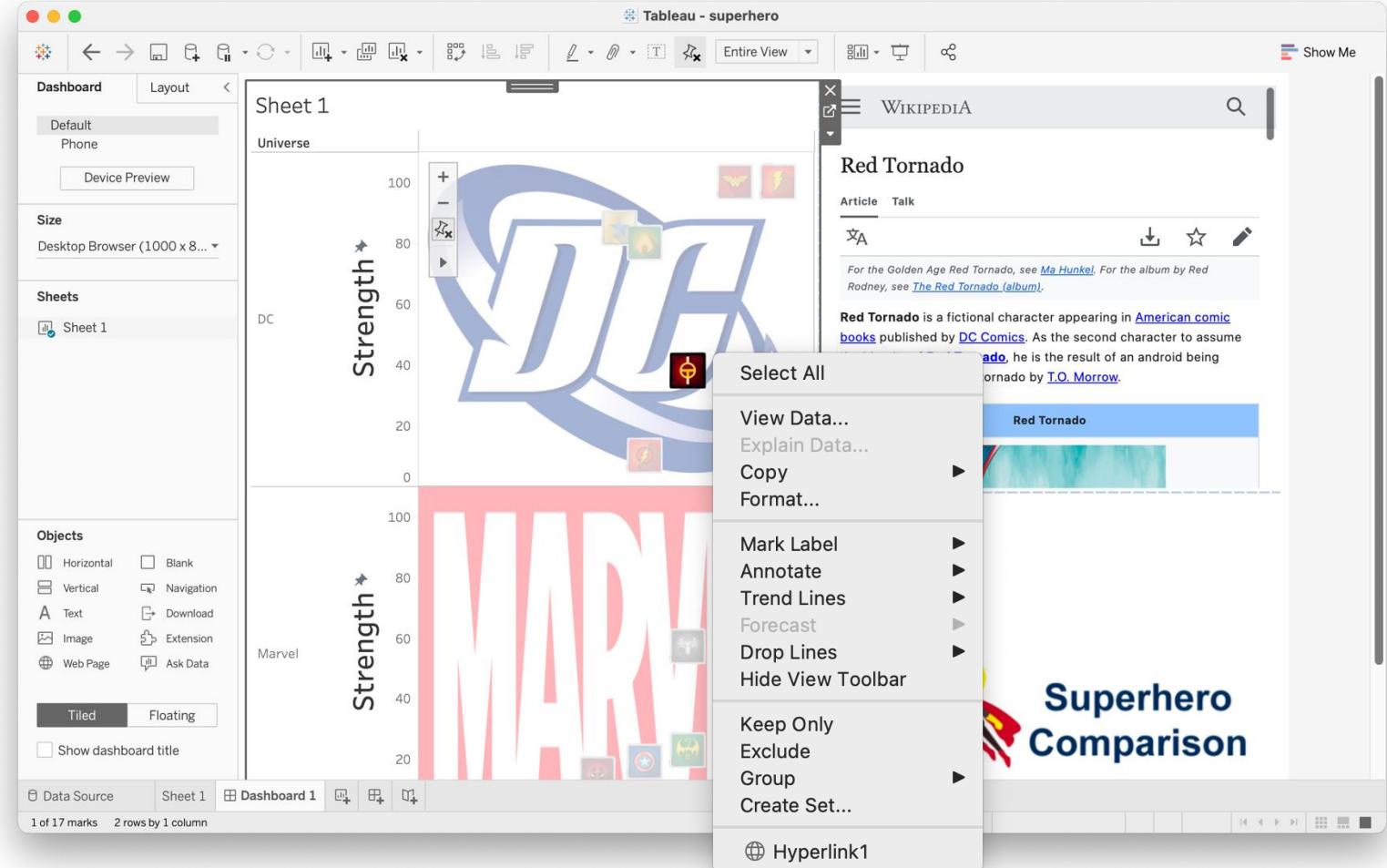
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Your Turn!

Find a group.

Download Students.zip from the course website. The README explains the datasets included. Choose at least 2 datasets, join them in Tableau, and create a dashboard.