Data Viz with

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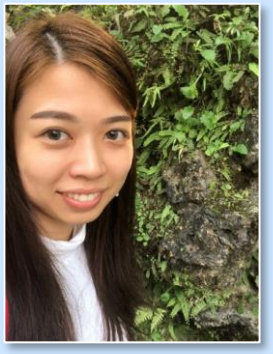

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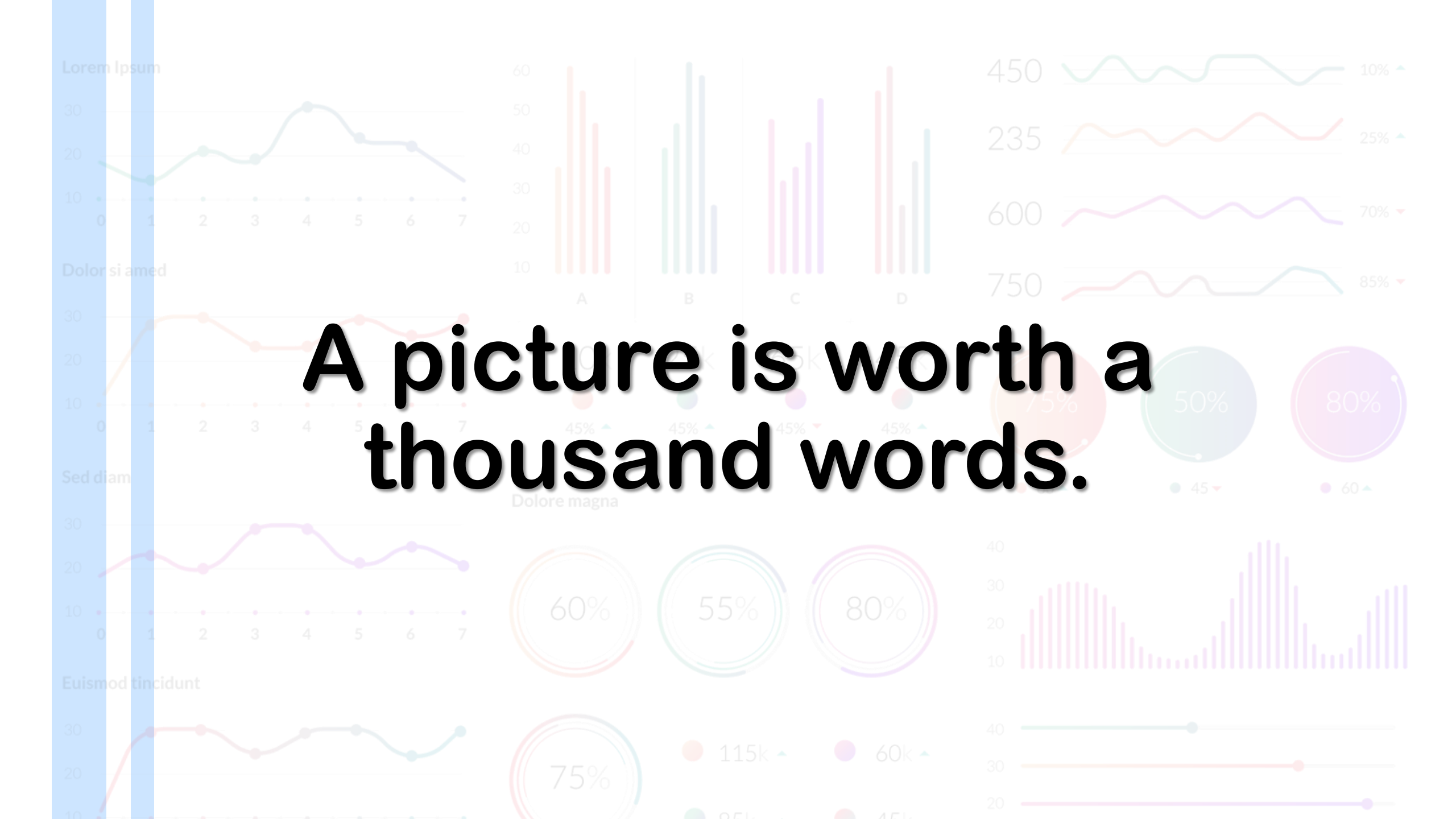
What is Data Visualization??

The use of various **visual aids** on data to describe, represent, contrast, discover patterns, draw attention, stimulate interest, focus on, …


A picture is worth a thousand words.

Find Stories in Our Data

We can **imagine** various stuffs when looking at a data.

This gives us **insights**!

Tell Stories using Our Data

Knowing data helps us **select intended perceptions** to **convey our messages**.

Understanding Data Types

Discrete
Countable data

Continuous
Measurable data

Binary
Only 2 categories

Nominal
More than 2 categories

Ordinal
Categories with orders

Missing Values

Non-zero value

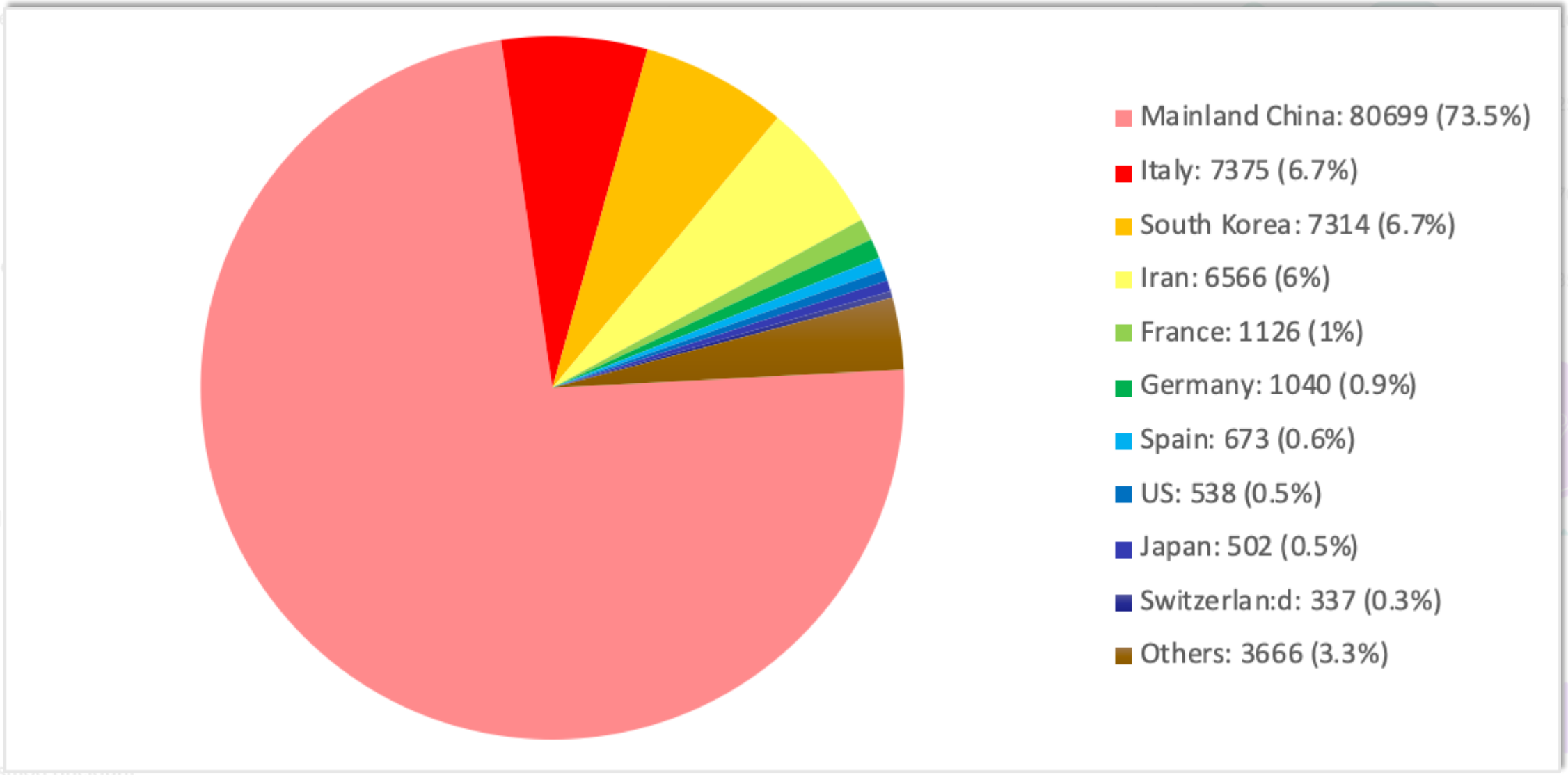
0

null

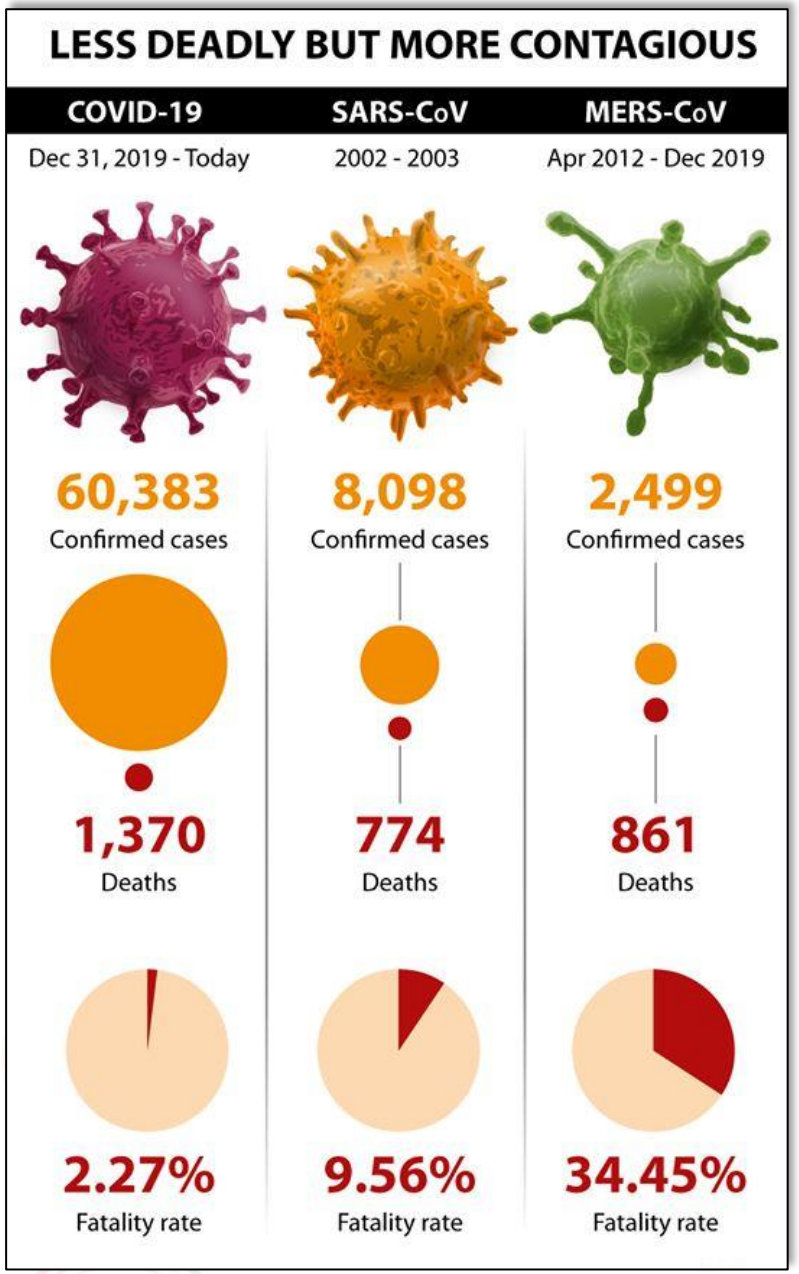
undefined

[Meme] I dont have a good title for this.

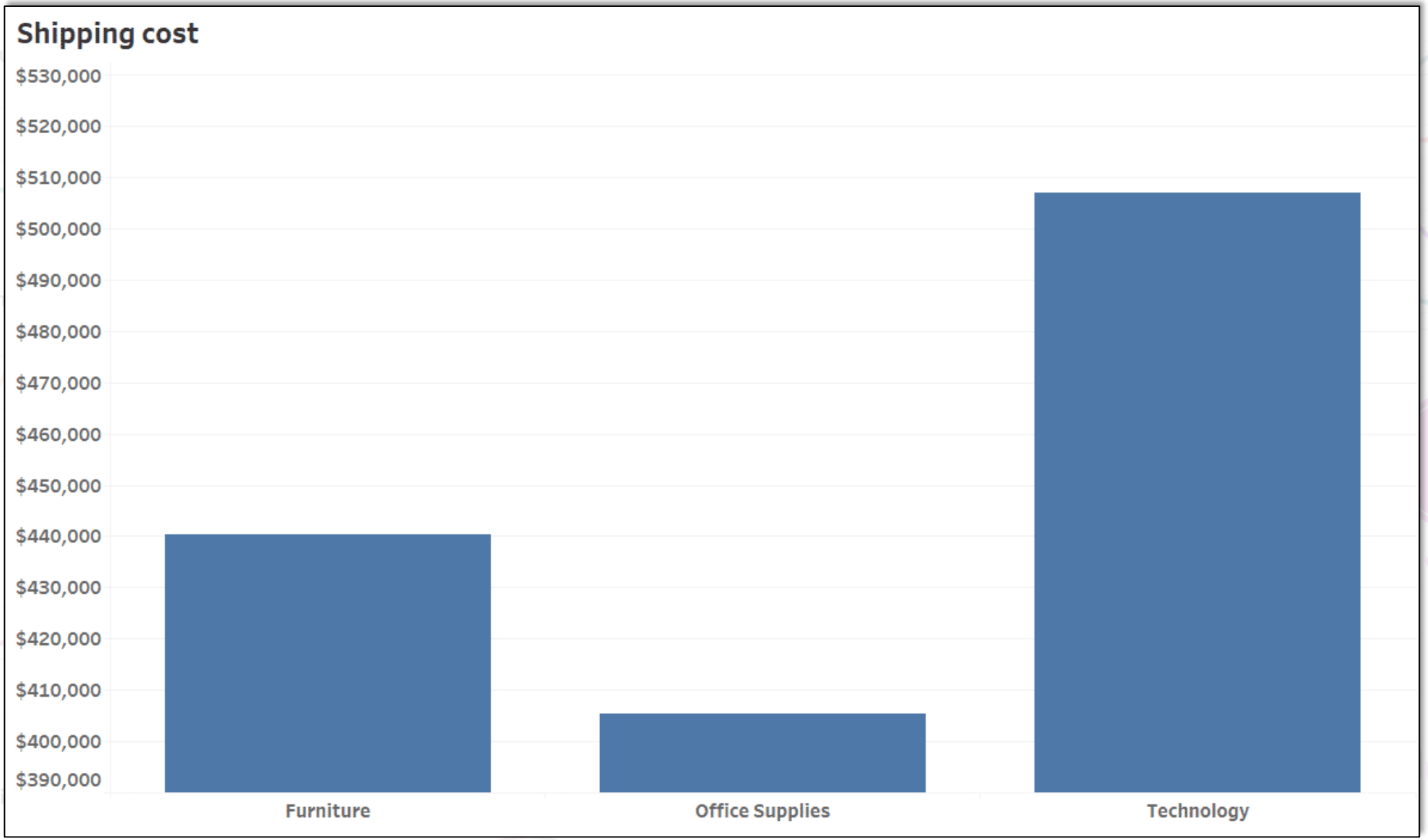
Let’s look at some examples of chart.



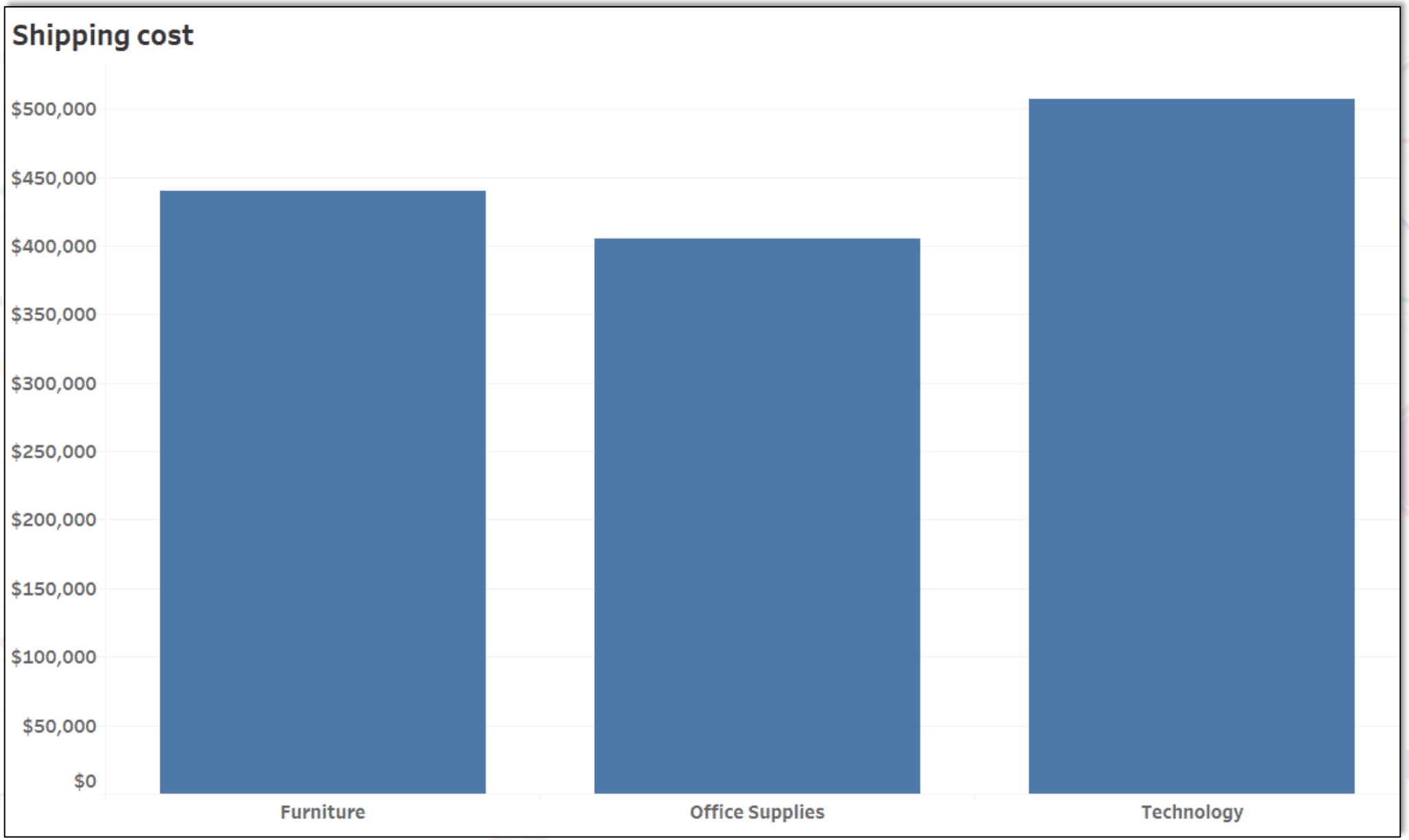
Source: http://thinkagile.net/covid-19-pie-chart-best-practices/



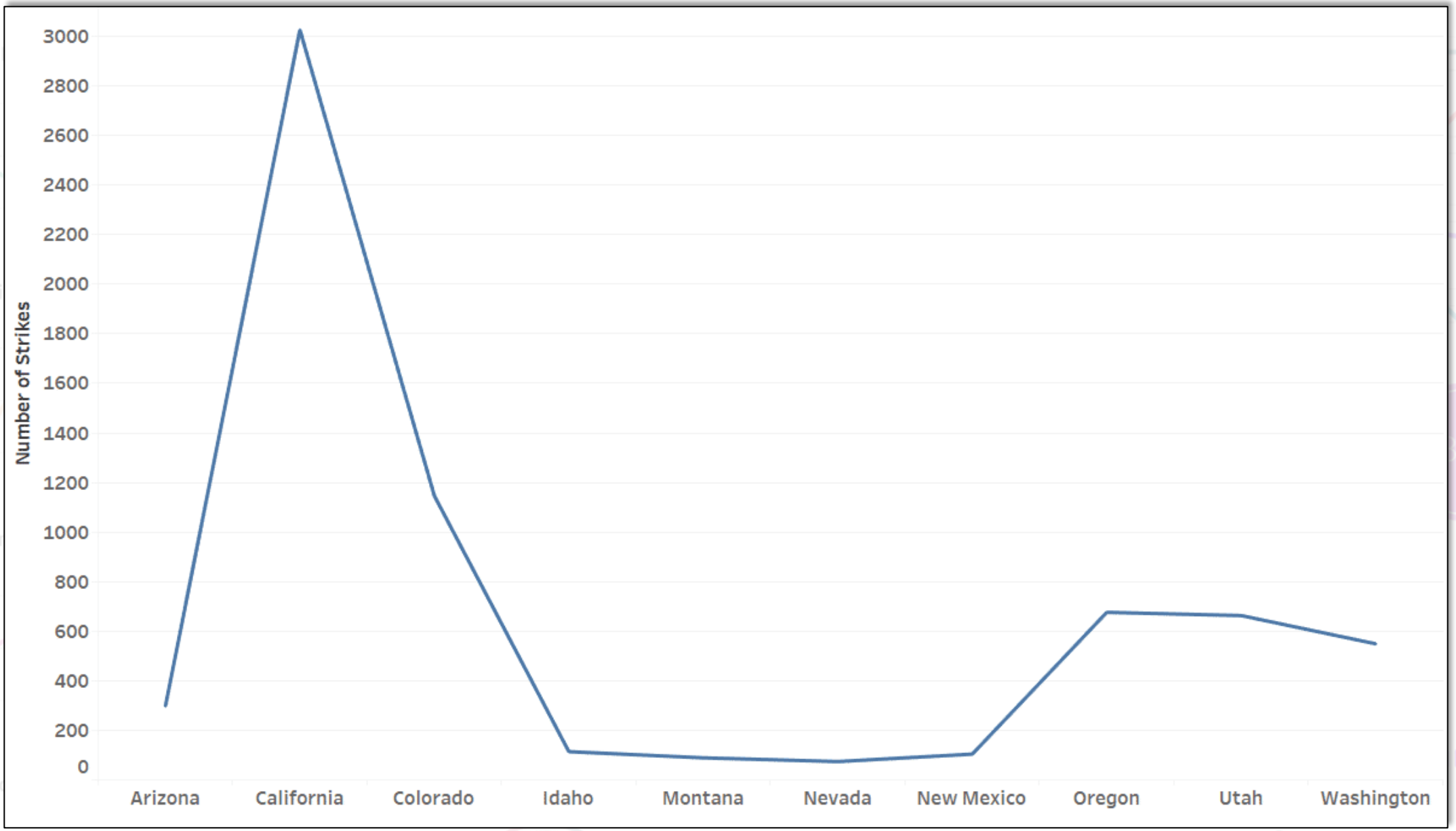
Source: WHO and Johns Hopkins University



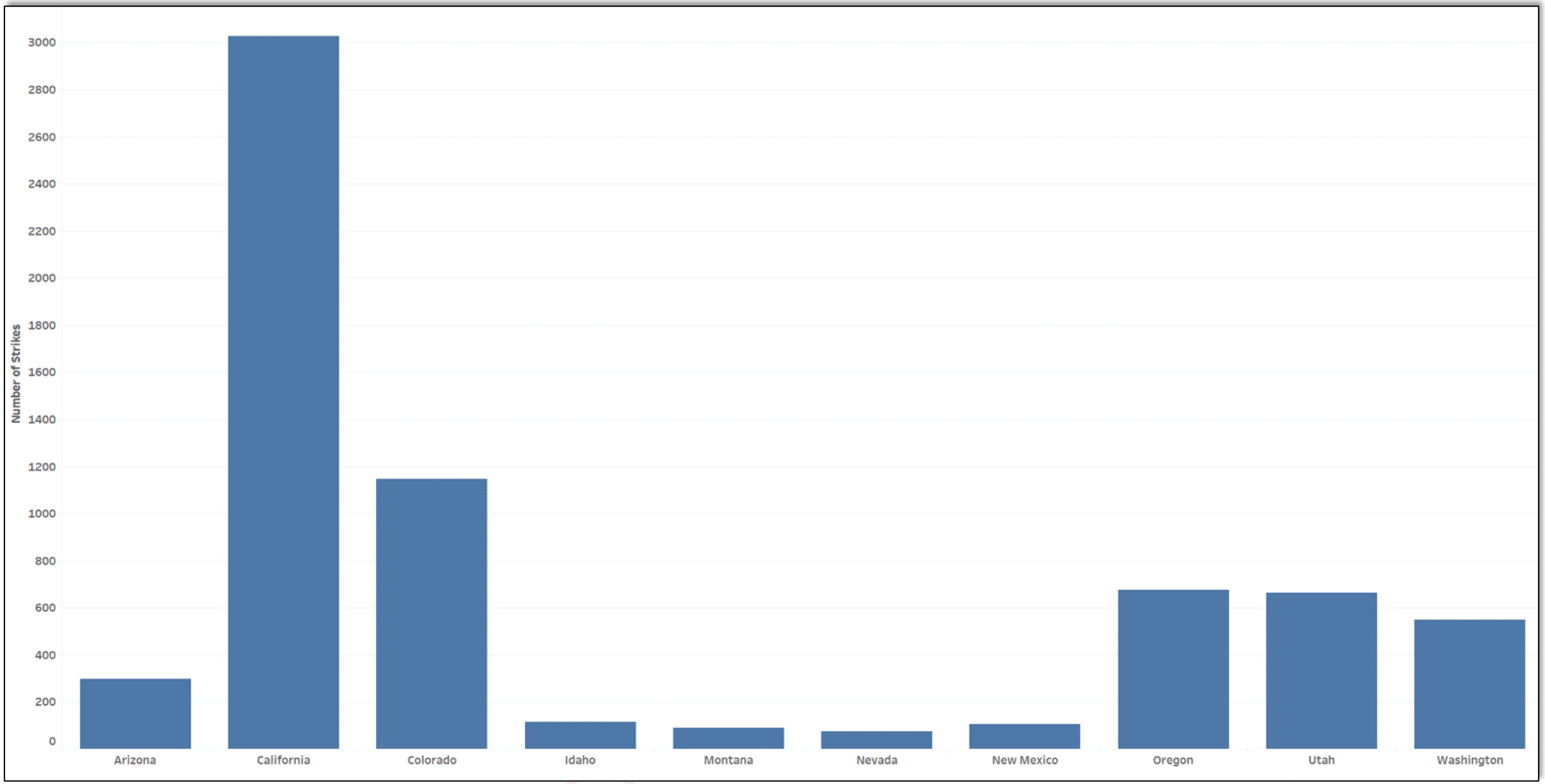
Source: Tableau



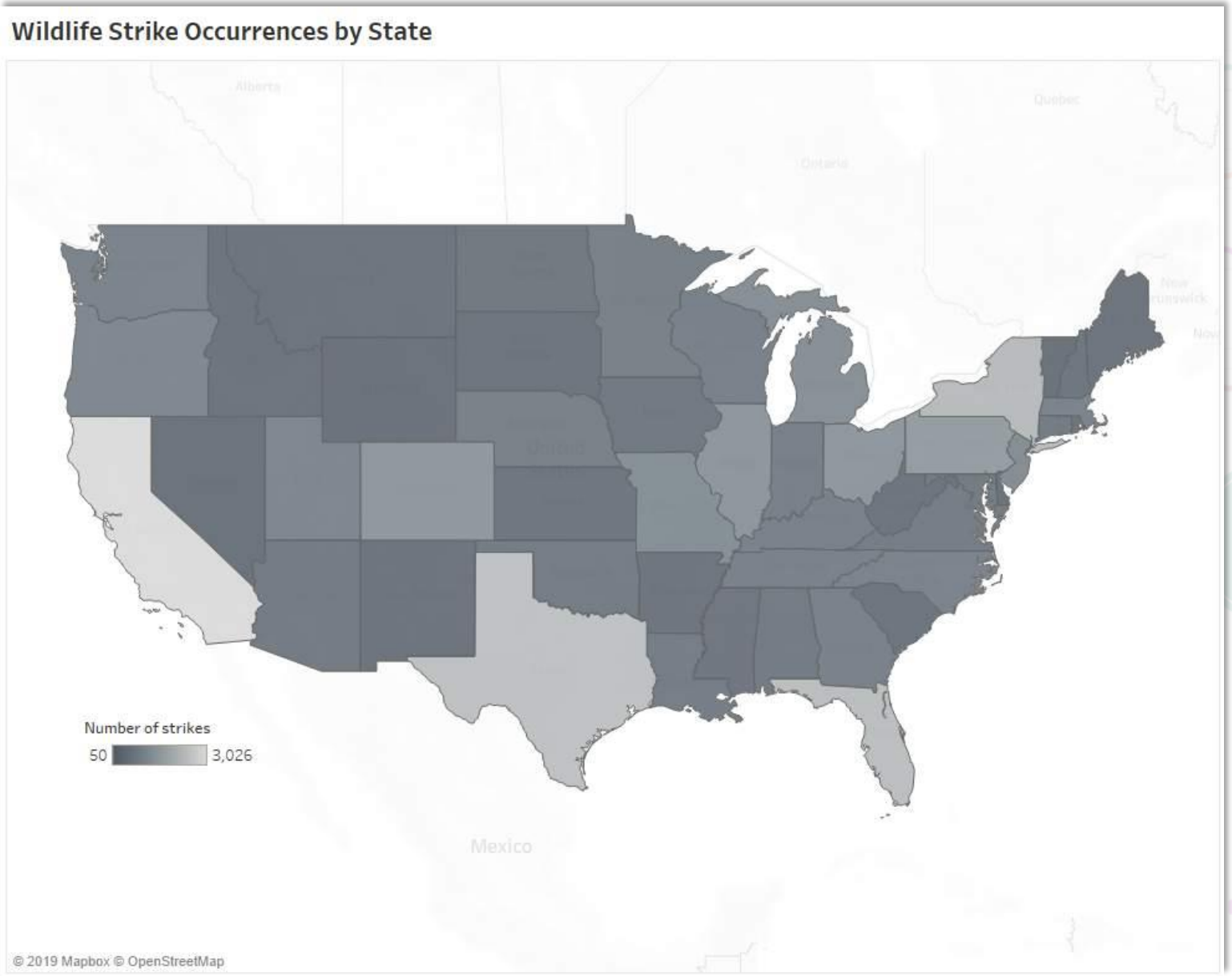
Source: Tableau



Source: Tableau

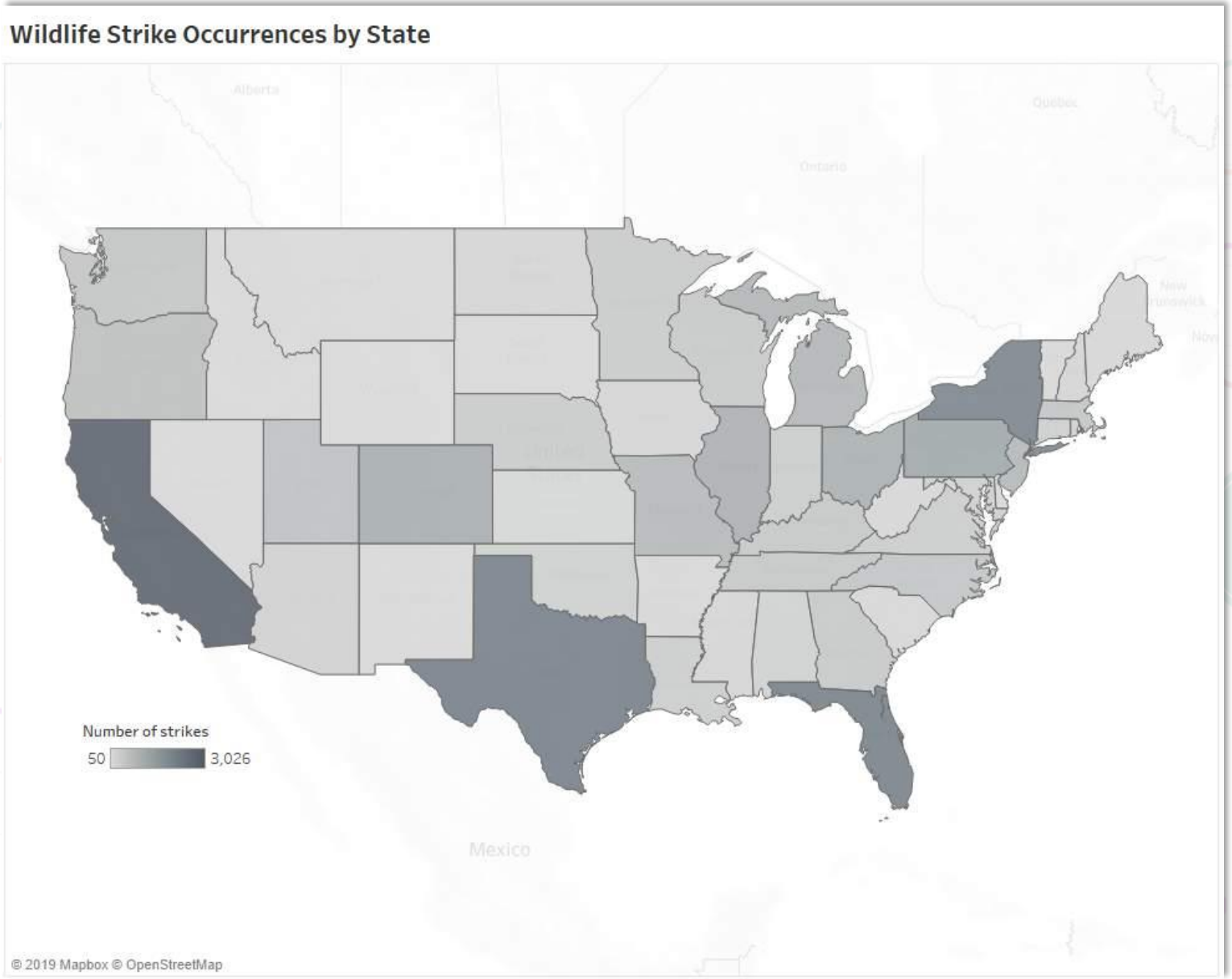


Source: Tableau



Source: Tableau

Wildlife Strike Occurrences by State



Source: Tableau

Common Viz Issues

- Inappropriate choice of chart type
- Too much information
- Poor choice of visuals (color, patterns, lines, …)
- Inconsistent visuals and scales
- Inaccurate quantitative representation

Data Viz Tips

- Be **curious**. Think. Develop our **senses** to spot weird patterns or trends.
- Focus on our **audience**. Different audiences may interpret differently.
- Ensure **clarity**, **precision**, **efficiency**

Data Viz Inspirations

https://datavizproject.com

https://www.coronatracker.com/

https://www.arcgis.com/apps/dashboards/bda7594740fd40299423467b48e9ecf6

Last Question

How many **dimensions** can we represent in a single chart?

x-axis, y-axis, secondary y-axis, colour,
size/area, shape/pattern, … (anymore?)

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Tools

- Tableau Desktop for Students (2 years free license): https://www.tableau.com/academic/students
- Tableau Online: https://sso.online.tableau.com/public/idp/SSO
- Tableau Public: https://public.tableau.com/en-us/s/

Resources

- Tableau e-learning (after signing up Tableau for Students): https://elearning.tableau.com/
- Tableau free training: https://www.tableau.com/learn/training/20211