

GET TRAINED WITH



**WILD
CODE
SCHOOL**

- **Dataviz (5 min)**
- **Good practices (10 min)**
- **Bad examples (10 min)**
- **Storytelling (10 min)**
- **Be inspired (10 min)**

TRAINING COURSES

WEB DEVELOPMENT

FRONT-END
DEVELOPER

FULL-STACK
DEVELOPER

DATA

BI ANALYST

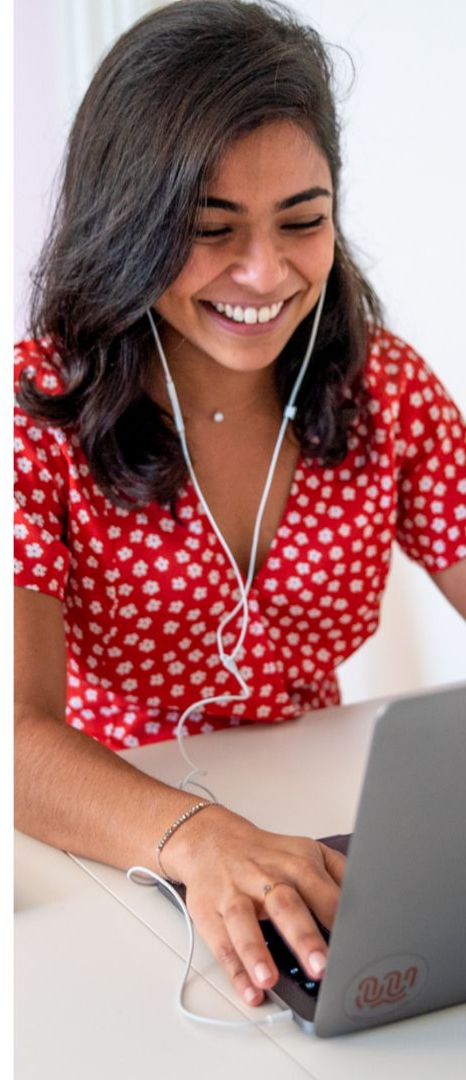
DATA ANALYST

2022
PRODUCT MANAGEMENT

2022
CYBERSECURITY

2022
NO CODE

AND OTHER TRAININGS CUSTOMIZED TO YOUR NEEDS



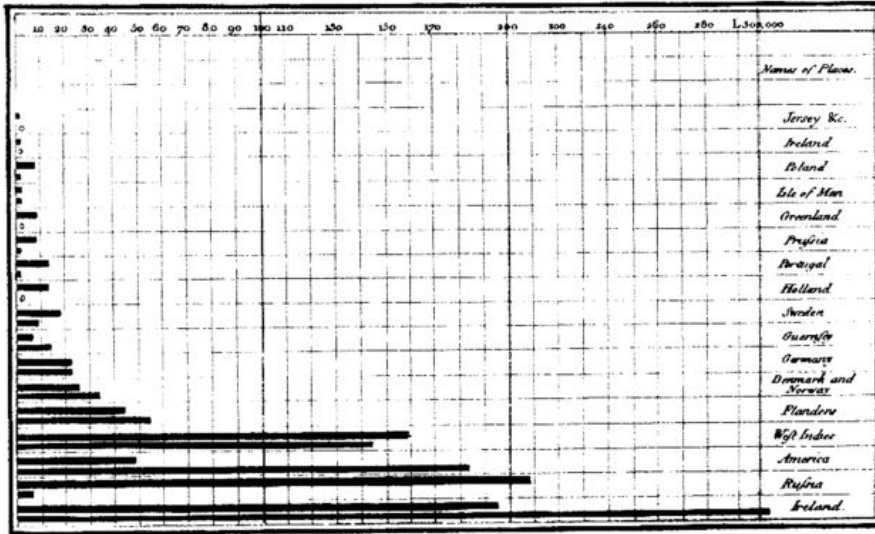
Dataviz



DATAVIZ: A BIT OF HISTORY

The pioneer: William Playfair
(1759 - 1823)

Exports and imports of SCOTLAND to and from different parts for one Year from Christmas 1780 to Christmas 1781.

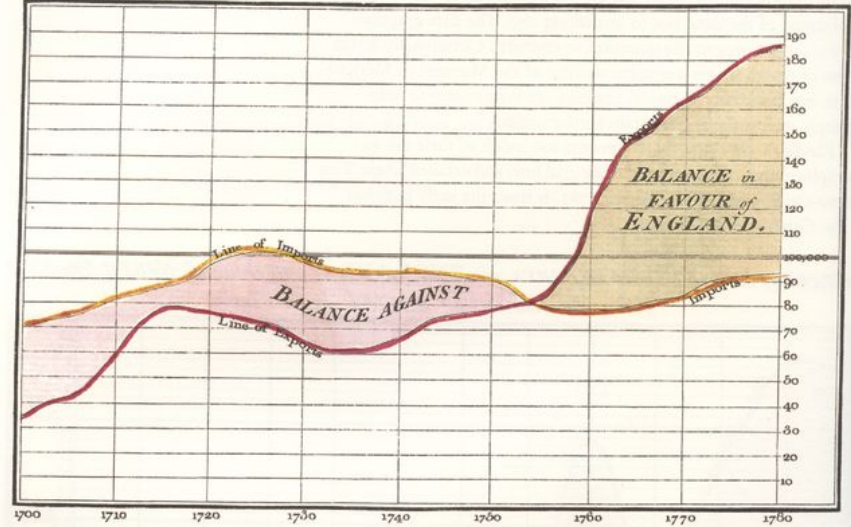


The Upright divisions are Ten Thousand Pounds each. The Black Lines are Exports the Reddillions Imports.

Published in the Art Director's Journal 7th 1786 by W^m Playfair

Made with 100% Sound, London.

Exports and Imports to and from DENMARK & NORWAY from 1700 to 1780.

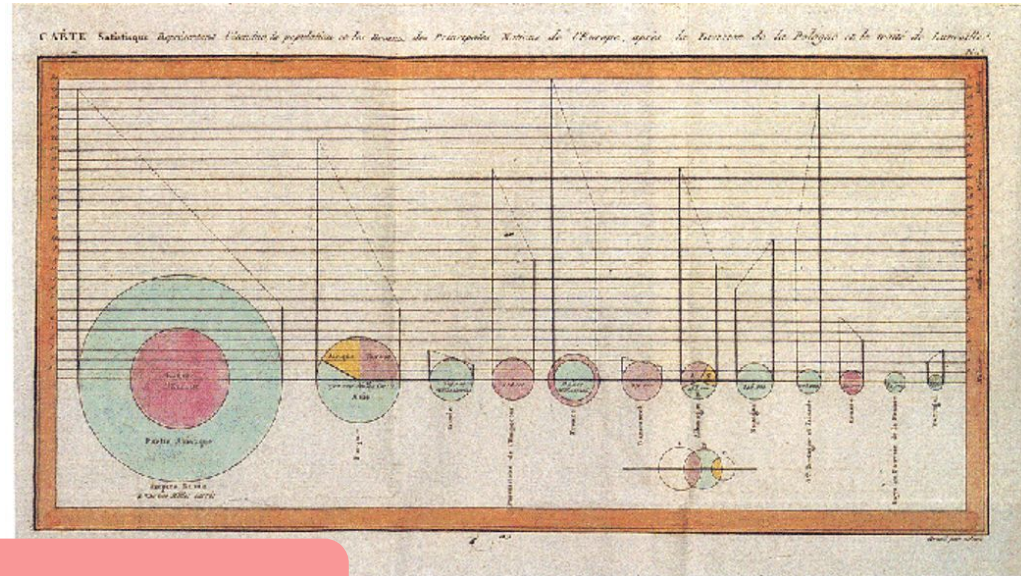
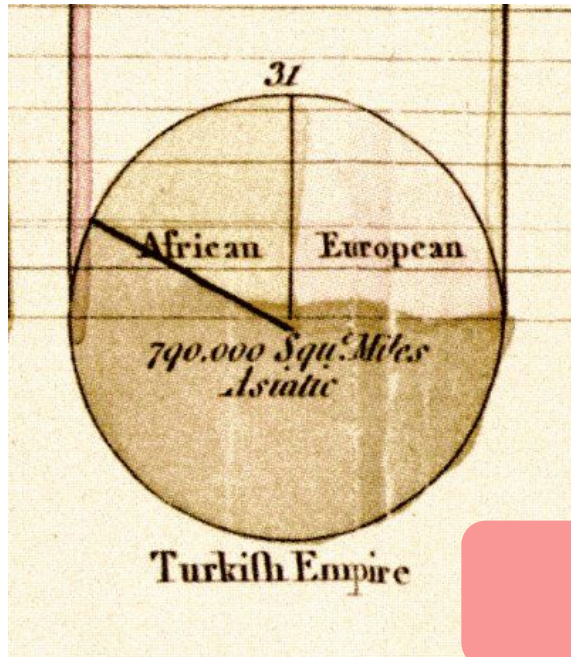


The Bottom line is divided into Years, the Right hand line into L10,000 each.
Published in the Art Director's Journal 1st May 1786, by W^m Playfair.
Made with 100% Sound, London.

Time series and Bar
chart (1786)

DATAVIZ: A BIT OF HISTORY

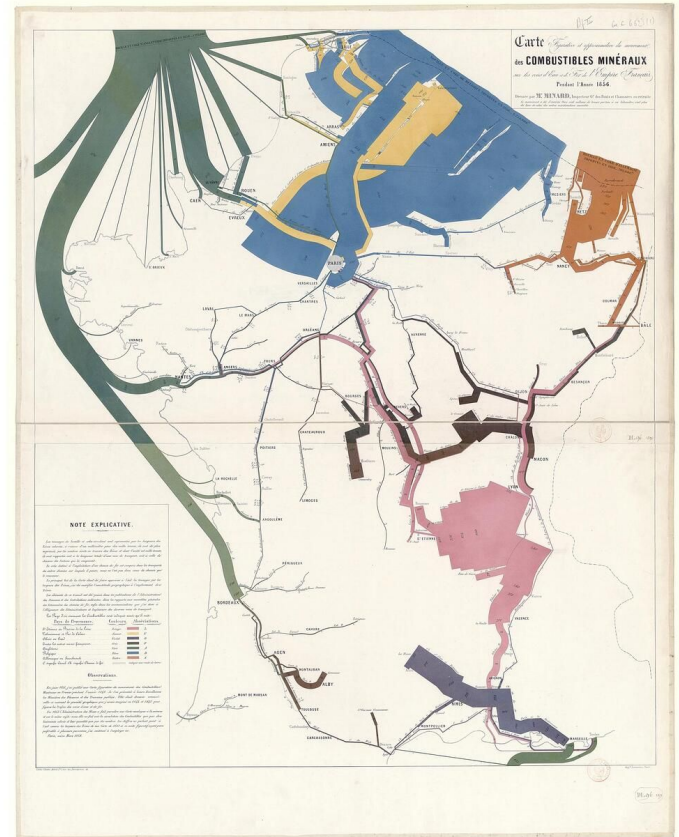
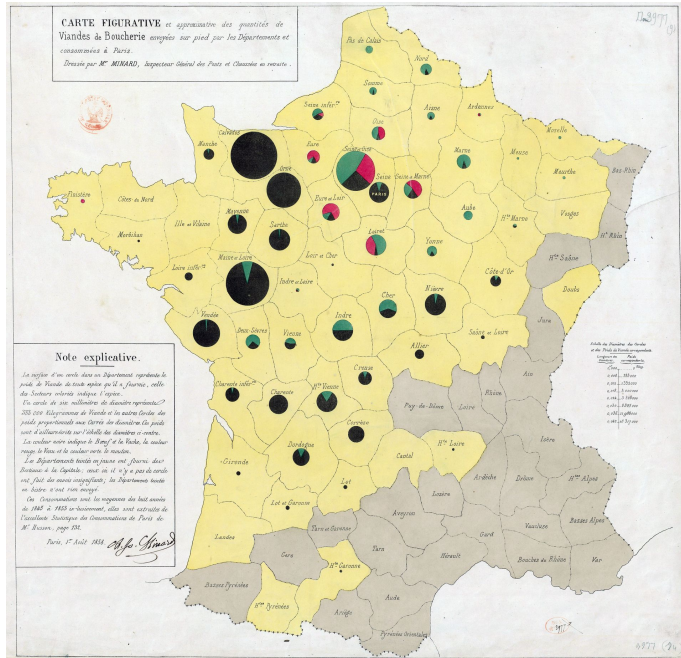
The pioneer: William Playfair
(1759 - 1823)



Pie chart (1801)

DATAVIZ: A BIT OF HISTORY

Charles Joseph Minard
(1781 - 1870)

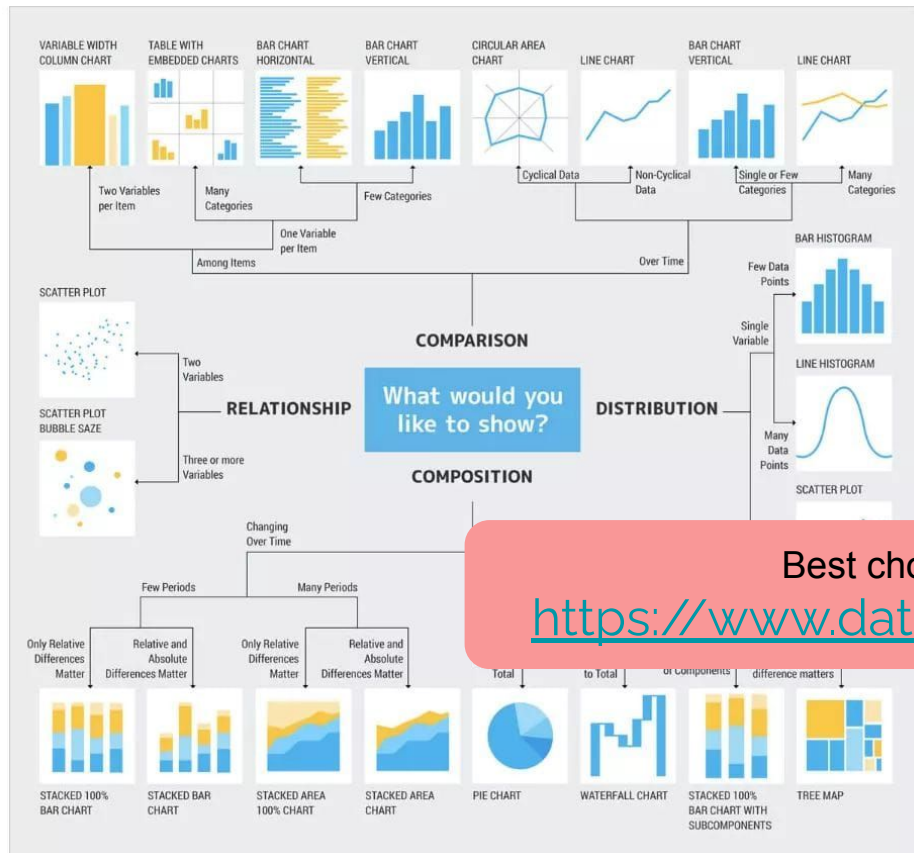


DATAVIZ: WHY & HOW?



- To transform raw data into relevant information
- To pick up only relevant information
- To give a message to an audience

DATAVIZ: HOW TO CHOOSE?

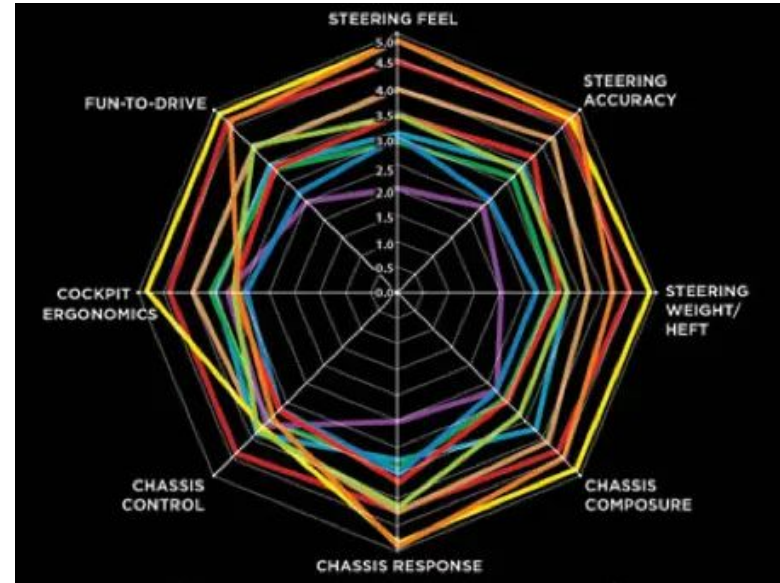
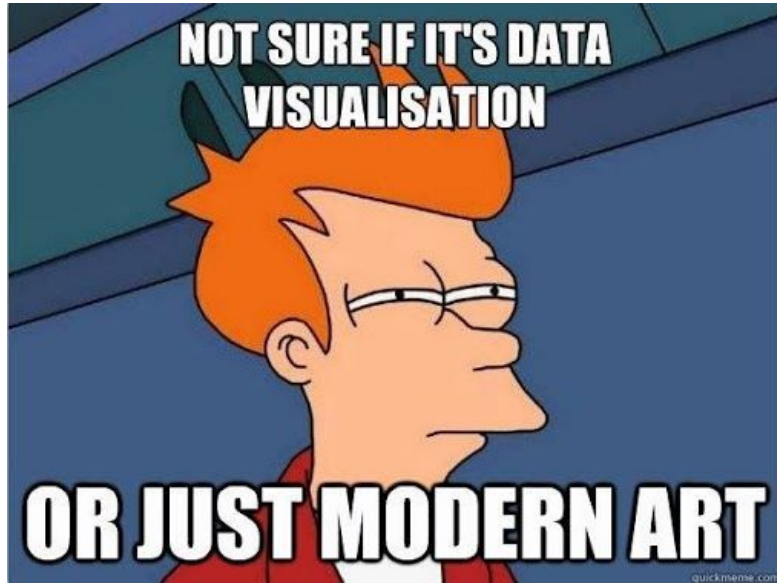


Best choice:
<https://www.data-to-viz.com/>

Good practices



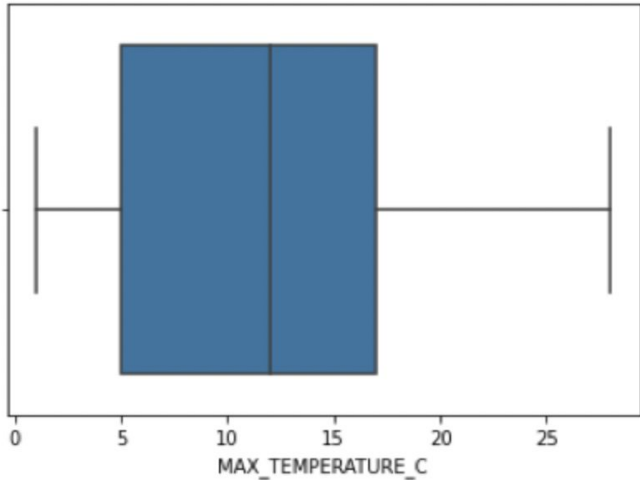
THE PITFALLS OF DATA VISUALISATION : STAY READABLE



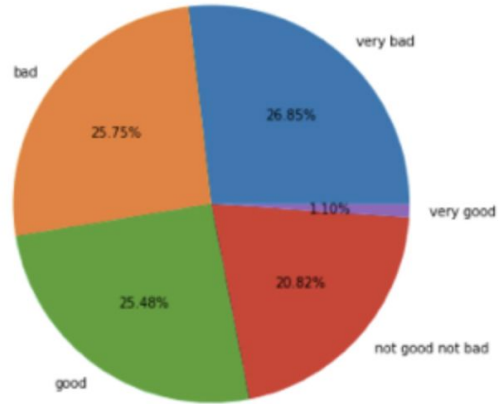
DEFINE YOUR AUDIENCE



Statistician oriented



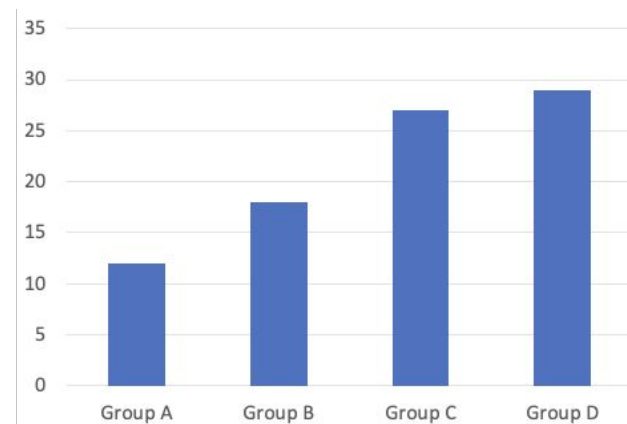
Communication oriented



A dataviz is not exhaustive. It is a subjective (but ethical) choice.

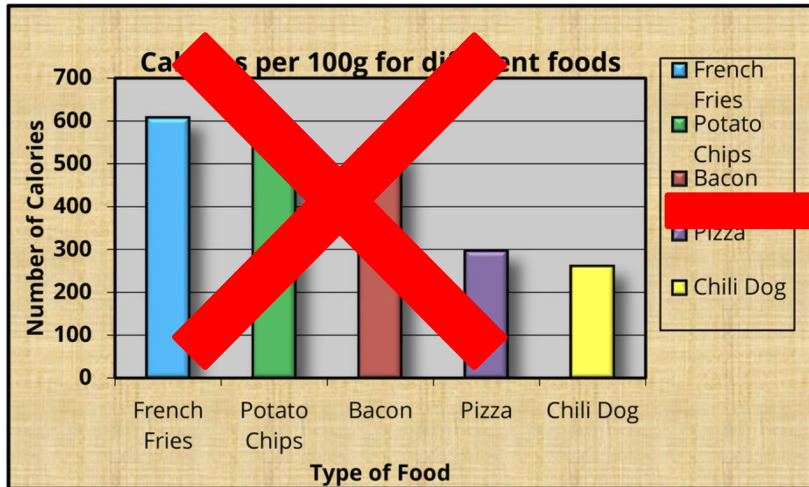
AVOID OVERLOADING THE GRAPHS

The simpler it is, the more readable it is.
Also avoid all 3D effects, it usually doesn't
bring much.

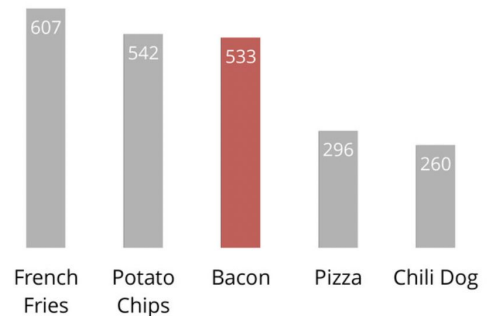


DATA-INK RATIO

Remove
to improve
(the **data-ink** ratio)

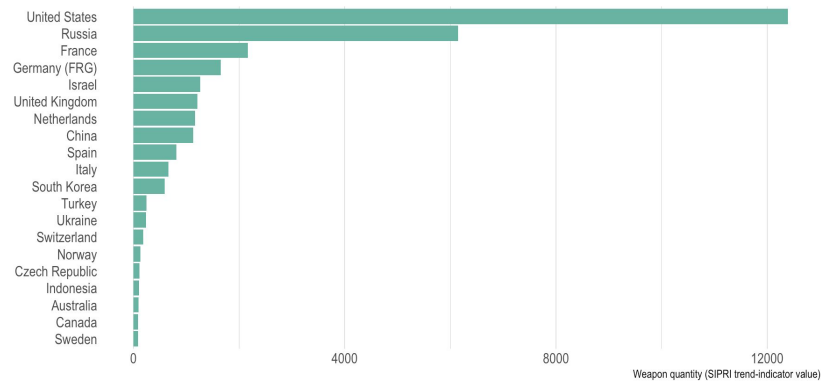
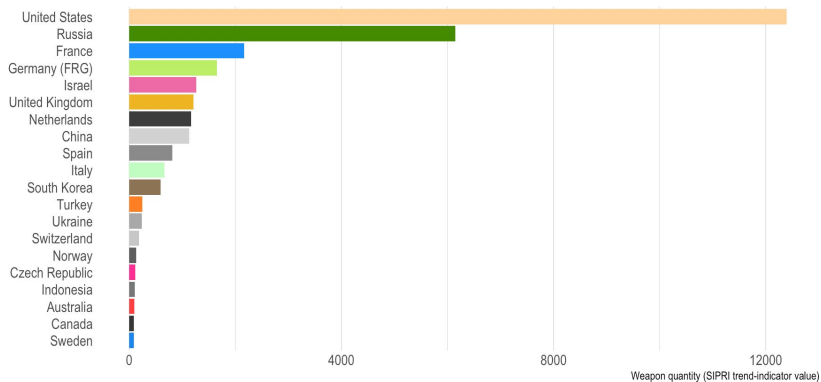


Calories per 100g



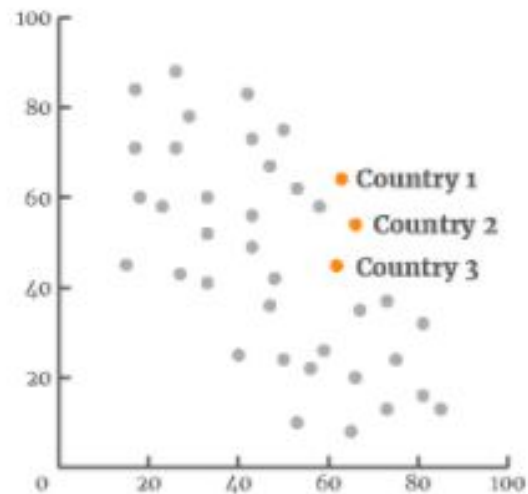
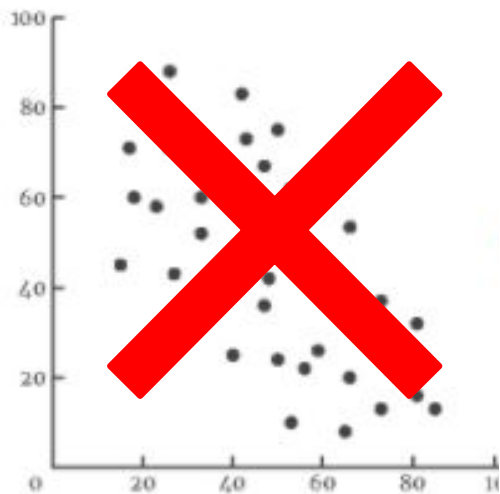
THE CHOICE OF COLORS

If colours are unnecessary, don't use them.



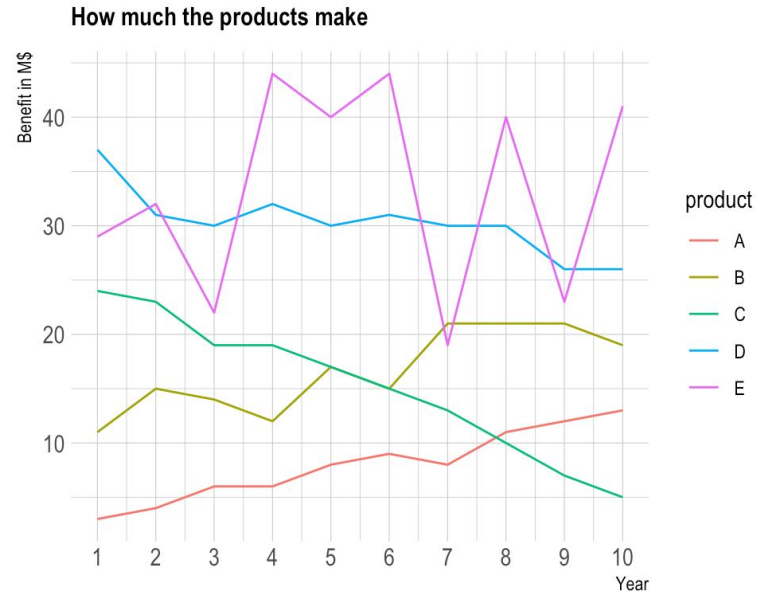
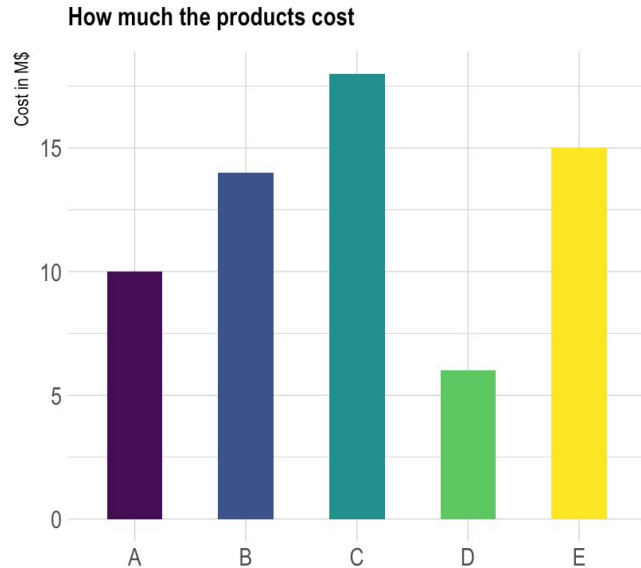
THE CHOICE OF COLORS

Don't hesitate to emphasize important information. The goal is to guide the reading to be as intuitive as possible.



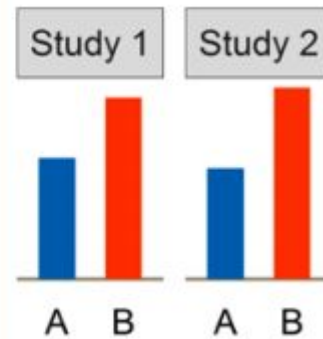
THE CHOICE OF COLORS

Always use the same colour for related graphics



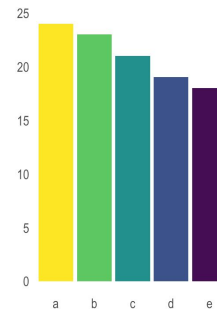
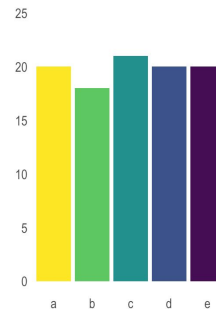
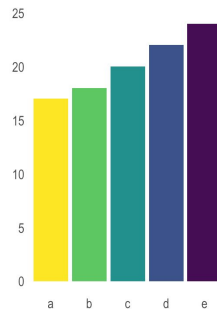
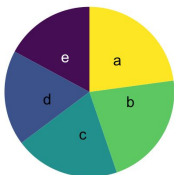
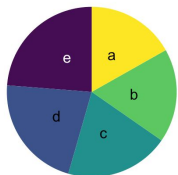
THE CHOICE OF COLORS

Always use the same colour for related graphics



THE MISUSE OF PIE CHARTS

The human eye is bad at quantifying angles...

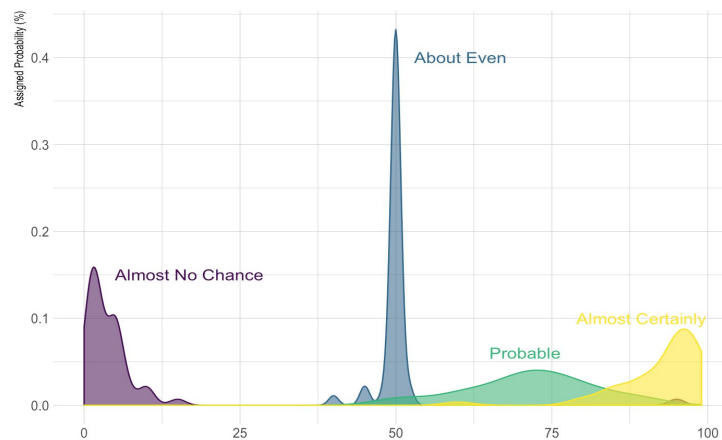
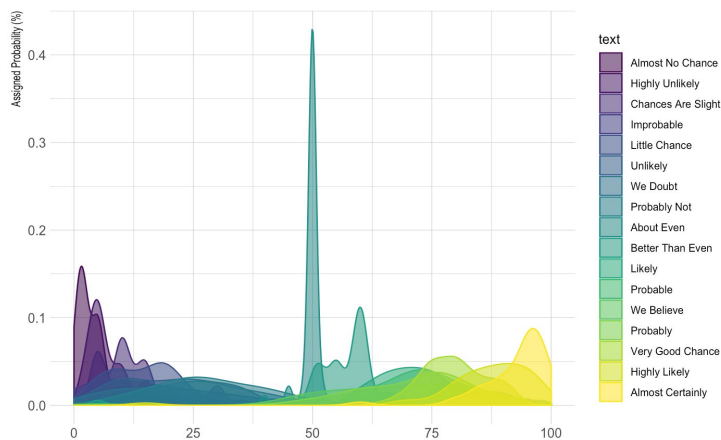


Column chart: never cut the Y-axis

Same data, and much more readable, isn't it?

VISUAL OVERLOAD

Too much information decreases readability



When it's possible: add legend directly on the chart

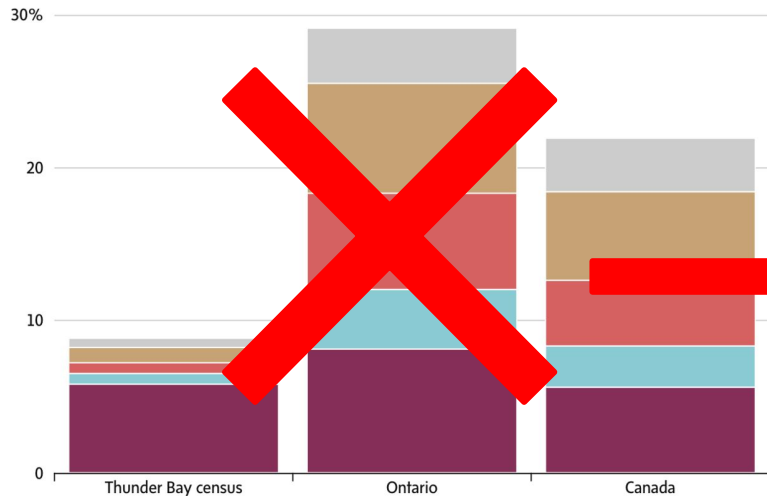
Aggregate data when it's possible

WRONG DESIGN

By convention, the time (years, months etc...) is rather horizontal. To show continuity over time, we will use lines instead.

Immigrants as a percentage of population in 2016, by period of immigration

● Before 1981 ● 1981-90 ● 1991-2000 ● 2001-10 ● 2011-16

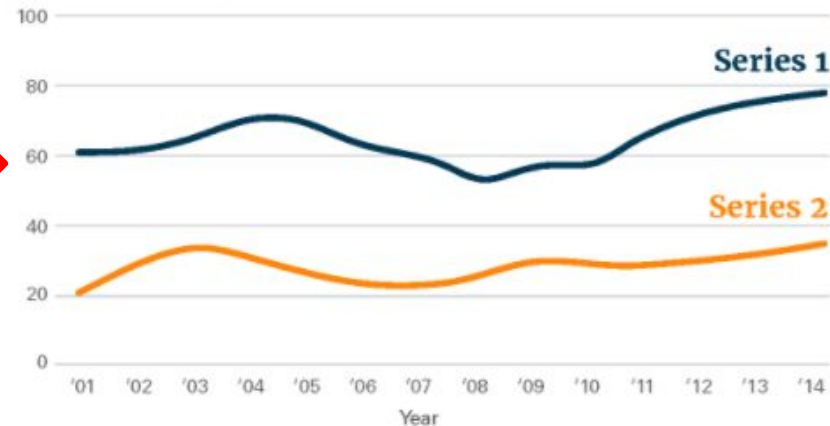


THE GLOBE AND MAIL, SOURCE: STATSCAN

DATA SHARE

Chart Title Here

(Y axis label here)

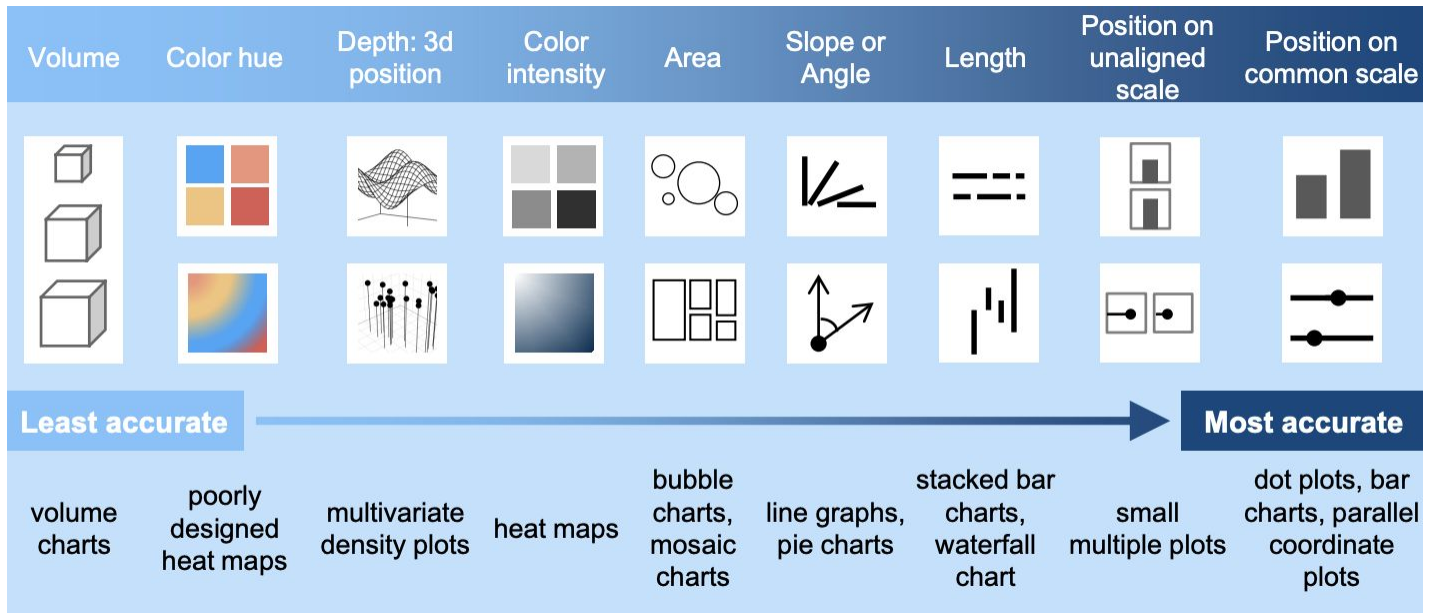


PERCEPTION OF SHAPES

Graphs are not all equal in our perception.

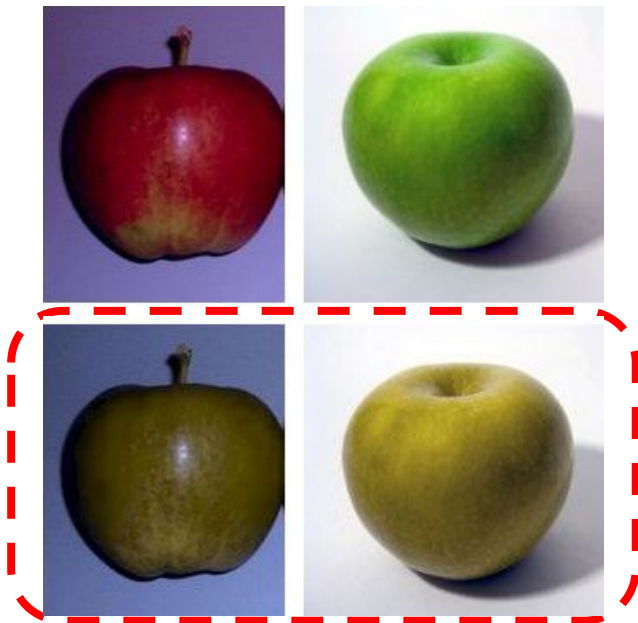
In the mid-1980s, statisticians William Cleveland and Robert McGill conducted experiments with volunteers, measuring the accuracy with which they were able to perceive quantitative information encoded by different methods (visual cues, variations in size, shape or color, etc.).

Here are their conclusions:



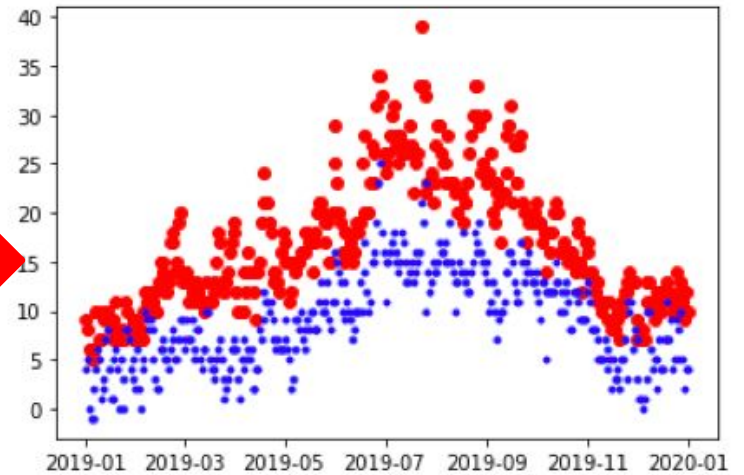
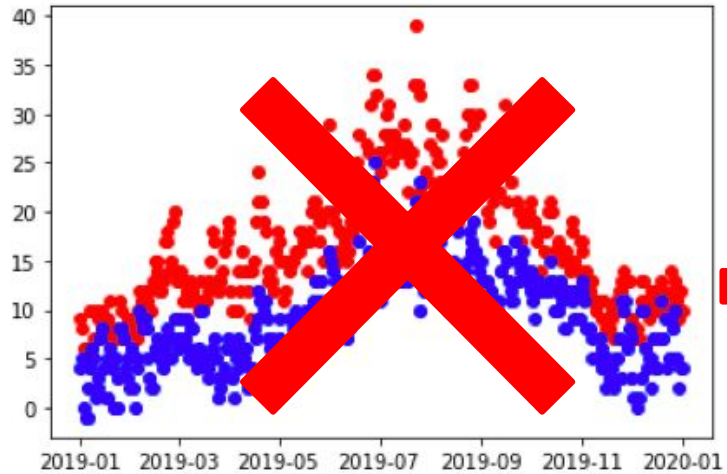
WRONG DESIGN

The proportion of colorblind people is about 8% in men and 0.45% in women.



What a colorblind person sees

COLORBLINDNESS



[Colorblind simulator](#)

CHARTS & ETHICS

And most importantly: always remain ethical! A dataviz is an extremely powerful tool to transmit information in an intuitive way. But you are not there to deceive or to bluff the reader, or to make the data lie. You are here to make a dataviz that will bring relevant information.

Let's go to see real bad dataviz!

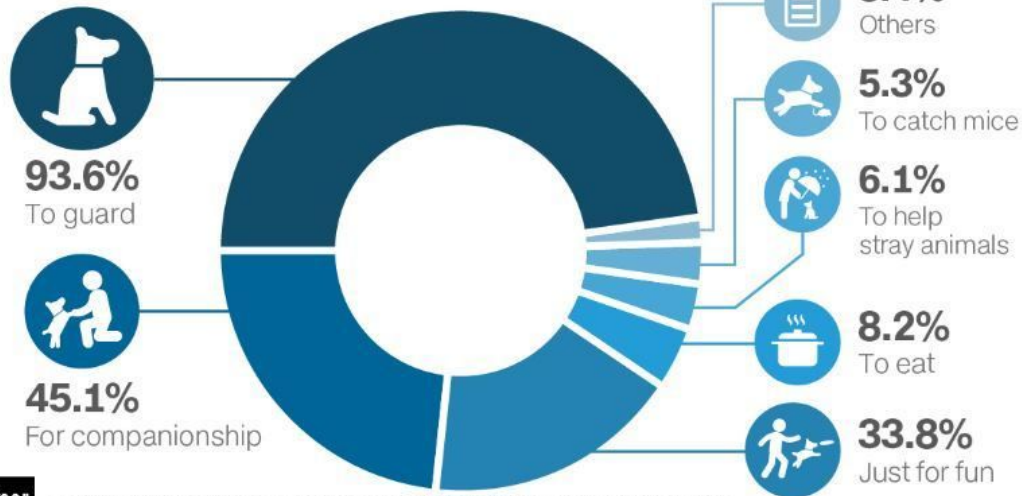
Really bad examples



WRONG INPUT DATA

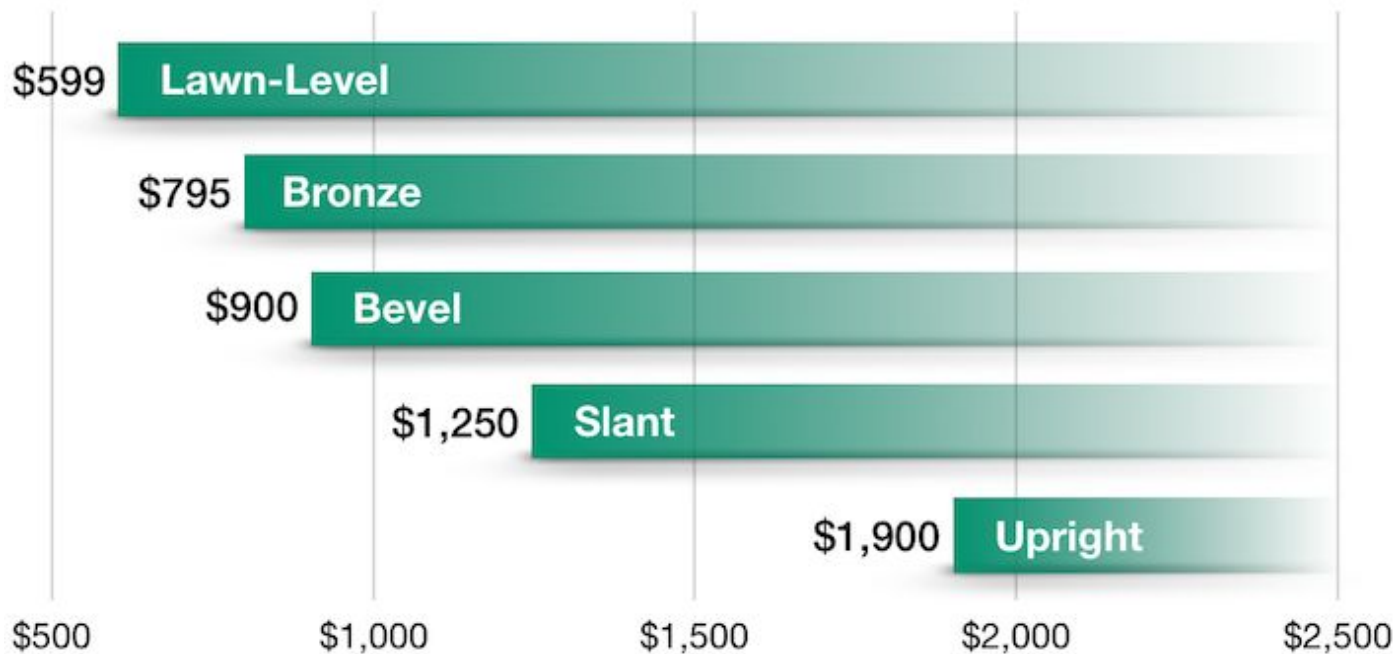
195.5% of dog lovers will find this concerning

WHY PEOPLE KEEP DOGS IN CHINA



SOURCE: Animal Asia survey of 1,432 people in rural areas. Respondents could give multiple answers.

WHAT'S WRONG HERE?



<https://www.milanomonuments.com/blog/how-much-do-monuments-headstones-and-monuments-cost-and-why>

WHAT'S WRONG HERE?

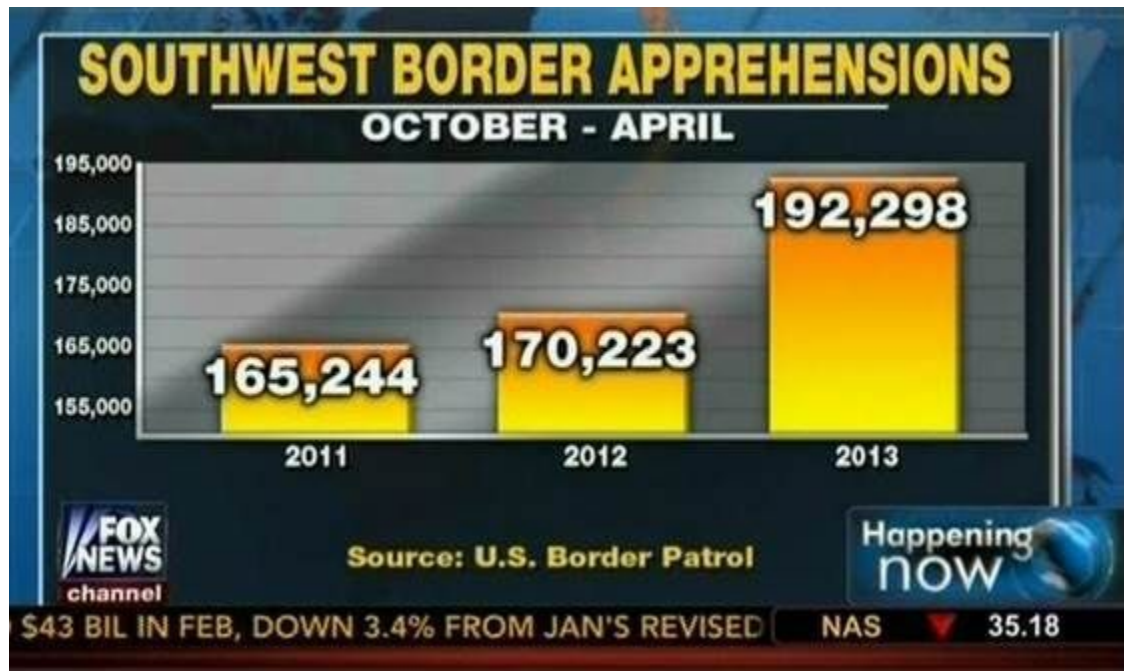


WHAT'S WRONG HERE?

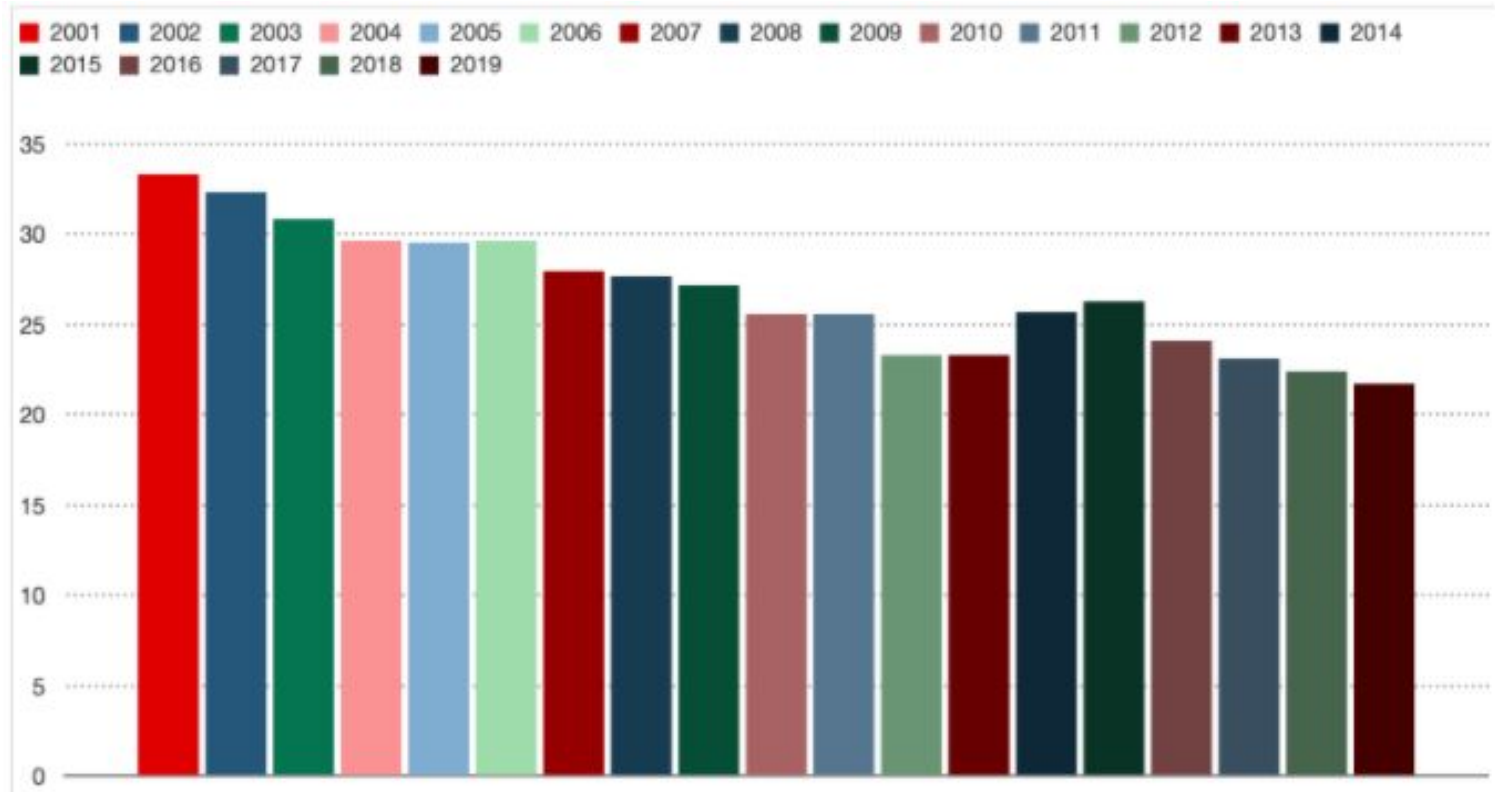


WHAT'S WRONG HERE?

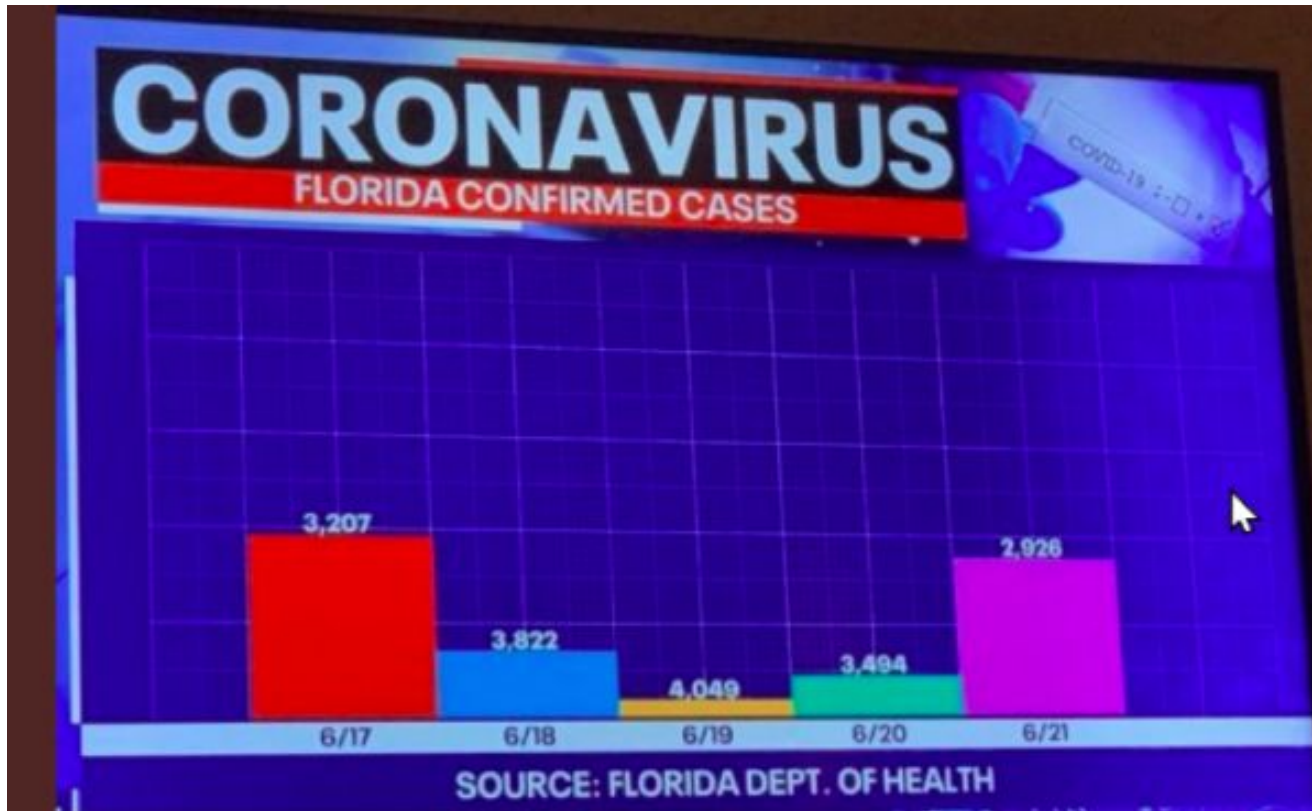
Column chart: never cut Y-axis



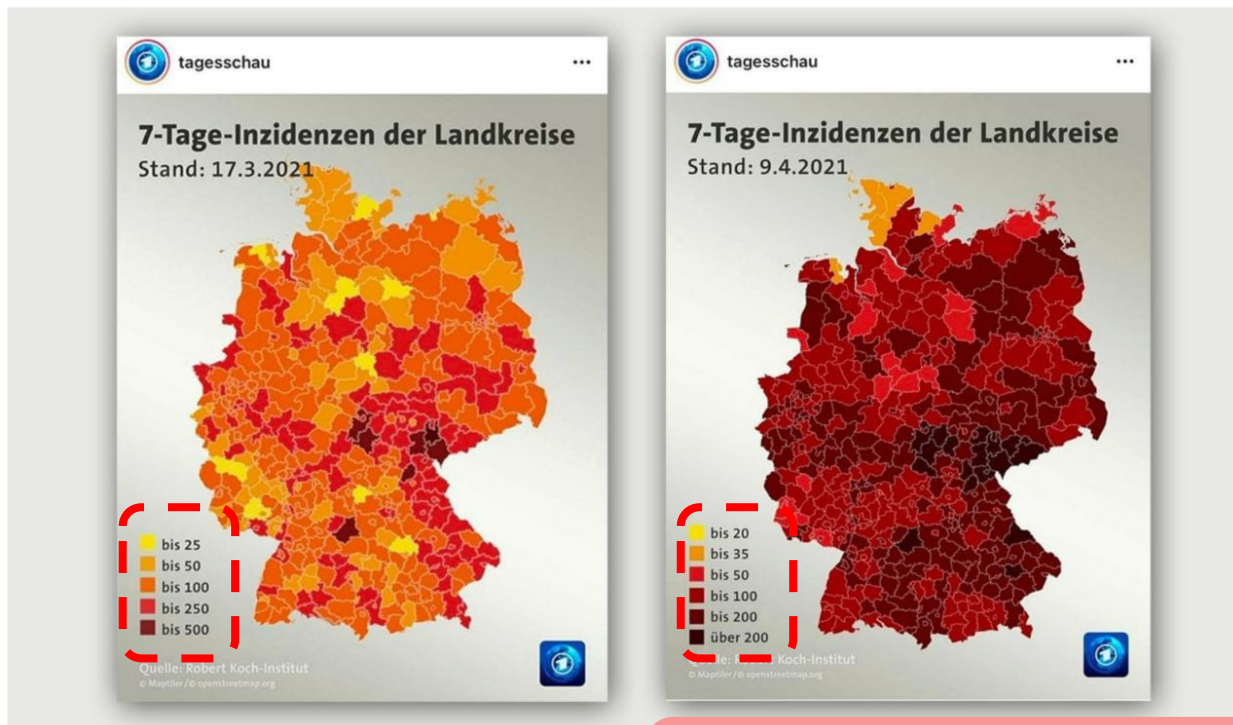
WHAT'S WRONG HERE?



WHAT'S WRONG HERE?



WHAT'S WRONG HERE?



Die Tagesschau hat ihre Farbskala für Corona-Inziden

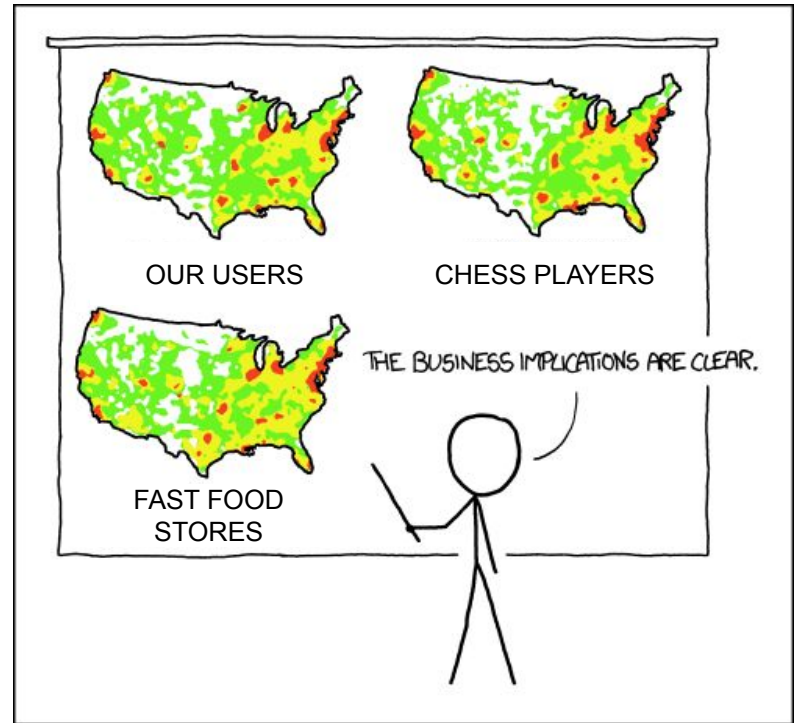
Changed the categories of the colours - so all is dark red

THE IMPORTANCE OF DATA VISUALISATION

More examples of do's and don'ts

<https://www.data-to-viz.com/caveats.html>

<https://viz.wtf>



PET PEEVE #208:
GEOGRAPHIC PROFILE MAPS WHICH ARE
BASICALLY JUST POPULATION MAPS

Storytelling



STORYTELLING

Why storytelling?

- What do **I want my audience to know** with the data I am presenting?
- How will I structure a narrative that leads **to desired action**?
- How is my data **helping drive a decision**?

How do I get started?

- What am I **trying to achieve** with the data I choose to display?
- Who is **my audience**? What do they care about? What level of data detail will they likely expect or appreciate?
- What is my **BIG Idea** -- the one thing I want my audience to know or do with my data?

STORYTELLING

Headlines with conclusion

BEFORE

Mobile trends in shopping



Smartphone owners

- Shop on smartphone
- Do not shop on smartphone

Online sales

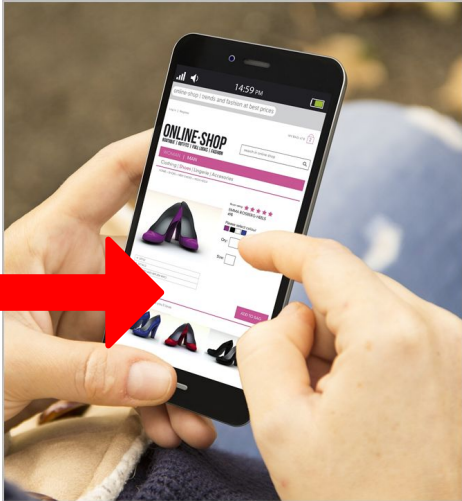
- Online sales - Smartphone
- Online sales - All other

Category	Percentage
Shop on smartphone	45%
Do not shop on smartphone	55%

Category	Percentage
Online sales - Smartphone	55%
Online sales - All other	45%

AFTER

Mobile is changing the way people shop and buy



- 84% of smartphone users shop on their phones
- 45% of all online shopping purchases happen on a smartphone

Source: Emarketer, [Region, Year]

Simple and readable content

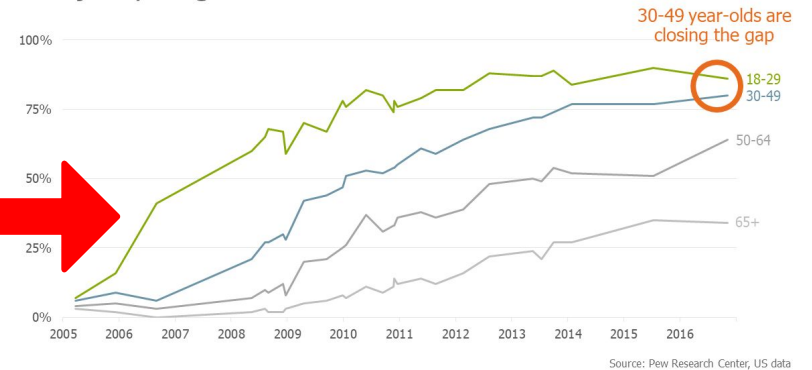
STORYTELLING

Headlines with conclusion

Social media use by age



Social media use now popular with more than just young adults



- Avoid the noise (3D effect, colors, etc...)
- Emphasis the main point
- Legend directly on the chart

Be inspired by the best!



Be inspired

Tableau gallery

(for inspiration, you cannot use this BI tool for the dataviz competition)

Example:

<https://public.tableau.com/app/profile/lee0312/viz/caogao1/23>

RShiny gallery

Example:

<https://shiny.rstudio.com/gallery/freedom-press-index.html>

Plotly gallery

Examples: <https://plotly.com/python/mapbox-density-heatmaps/>
<https://plotly.com/python/bubble-maps/#bubble-map-with-animation>

Streamlit gallery

Example:

<https://share.streamlit.io/streamlit/demo-uber-nyc-pickups/>

Questions ?

+20

campuses in Europe
2 campuses in remote

5

training courses
(Web development, Data, Product management,
Cybersecurity, No code)

4.9/5

global satisfaction
of our students

84%

job placement rate

5,000+

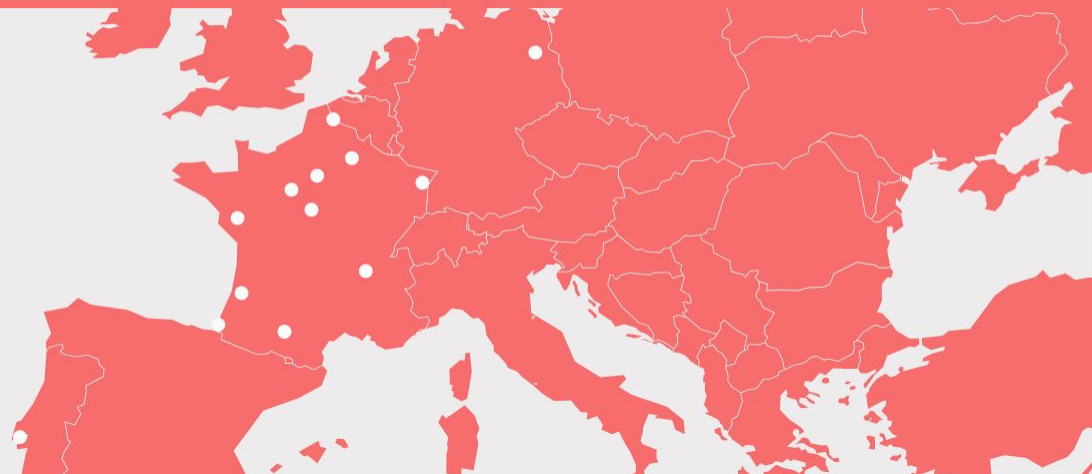
students & alumni

1,000+

partner companies



**WILD
CODE
SCHOOL**



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WEB DEVELOPMENT

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DEVELOPER

FULL-STACK
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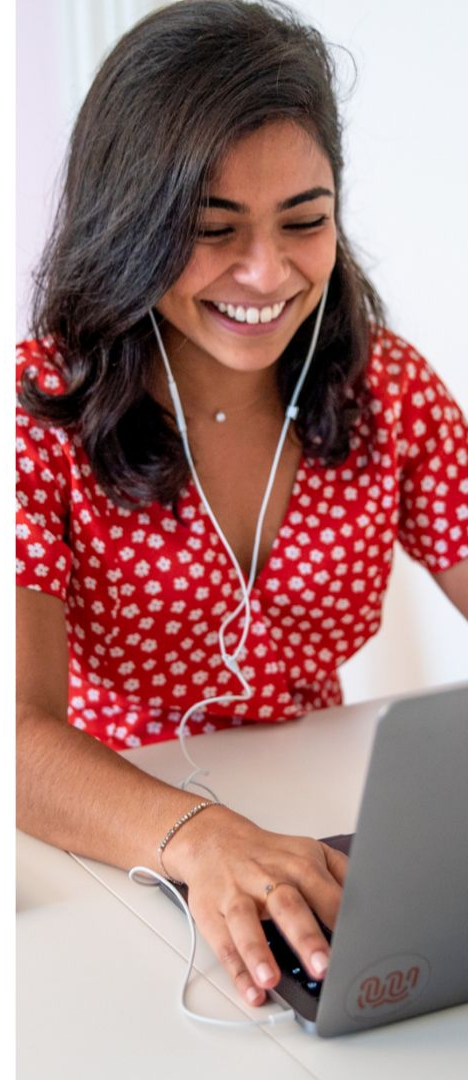
DATA ANALYST

2022
PRODUCT MANAGEMENT

2022
CYBERSECURITY

2022
NO CODE

AND OTHER TRAININGS CUSTOMIZED TO YOUR NEEDS



WE'RE FITTING TO YOUR...



SCHEDULE

FULL TIME

PART TIME



LOCATION

ON CAMPUS

REMOTE



LEVEL

CURIOUS

BEGINNER

ADVANCED



THEY TRUST US



SQL
DIGITAL
EXPERIENCE

infotel

ekino.

ManoMano



AT INTERNET

AKYA
PASSION FOR
TECHNOLOGIES

Doctolib

deezer

dailymotion

DHL

SCALIAN

Betclic

FUJITSU



Carrefour

SNCF

IBM

adidas

Geev

NATIXIS



CRÉDIT AGRICOLE

PAP

ACTIVUS
GROUP

APSIDE

Capgemini



ARSKAN

ASSURANCE
MALADIE
Caisse Nationale

Cdiscount

DEKRA

SMILE
IT IS OPEN

CGI

twilio

Amiltone

wizaplace

inetum.
Positive digital flow

Rakuten

Consoneo

accenture

cascades

onepoint.

Les Echos

AKEROS

data
iku

CANAL+

izi solutions
GROUPE EDF

ManShine

THALES

UBISOFT



MINISTÈRE
DE L'ÉCONOMIE
ET DES FINANCES

SUCCESS STORIES

OUR ALUMNI



Emily

Web developer



Rita

Data analyst



Neli

Software Engineer



Pedro

Junior Programmer



Aygul

Product Manager



Naomi

Senior Technical Writer



Paul

Web developer



Doriane

Data analyst



Elisa

Web developer

