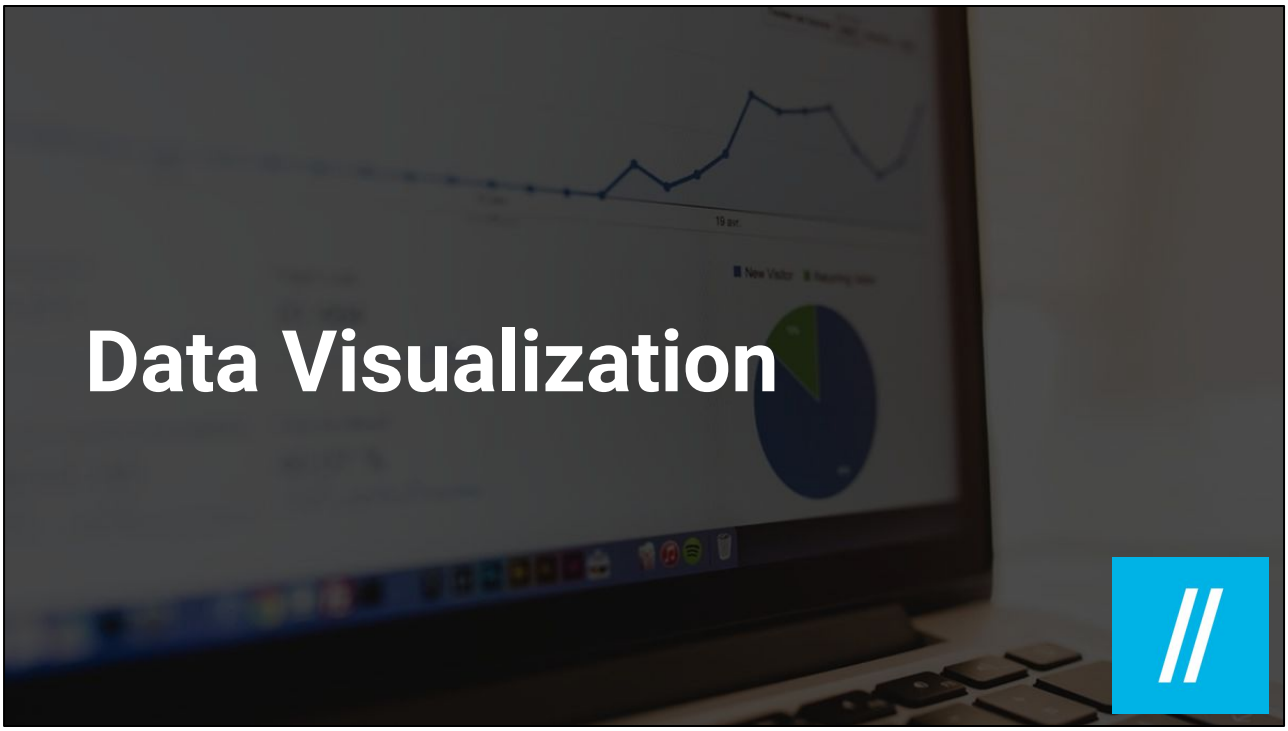
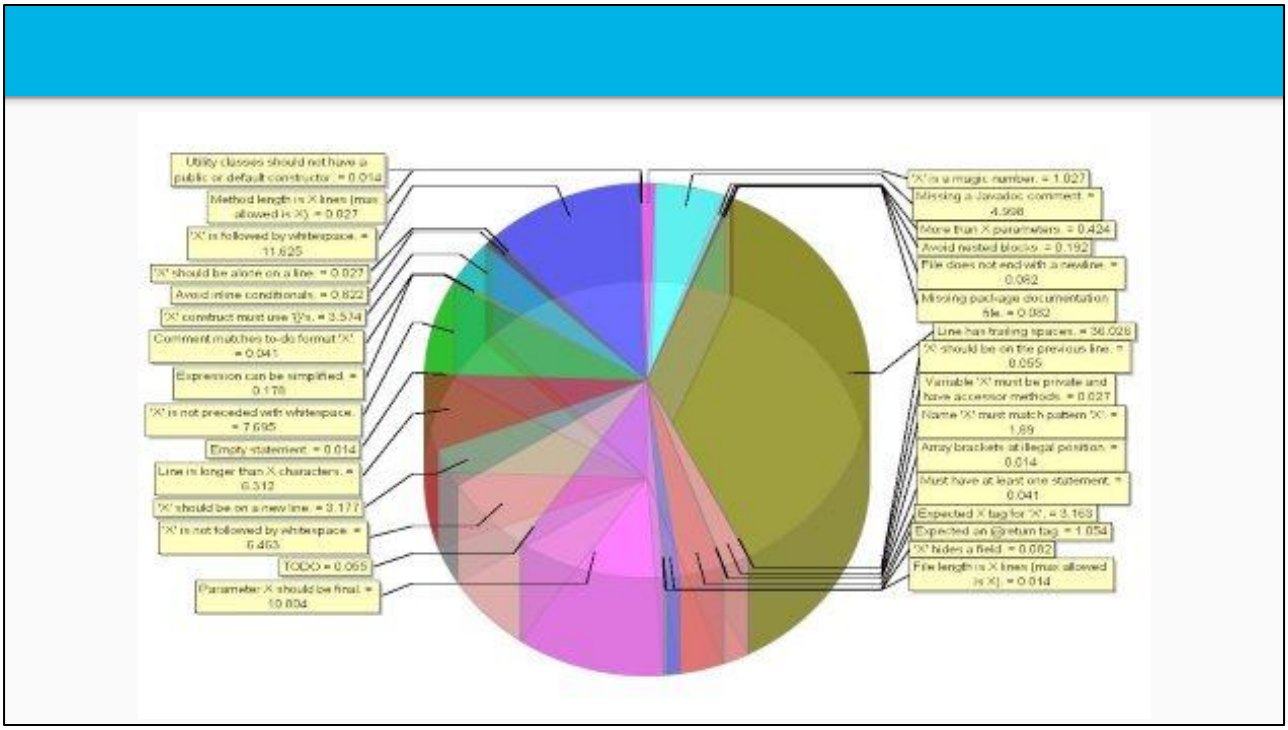
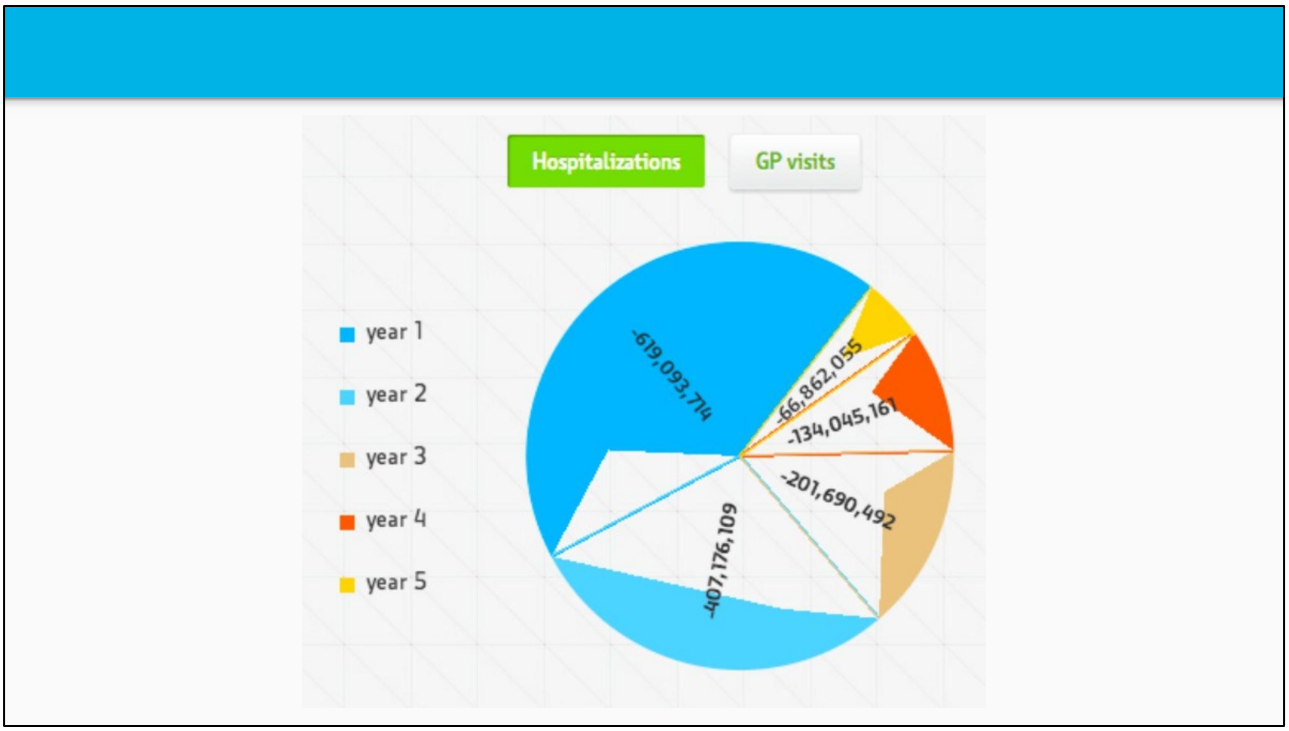


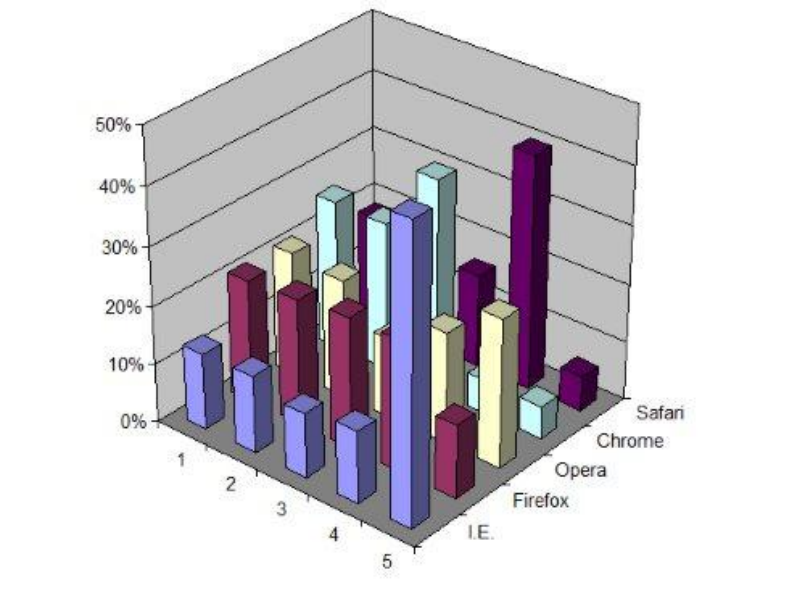
Made with <3 by Lindsey Berlin



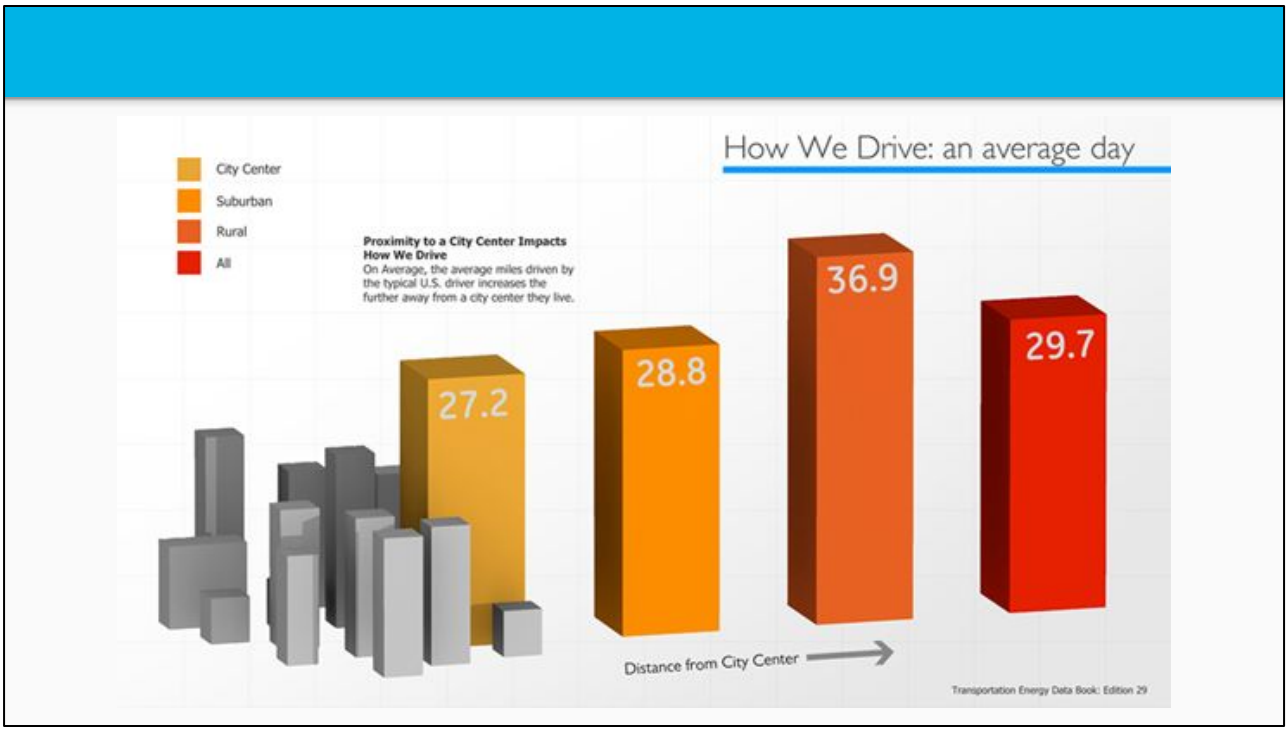
Gotta love a terrible pie chart. Part of why we can't read this is because of rendering, but also it's just bad. Also ew transparency. Way too much information here, why are the labels so explicit? Etc, etc.
Image Source:
http://livingqlikview.com/the-9-worst-data-visualizations-ever-created/
Going through some bad examples. What do these even mean? Why are they bad? Colors, type, too much information? Etc.



What in the world is this trying to convey? Why is some of it colored in but not all of it? Pie charts are the worst.
Image source:
https://gizmodo.com/8-horrible-data-visualizations-that-make-no-sense-1228022038

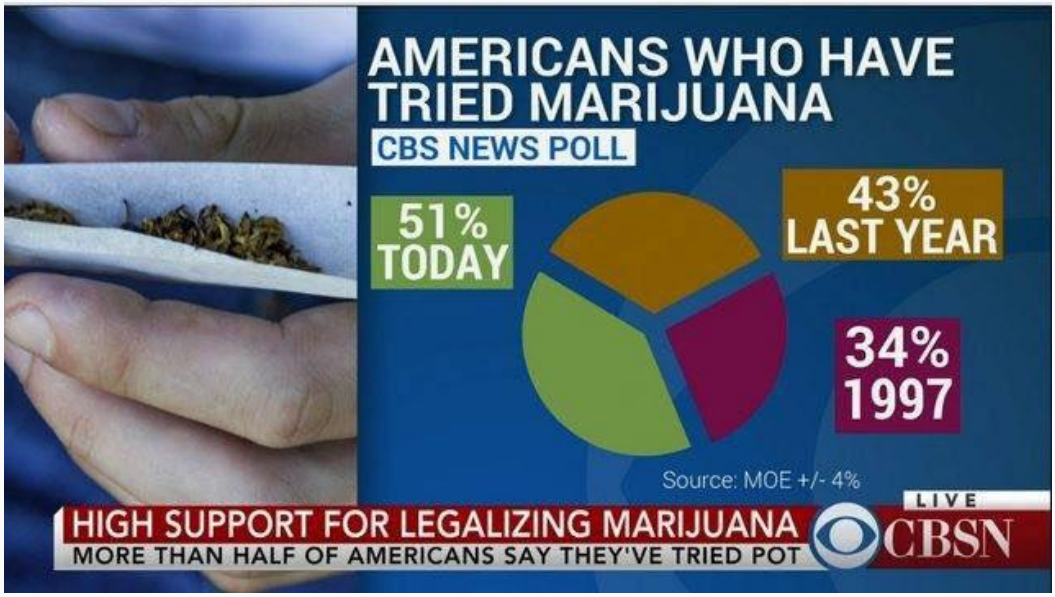


What is even happening? Can't see your data points, no context, no sense if things are bigger or smaller than each other, too much all at once. Also an example that there are bad visualizations that aren't pie charts.
Image Source:
http://livingqlikview.com/the-9-worst-data-visualizations-ever-created/



Is ‘all’ really a column here?? Very visually confusing, since it seems like something beyond ‘rural’ is driving less. Also, duh? Also shows how something that seems well-put-together can still be a bad graphic - this starts from a cool visual idea, making each thing like a building, and is put together in a visually appealing way, but is still a bad visualization

Image Source:
https://visual.ly/blog/poor-visualization-can-do-more-harm-than-good/



Ah, my all time favorite, the world's worst pie chart.
Image Source:
http://www.painting-with-numbers.com/blog/getting-high-on-bad-data-visualization/

Phew.

Check these out instead:

https://www.reddit.com/r/dataisbeautiful/top/?t=all
https://informationisbeautiful.net/
https://pudding.cool/

Alright, now let's look around at some GOOD examples.
Remember - we're not asking you to be graphic designers, or artists, or visual journalists. But the difference between a bad visualization and a good one can be the difference between your analysis meaning something versus it being left on the sidelines.

Visualization Types

Let's look at some examples:

- https://datavizproject.com/
- https://python-graph-gallery.com/
- https://seaborn.pydata.org/examples/index.html

10 Questions to Ask Yourself

1. Does it tell a story?
2. Is it easy to understand?
3. Is it tailored to my target audience?
4. Does it answer specific questions?
5. Is it user-friendly?
6. Is it useful?
7. Is it honest?
8. Is it succinct?
9. Does it provide context?
10. Without requiring context?

NOTE! These rules are true for ANY presentation! Presentation of information through data, or just a ppt presentation, everything. Feel free to grade me on these 10 ideas here!
Source: https://thekinigroup.com/importance-data-visualization/

1) A story is vital. What's the point of your data if you're not giving it a why - with important actors, background, a conclusion. You should bring your audience from point a to point b.
2) If they don't understand what you're saying with your visualization, why did you make it? If someone needs you to stand next to them and explain what each piece is, you probably should rethink what you can make more explicit, to the point, etc.
3) Don't give a CEO a data visualization that requires a background in data science to understand.
4) Make sure you're answering the questions you've asked, and not ones you haven't. If you're asking a question, make sure the answer is presented.
5) Again, if you need to be standing next to someone guiding them through the visualization, you should brainstorm ways to improve.
6) A bit repetitive, but still - make sure that story, those questions, are all getting useful and usable answers with your visualization.
7) Data visualizations can drastically distort your data! Don't let them! Make sure your depiction is true to the data beneath it.
8) This ties into being easy to understand. The best visualizations are short,

1) sweet and to the point.
2) Your audience should know what they're learning from your visualization and why.
3) BUT! Too much context is clutter! If you've tailored the visualization to your audience, it shouldn't explain things that audience is going to know.

Further Resources

- Python Matplotlib guide (the theory of matplotlib, with examples): https://realpython.com/python-matplotlib-guide/
- The best Seaborn tutorial, through Pokemon stats: https://elitedatascience.com/python-seaborn-tutorial
- 2010 TED Talk on data visualization from Information is Beautiful: https://www.ted.com/talks/david_mccandless_the_beauty_of_data_visualization (Don't have 20 minutes? Check out the last 8, on perspective, here)