Data Visualization With Tableau

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Learning Outcomes

- Introduce the idea of data visualization and discuss options for creating them
- Introduce Tableau Public and demonstrate how it can be used to create data visualizations
- Experiment with a basic dataset and highlight how to get started to create a simple viz
- Discuss potential ways Tableau can be used at your library

What Is Data Visualization?

"'All data visualizations map data values into quantifiable features of the resulting graphic. We refer to these features as aesthetics" (Wilke, 2019)

Types of data visualization include:

- Scientific Visualization
- Information visualization
- Infographics

Options for Data Viz

Power BI	Pros: Intuitive interface, integrates well with Microsoft products, affordable pricing Cons: Performance issues with very large datasets
+ableau	Pros: Strong support community due to high use (over 60, 000 accounts), easy public sharing, integrates well with large live updating datasets Cons: Advanced features have a steeper learning curve
QlikView	Pros: Highly customisable, wide feature set Cons: Free option comes with limited user keys (i.e. you can't open your viz on different computers), better for experienced users
FusionCharts	Pros: Large library of live templates, big range of export options, very mobile friendly Cons: Requires familiarity with Javascript

All about Tableau Public

Tableau Public is a free data visualization tool that can be used to:

- Tell a story with your data "vizzes"
- Find relevant & interesting data visualizations using hashtags
- Share vizzes on your Tableau Public profile

https://public.tableau.com/s/

ChildrensLit

Jumanji /
2011

Beezus and Ramona /
2013

Divergent /
2011

The fault in our
stars /
2012

Ramona and
her father /
2013

Allegiant /
2013

Mockingjay /
2010

Are you there God? It's me, Margaret. /
2014

Miss Brooks loves books
(and I don't) /
2010

Press here /
2011

Ramona the
brave /
2013

Little house on the prairie /
2010

Insurgent /
2012

Oz, the
complete
collection /
2013

Pete the
cat and
his four
groovy
buttons /
2012

Wonder /
2012

Ramona Quimby, age 8 /
2013

A ball for Daisy /
2011

The dark is rising sequence /
2013

Crank /
2010

Ramona the pest /
2013
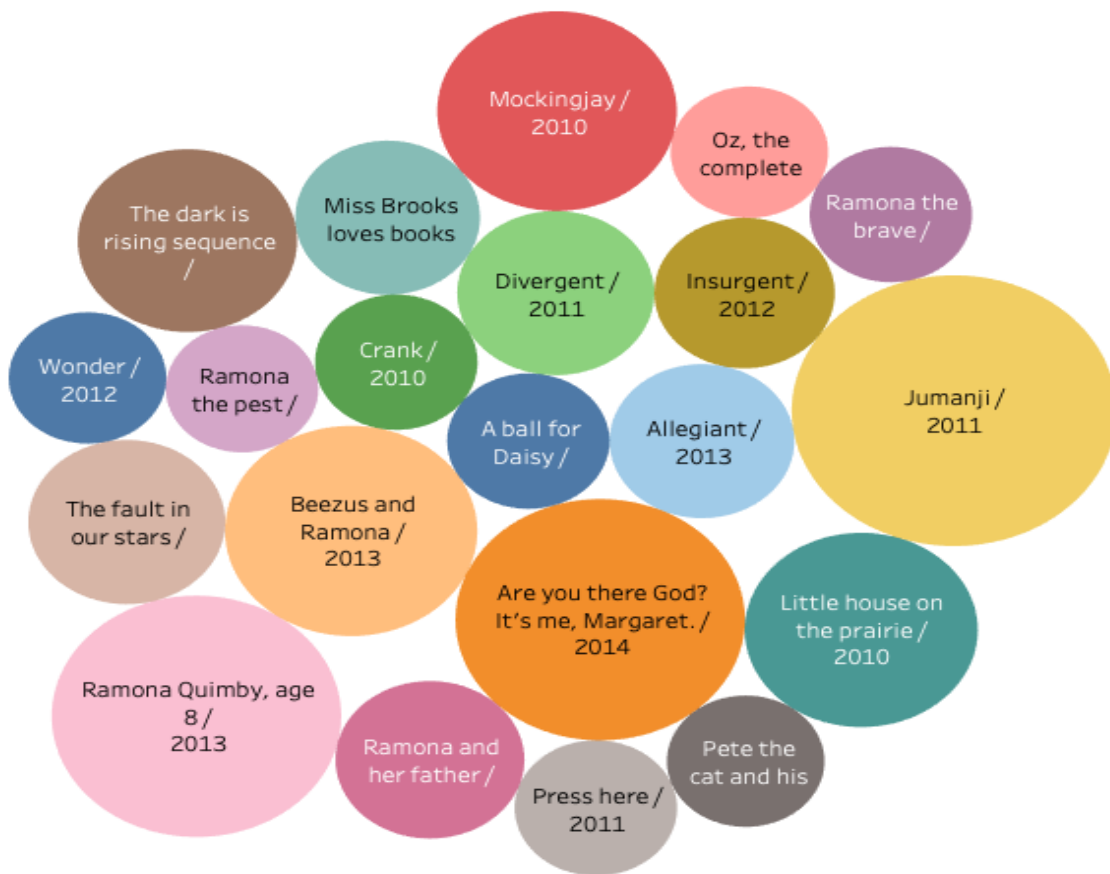
ChildrensLit

- Mockingjay / 2010
- Oz, the complete
- The dark is rising sequence /
- Miss Brooks loves books
- Ramona the brave /
- Divergent / 2011
- Insurgent / 2012
- Crank / 2010
- Ramona the brave /
- Wonder / 2012
- Ramona the pest /
- Jumanji / 2011
- A ball for Daisy /
- Allegiant / 2013
- The fault in our stars /
- Beezus and Ramona / 2013
- Are you there God? It's me, Margaret. / 2014
- Little house on the prairie / 2010
- Ramona Quimby, age 8 / 2013
- Ramona and her father /
- Press here / 2011
- Pete the cat and his
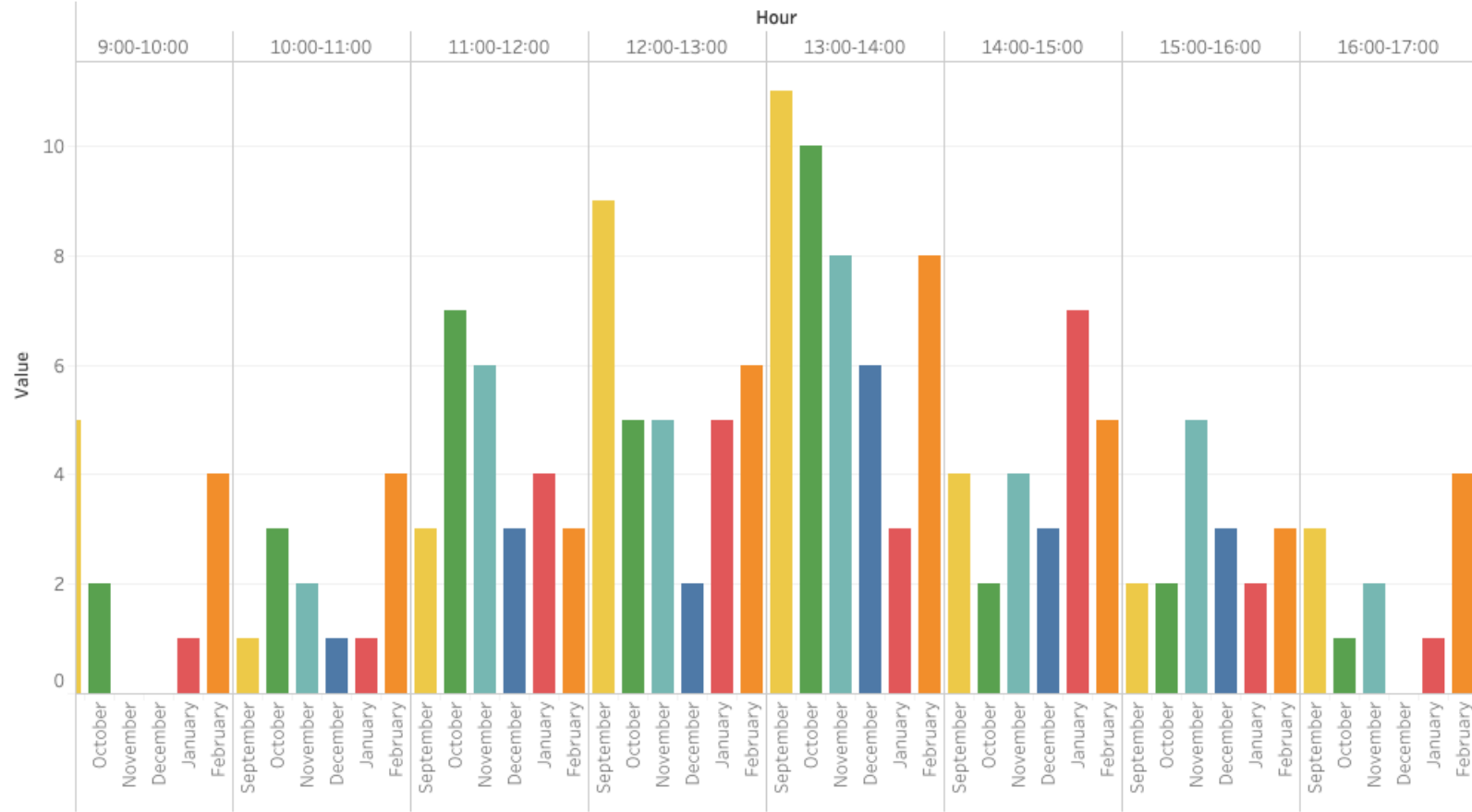
2019 Chester Fritz Library Floor Counts

Floor Count: 1.0 – 465.0

Q1

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
			4	12	15							64	63						108	92
	51	57	124	78	78	35	89	137	167	160		91	97	176	312	303	262	139	72	
97	250	165	192	131	99		167	303	181	210	94	74			18	23	14		10	
	75	177	174	105	136	56		113	217	231	173	74	41	86	203	199	262	187	87	93
100	176			152			169	216	219	251	163			181	280	190	220	156	91	52
														199						

Q2

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	281	255	258	192	65	73				294	228	188	160							
171	320	295	263	169	84	79	353	420	414	329	168	35			18	22	21	28	20	
181	221	236	217	56				31	17	40	51	23				8	7			
	194	241	247	362	101	69		24	28	21	23	13						21		
233	246	389						1	19	23	13	15								

Q3

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	18	4	9		9							6	9		15	158	163	133	98	23
	11	12	9	14	11			3	4	6	5	4		78	148	162	185	140	87	38
	13	11	9	8	4			5	3	6	8	5		96	212	194	216	183	97	52
	7	10	12	4	9			12	12	9	12	10	4	144	233	322	191	138	97	48
	9	4	8				4	42	83	112	117	62		101	204					

Q4

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	173	235	160	83	34							126	79	84	209	226	359	202	111	75
128	231	215	188	101		31	179	232	210	258	217	84		142	271	258	299	194	141	168
152	228	199	241	180	90	43		112	209	249	176	99	57	373	465	371	248	143	6	
136	236	273	269	199	83	45	134	228	227	236	127	86	54		7	1		5	12	
154	270	185	220	173			116	174	80	25		7				2				

Monthly Totals

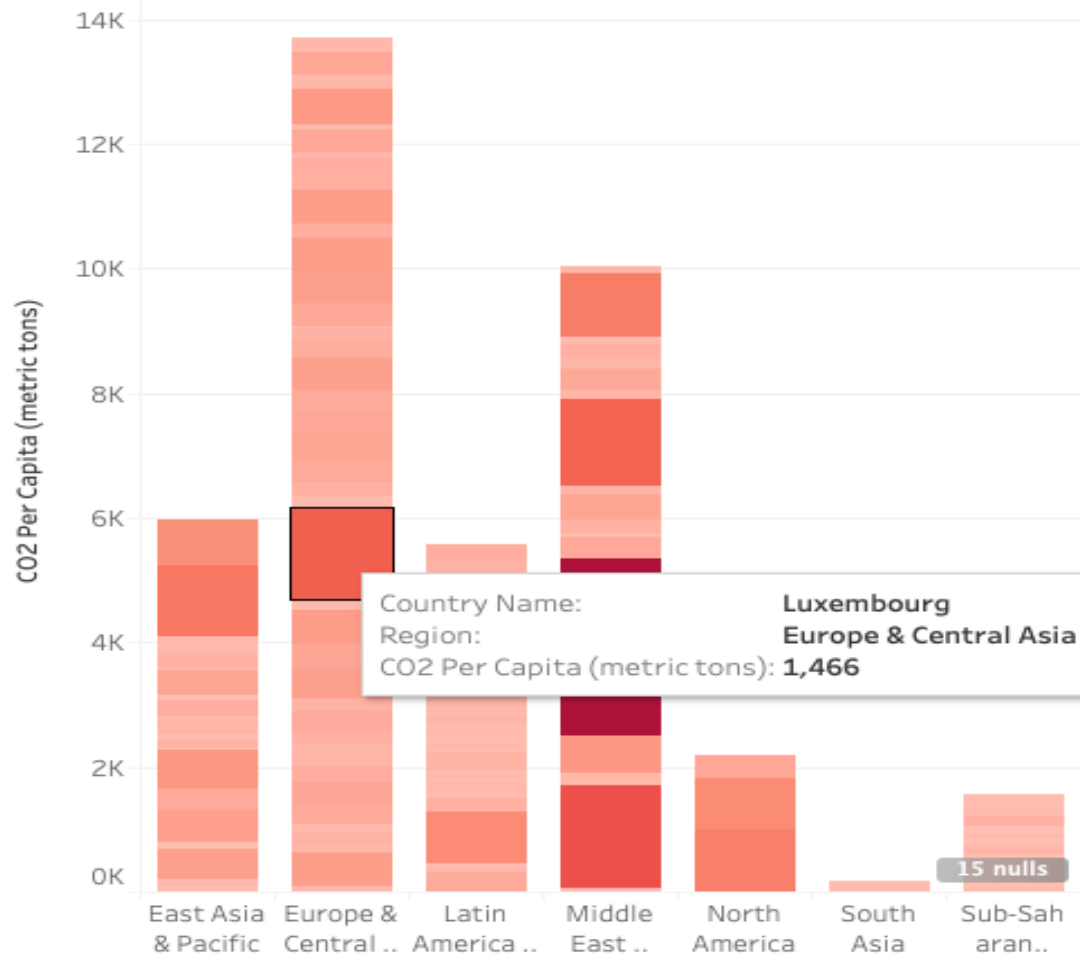| Month	Total
January	2,539
February	3,764
March	4,015
April	5,498
May	2,931
June	145
July	205
August	543
September	3,956
October	4,955
November	3,781
December	4,372

Location
- [x] (All)
- [x] 1st Floor-14 Study Area (i...
- [x] 1st Floor-15 Study Table (...
- [x] 1st Floor-16 Study Area (i...
- [x] 1st Floor-17 North Wall (i...
- [x] 1st Floor-18 Study Area (i...

Time Range
10:00:00 AM — 9:39:00 PM

+ableau

+ableau+public

Title

Census_USPoverty_2018_Example

Make sure your viz has a good title so people don't pass it by when they're browsing Tableau Public.

Permalink

http://www.

Plan on embedding your viz? This is an excellent way to drive traffic to your site.

Inspiration

Add URL to a Tableau Public viz or author profile

Did you leverage the community for your creation? Don't forget to give a shout out to those who helped!

Description

Census_USPoverty_2018_Example
#censusdata

A great description and relevant **#hashtags** can help people discover your viz.

Toolbar Settings

☑ Show view controls *Undo, Redo, Revert*

☑ Show author profile link

☑ Allow workbook and its data to be downloaded by others

Other Settings

☐ Show workbook sheets as tabs

Cancel   Save

Save your vizzes to your profile

Make them public and findable by adding hashtags

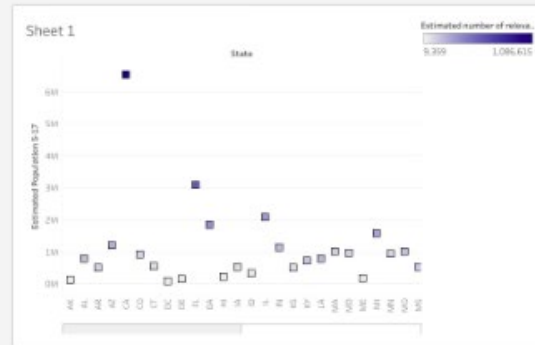Community of Practice aspect allows you to follow others

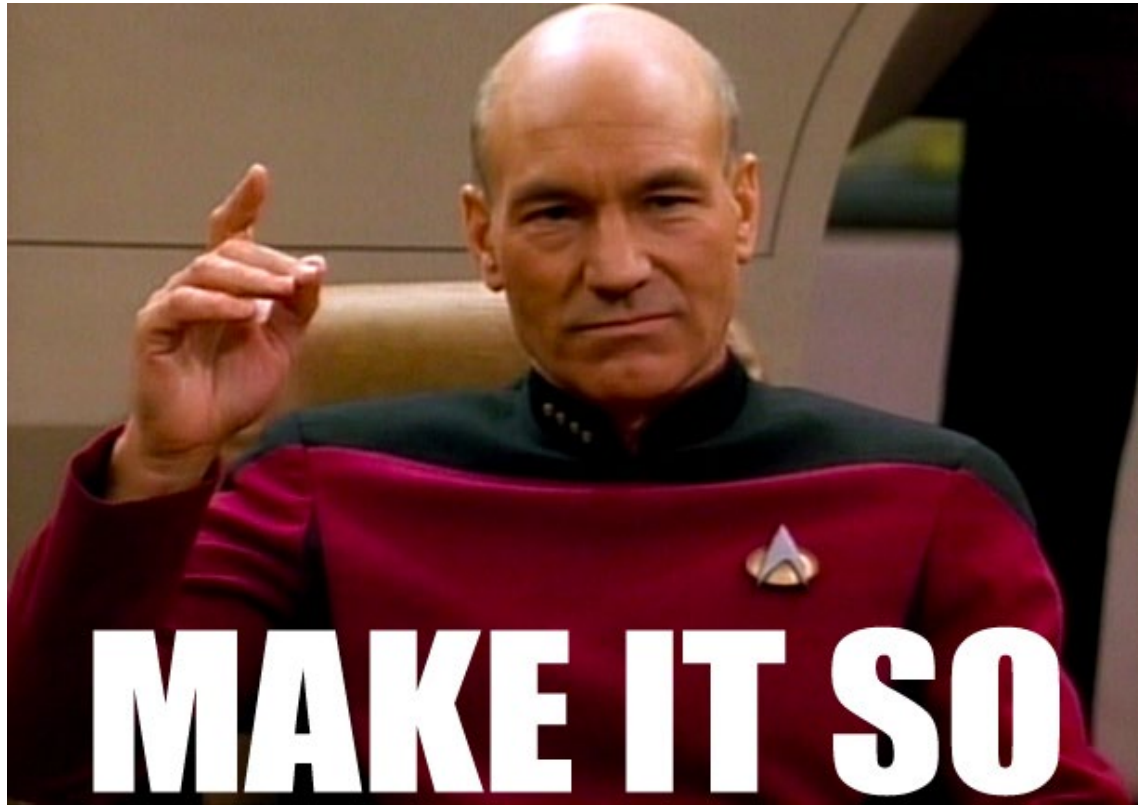# Experimenting with Tableau Public

Tableau Public Experiment Goals

- Connect to a dataset

- Start a new worksheet with the data

- Experiment with different combinations of measures & dimensions

- Find a data viz for your dataset

- Try using the color and details options in your marks box

Thoughts?

Further Resources

InfoVis Wiki: https://infovis-wiki.net/wiki/Main_Page

Data Visualization Catalog: https://datavizcatalogue.com/

Tableau Tutorials for Beginners: https://data-flair.training/blogs/tableau-tutorial/

Bibliography

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https://www.kdnuggets.com/a-comparative-analysis-of-top-6-bi-and-data-visualization-tools-in-

2018.html/. Accessed 16 Mar. 2020.

"Top 7 Data Visualization Tools Compared." *Logikk*, https://www.logikk.com/articles/top-data-

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