A large, bright pink geometric shape, resembling a triangle or a parallelogram, is positioned in the top-left corner of the slide.


Data visualisation for beginners

A workshop at UXLibs VI

A light grey geometric shape, resembling a triangle, is positioned in the bottom-right corner of the slide.



Hi, I'm
Luis

Librarian & Computer Scientist
with a  for User Experience!

Twitter @LuisInANutshell



Meet the team

(via visualizations)





#1 Mark your hometown on a map

**#2 On a line from A-Z, mark the
first letter of your forename**

**#3 Mark yourself inside two axes
("prior knowledge on the topic" and
"frequency of vis usage")**



*Geo-Scatterplot.
Watch scale! Europe was
flooded with post-its.*

#1 Mark your hometown on a map

**#2 On a line from A-Z, mark the
first letter of your forename**

*Scatterplots not suited if you
work with fixed values (like
A-Z), use bar chart instead.*

**#3 Mark yourself inside two axes
("prior knowledge on the topic" and
"frequency of vis usage")**

*"Classic" scatterplot to
visualise relation between two
attributes.*

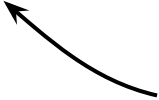


“Datenarten”

(Data Types)



“Datenarten” (Data Types)



*German humor.
Sorry.*



#1 Amounts (e.g. “number of books”)

#2 Proportions (e.g. “70% student users, 30% external users”)

#3 Distributions (e.g. “distribution of users in an age scale”)

#4 X/Y-Relationships (e.g. #3 in Meet the team)

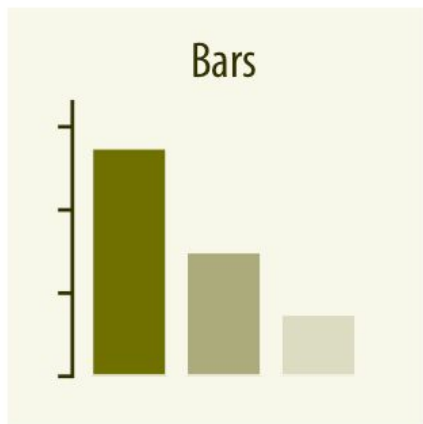
#5 Geodata (e.g. #1 in Meet the team)



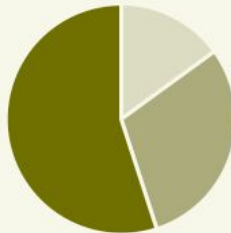


Finding the right visualisation type

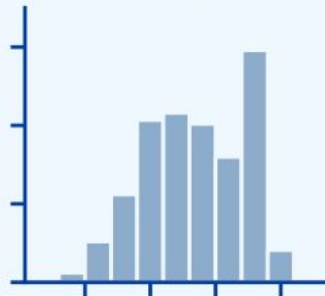




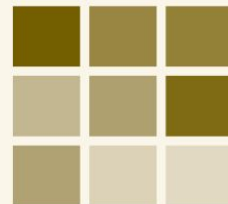
Pie Chart



Histogram



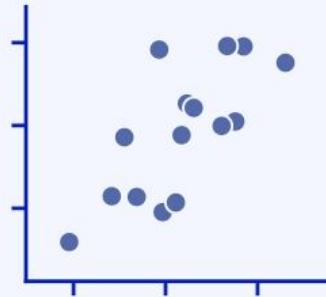
Heatmap



Parallel Sets



Scatterplot

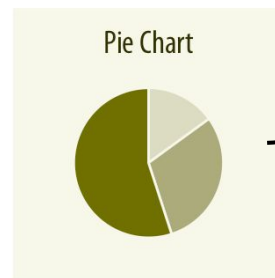


Map

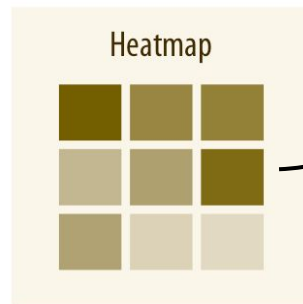




Geodata



Proportions



Amounts

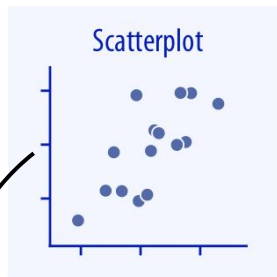


Amounts

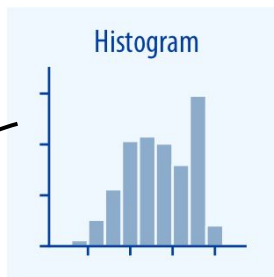
Proportions



Proportions



X/Y-Relationships



Distributions

A pink triangle is in the top-left corner, and a grey triangle is in the bottom-right corner. The text is centered in the white space between them.

A round of...







tinda

-tavisualization

*German humor as
well. Sorry (again).*

MOST WICKETS IN DEATH OVERS IN ODIS

SINCE THE START OF JANUARY 2017

■ WKTS ■ AVE

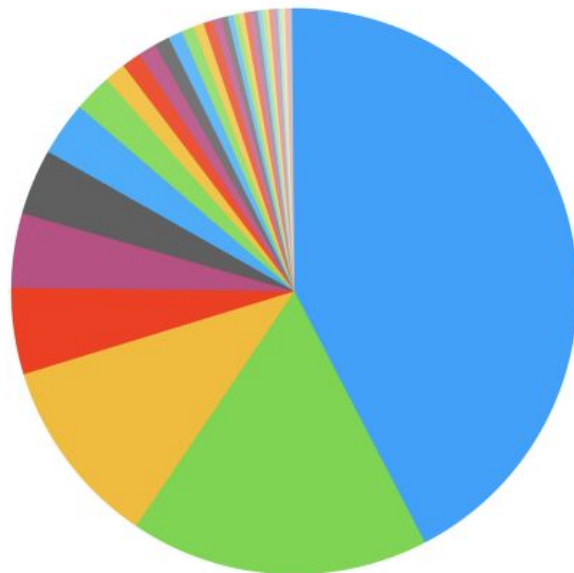


NUMBERS UPDATED TILL MAY 14, 2019

Contrast too low!
Why uppercase?



Which game(s) have you played the most?
3,994 responses

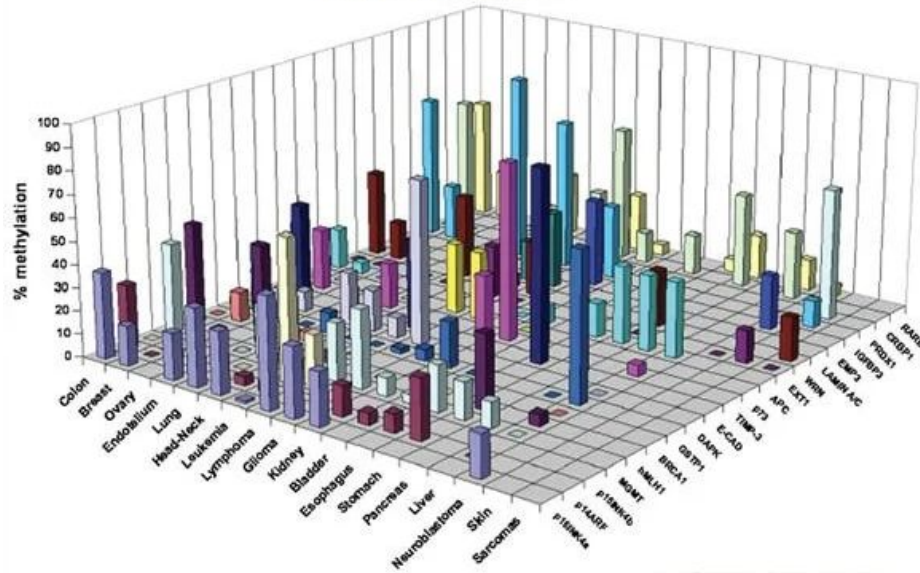


- Zelda
- The Legend of Zelda: Breath of the Wild
- Breath of the Wild
- BOTW
- Botw
- Breath of the wild
- BotW
- zelda
- Legend of Zelda: Breath of the Wild
- Legend of Zelda
- Zelda BOTW
- BoTW
- botw
- Zelda: Breath of the Wild
- Zelda BotW
- Zelda Breath of the Wild
- The Legend of Zelda
- Breath of The Wild
- The Legend of Zelda Breath of the Wild
- Zelda: BOTW
- Zelda: BotW
- Breath of the Wild
- Zelda breath of the wild
- Breath Of The Wild
- Legend of Zelda Breath of the Wild
- LoZ
- LoZ: BotW
- Zelda botw
- zelda botw
- breath of the wild
- Legend of zelda
- legend of zelda
- LoZ BOTW
- The Legend of Zelda: Breath of The Wild
- The legend of Zelda: breath of the wild
- ZELDA
- Zelda: BotW

Don't use pie
charts with too
many slices!



A CpG Island Hypermethylation Profile of Human Cancer



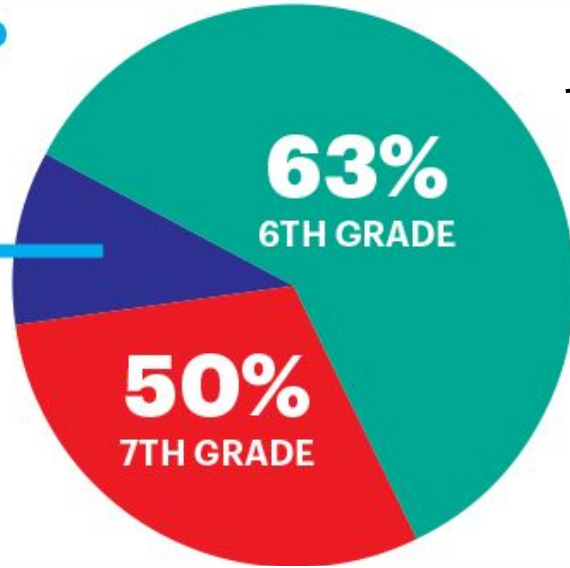
Hum. Mol. Genet. (2007) 16:R50-59

*Why? Stop
3D-Visualisations.*



PET OWNERSHIP BY GRADE

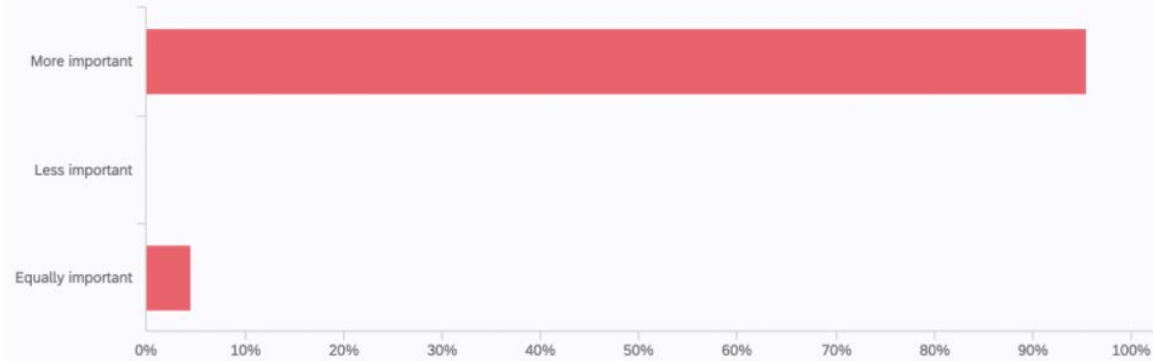
26%
8TH GRADE



*Numbers don't
add up to 100%!*



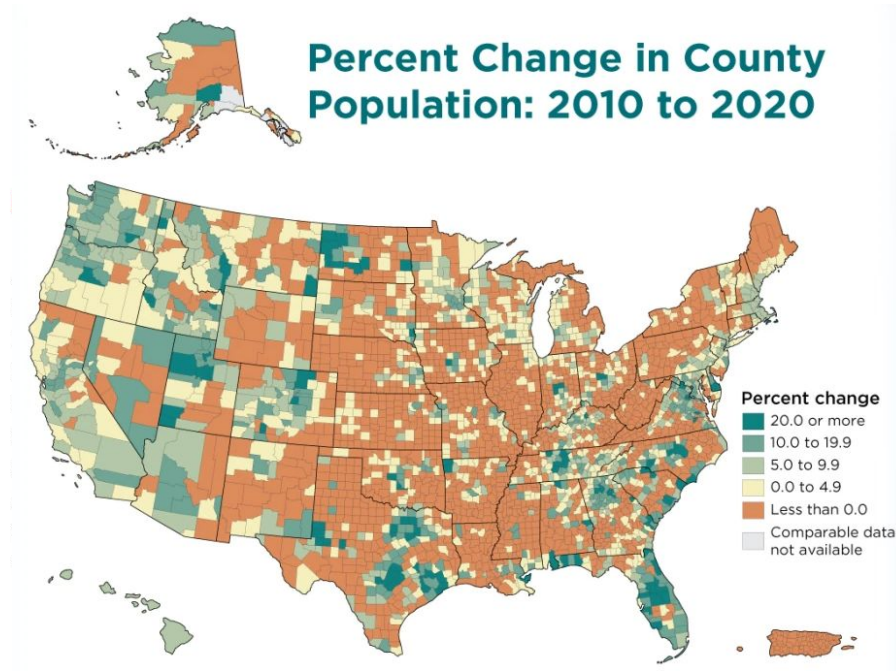
Do you think peer recognition is more or less important in a remote work environment?



Clarity is good!
Maybe change the
order of bars?



Low contrast colours. Too little explanations?

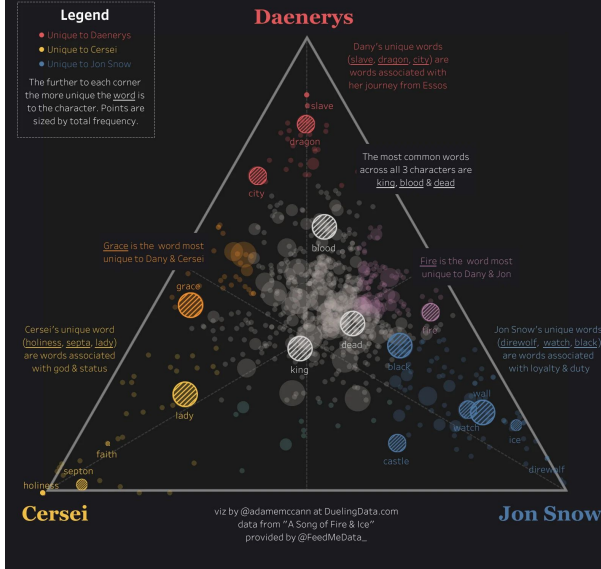


Better colours!



GAME OF THRONES IN WORDS

This viz shows the most unique words by character for each chapter in the 5 Game of Thrones books



Scatterplot but with more axes and variable size of dots (= bubble chart).

Use colours, fonts, etc. to experiment!





Takeaways





#1 Take a moment to think about data types

#2 Do you want to visualize? If so, what visualization type is suited?

**#3 Think about contrast, clarity, etc.
(see tinda-tavisualisation examples!)**





That's all, folks!



Colours

Coolers[1] generates beautiful colour palettes and has a feature (the glasses) to "see" different kinds of visual impairments. Colorbrewer[2] has different palettes and an option to only include those that are "colourblind-safe".

Tools

I normally use the programming language Python or JavaScript to visualize, so I have little experience here. However, here are two articles. The first provides a good and short overview[3], the second goes into more depth and even has nice examples[4].

Overview & Decision Helpers

There are several sites to help you choose the right visualisation type. Basically what we did, but with more types and nice charts. Data to Viz[5] is a nice flowchart to help you choose, the DataVizCatalogue[6] provides a good overview and the Directory of Visualizations[7] has elaborate explanations.

[1] <https://coolers.co/generate>

[2] <https://colorbrewer2.org>

[3] <https://towardsdatascience.com/8-best-data-visualization-tools-that-every-data-scientist-should-know-2287c9c45cc4>

[4] <https://www.toptal.com/designers/data-visualization/data-visualization-tools>

[5] <https://www.data-to-viz.com>

[6] <https://datavizcatalogue.com>

[7] <https://clauswilke.com/dataviz/directory-of-visualizations.html>

Visualisation Sources

<https://www.syntaxtechs.com/blog/data-visualization-examples>

<https://www.easel.ly/blog/17-captivating-data-visualization-examples>

<https://www.toptal.com/designers/data-visualization/data-visualization-best-practices>

**WAS IT A
MATCH?**

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