

The First #30DayChartChallenge

A Summary of Inspiring Contributions, Our Learnings,
and About the Value of Challenges in General



*Dr. Cédric Scherer • Data Visualization Lisboa • May 20 2021
@CedScherer • @DatavisLisboa • #vislis*

#30DayChartChallenge

— April 2021 —

30 Days • 30 Charts • 5 Categories



comparisons



distributions



relationships



timeseries



uncertainties

A Data Visualization Challenge by Dominic Royé and Cédric Scherer



Scientist

PostDoc in Computational Ecology

@ Leibniz Institute for Zoo and Wildlife Research

» Analyses, visualization, geodata, reproducible workflows – all in R!

DataViz Designer

Freelancing Data Visualization Specialist/Consultant/Instructor

» Visualization, cartography, reproducible workflows, workshops

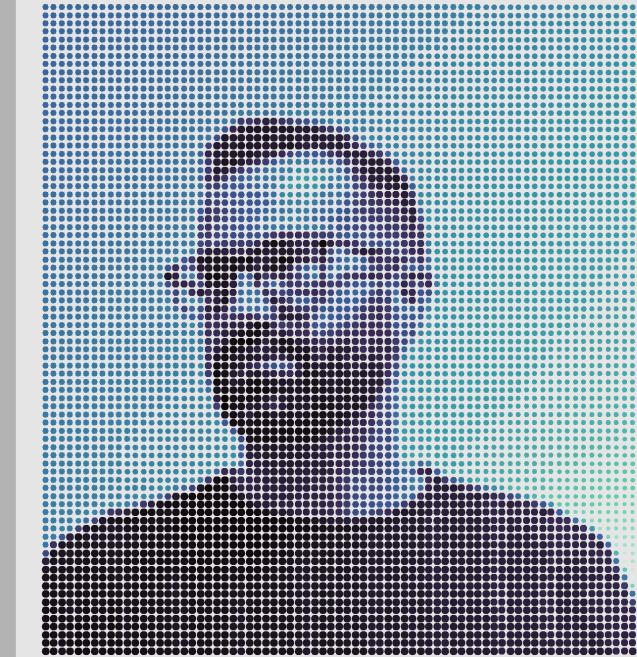
Cédric
Scherer

cedricscherer.com



*Cédric
Scherer*

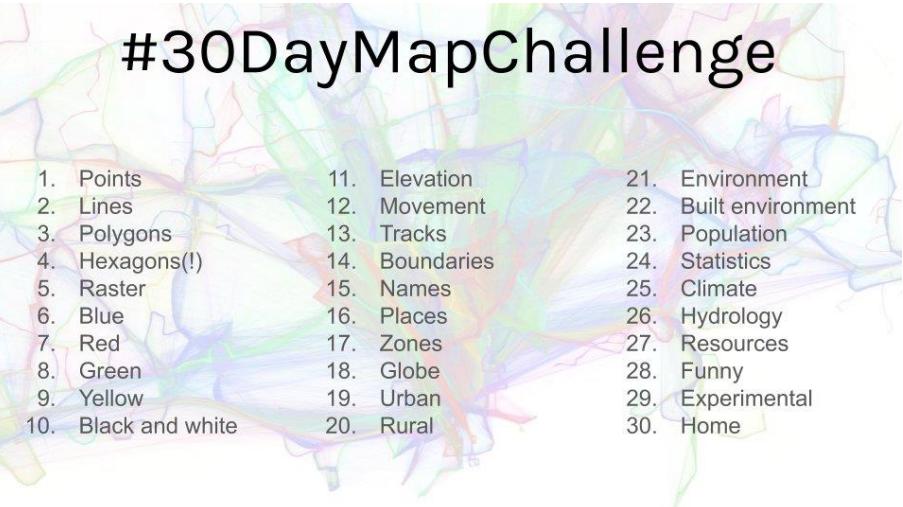
cedricscherer.com



*Dominic
Royé*

dominicroye.github.io

#30DayMapChallenge

- 
- 1. Points
 - 2. Lines
 - 3. Polygons
 - 4. Hexagons(!)
 - 5. Raster
 - 6. Blue
 - 7. Red
 - 8. Green
 - 9. Yellow
 - 10. Black and white
 - 11. Elevation
 - 12. Movement
 - 13. Tracks
 - 14. Boundaries
 - 15. Names
 - 16. Places
 - 17. Zones
 - 18. Globe
 - 19. Urban
 - 20. Rural
 - 21. Environment
 - 22. Built environment
 - 23. Population
 - 24. Statistics
 - 25. Climate
 - 26. Hydrology
 - 27. Resources
 - 28. Funny
 - 29. Experimental
 - 30. Home



Topi Tjukanov
@tjukanov

...

Announcing #30DayMapChallenge in November 2019!
Create a map each day of the month with the following
themes

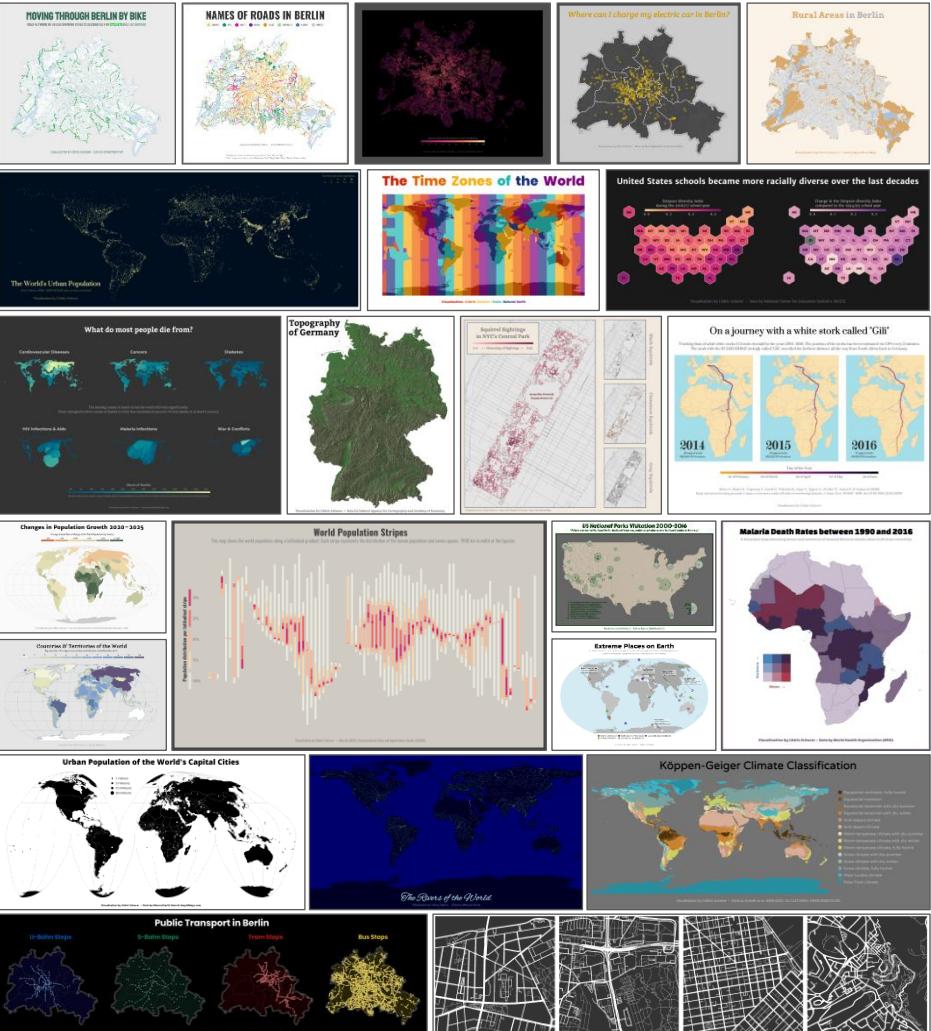


No restriction on tools. All maps should be created by
you. Doing less than 30 maps is fine.

#gischat #geography #cartography #dataviz

2:53 PM · Oct 25, 2019 · Twitter Web App

309 Retweets 117 Quote Tweets 820 Likes



#30DayMapChallenge

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#30DayMapChallenge

November 2020

1. Points
2. Lines
3. Polygons
4. Hexagons
5. Blue
6. Red
7. Green
8. Yellow
9. Monochrome
10. Grid

11. 3D
12. Map not made with GIS software
13. Raster
14. Climate change
15. Connections
16. Island(s)
17. Historical map
18. Landuse
19. NULL
20. Population

21. Water
22. Movement
23. Boundaries
24. Elevation
25. COVID-19
26. Map with a new tool
27. Big or small data
28. Non-geographic map
29. Globe
30. A map



Topi Tjukanov @tjukanov · Nov 29, 2020

One day left of #30DayMapChallenge. Should it be next year...

Same. 30 maps in 30 days

51.1%

15 maps in 30 days

36.1%

Something else. What?

12.8%

366 votes · Final results



18



8



35



Dominic Royé

@dr_xeo

Replying to @tjukanov

Is there already a corresponding
#30dayschartchallenge?

7:34 PM · Nov 30, 2020 · Twitter for Android

2 Likes



Topi Tjukanov @tjukanov · Nov 30, 2020

Replying to @dr_xeo

The hashtag seems to be empty, so I guess not.



1



1



1



Dominic Royé @dr_xeo · Nov 30, 2020

So, when should we do the first chart challenge? Someone else interested?
@CedScherer? 😊



Visual vocabulary

Designing with data

There are so many ways to visualise data - how do we know which one to pick? Use the categories across the top to decide which data relationship is most important in your story, then look at the different types of chart within the category to form some initial ideas about what might work best. This list is not meant to be exhaustive, nor a wizard, but is a useful starting point for making informative and meaningful data visualisations.

FT graphic design team. © The Financial Times Ltd. 2016. Liz Faunce, Graham Parrish, Billy Ehrenberg-Shannon, Paul McCallum, and Martin Stabe

 ft.com/vocabulary

| Deviation | Correlation | Ranking | Distribution | Change over Time | Magnitude | Part-to-whole | Spatial | Flow |
|--|---|---|---|--|---|---|--|--|
| Example FT uses Storms, cyclones, climate change | Example FT uses Inequality, employment, crime and the economy | Example FT uses Incomes, foreign exchange rates, commodity price results | Example FT uses Share price movements, company distribution, investing regularly | Example FT uses Share price movements, company distribution, investing regularly | Example FT uses Share price movements, company distribution, investing regularly | Example FT uses Share price movements, company distribution, investing regularly | Example FT uses Incomes, foreign exchange rates, commodity price results | Example FT uses Movement, distance, speed, time, sequence or geographical location |
| Dot chart  A simple standard dot chart. Good for showing both regular and irregular data points. | Scatterplot  The standard way to show the relationship between two continuous variables. Good for highlighting trends and outliers. | Ordered bar  Standard bar charts are good for showing values from highest to lowest in order. | Histogram  The standard way to show the distribution of data. Good for highlighting the shape of the data. | Line  The standard way to show the trend of data over time. Good for showing the movement of markets to represent a single variable. | Bar  See above. Good when data is not time-based and categories have long names. | Stacked bar  A simple way of showing the relationship between two things. Good for showing more than one component. | Dot map  Good for showing individual relatives in a small area. Good for showing multiple categories. | Waterfall  Shows changes in flows from one point to another, often good for showing the outcome of a complex process. |
| Dot matrix bar  Perfect for presenting survey results which add up to 100% (e.g. demographic analysis). | Column + line bubble  A good way of showing the relationship between two variables (e.g. sales and profit). | Ordered column  See above. | Dot plot  A simple way of showing the change of multiple variables over time. | Dot map  Good for showing individual relatives in a small area. Good for showing multiple categories. | Bar bubble  See above. Good when data is not time-based and categories have long names. | Bar chart  The standard way to show the size of multiple things. Good for showing more than one component. | Dot strip plot  Dots placed in order on a strip are a good way of showing data that has changed over time. | Waterfall  Designed to show the sequencing of data flows. Good for showing budgets. Can include +/- components. |
| Spine  Splits a single value into two contrasting parts (e.g. positive/negative, up/down). | Connected scatterplot  Usually used to show the relationship between two variables that have changed over time. | Ordinal bar  Used when there are big variations between seeing four different categories. | Dot plot  See above. | Dot chart  Good for showing individual relatives in a small area. Good for showing multiple categories. | Bar bubble  See above. Good when data is not time-based and categories have long names. | Bar chart  The standard way to show the size of multiple things. Good for showing more than one component. | Dot bubble  Good for showing individual relatives in a small area. Good for showing multiple categories. | Dot map  For showing unstructured areas across a map. |
| Surplus/deficit bar  The product area of these charts shows a surplus/deficit after spending a certain amount of time. | Bubble  Like a scatterplot but adds another detail dimension by adding a third variable according to a third variable. | Dot bubble  Used when there are big variations between seeing four different categories. | Dot plot  See above. | Dot chart  Good for showing individual relatives in a small area. Good for showing multiple categories. | Dot bubble  See above. | Bar chart  The standard way to show the size of multiple things. Good for showing more than one component. | Dot bubble  Good for showing individual relatives in a small area. Good for showing multiple categories. | Dot map  For showing unstructured areas across a map. |
| XY heatmap  A good way of showing the patterns between 2 variables. Good for showing the effect of one variable on another. | Dot bubble  Like a scatterplot but adds another detail dimension by adding a third variable according to a third variable. | Dot bubble  Used when there are big variations between seeing four different categories. | Dot plot  See above. | Dot chart  Good for showing individual relatives in a small area. Good for showing multiple categories. | Dot bubble  See above. | Bar chart  The standard way to show the size of multiple things. Good for showing more than one component. | Dot bubble  Good for showing individual relatives in a small area. Good for showing multiple categories. | Dot map  For showing unstructured areas across a map. |
| Step  Perfect for showing how parts have increased or decreased over time. | Dot plot  Lithographs draw more attention to the data points than a standard histogram because they can also show the raw data and value effects. | Dot plot  Perfect for showing how parts have increased or decreased over time. | Step  Good for showing changing data over time. Good for showing the trend of individual values. | Dot chart  Good for showing individual relatives in a small area. Good for showing multiple categories. | Dot bubble  See above. | Bar chart  The standard way to show the size of multiple things. Good for showing more than one component. | Dot bubble  Good for showing individual relatives in a small area. Good for showing multiple categories. | Dot map  For showing unstructured areas across a map. |
| Dotloop  Effectively showing changing proportions over time. For large datasets, consider using dotcharts. | Population pyramid  Effectively for showing the age and sex distribution of a population. Perfect for basic histograms. | Dotplot  Perfect for showing cumulative totals. Like a regular line chart, but the area under the line always represents a measure. | Violin plot  Gives us a box plot but with much more effective with density contours. Shows that cannot be averaged. | Dot chart  Good for showing the uncertainty in future data. Good for showing the further forward the projection. | Dot bubble  A good way of showing individual relatives in a small area. Good for showing multiple categories. | Tree map  Good for hierarchical parts-to-whole relationships. Good for showing the same time as a bar chart but less complicated. | Dot bubble  Good for showing individual relatives in a small area. Good for showing multiple categories. | Dot map  For showing unstructured areas across a map. |
| Box  Effectively for showing changing proportions over time. For large datasets, consider using dotcharts. | Population pyramid  Effectively for showing the age and sex distribution of a population. Perfect for basic histograms. | Dotplot  Perfect for showing cumulative totals. Like a regular line chart, but the area under the line always represents a measure. | Violin plot  Gives us a box plot but with much more effective with density contours. Shows that cannot be averaged. | Dot chart  Good for showing the uncertainty in future data. Good for showing the further forward the projection. | Dot bubble  A good way of showing individual relatives in a small area. Good for showing multiple categories. | Tree map  Good for hierarchical parts-to-whole relationships. Good for showing the same time as a bar chart but less complicated. | Dot bubble  Good for showing individual relatives in a small area. Good for showing multiple categories. | Dot map  For showing unstructured areas across a map. |
| Cumulative curve  A good way of showing cumulative totals. Like a regular line chart, but the area under the line always represents a measure. | Frequency polygon  For displaying multiple distributions of data. Like a regular line chart, but the area under the line always represents a measure. | Seaweed  Used to indicate individuals points in a distribution. Points can be weighted by additional variables, such as size or cost factors. | Dot chart  A good way of showing cumulative totals. Like a regular line chart, but the area under the line always represents a measure. | Dot chart  Good for showing the uncertainty in future data. Good for showing the further forward the projection. | Dot bubble  A good way of showing individual relatives in a small area. Good for showing multiple categories. | Tree map  Good for hierarchical parts-to-whole relationships. Good for showing the same time as a bar chart but less complicated. | Dot bubble  Good for showing individual relatives in a small area. Good for showing multiple categories. | Dot map  For showing unstructured areas across a map. |
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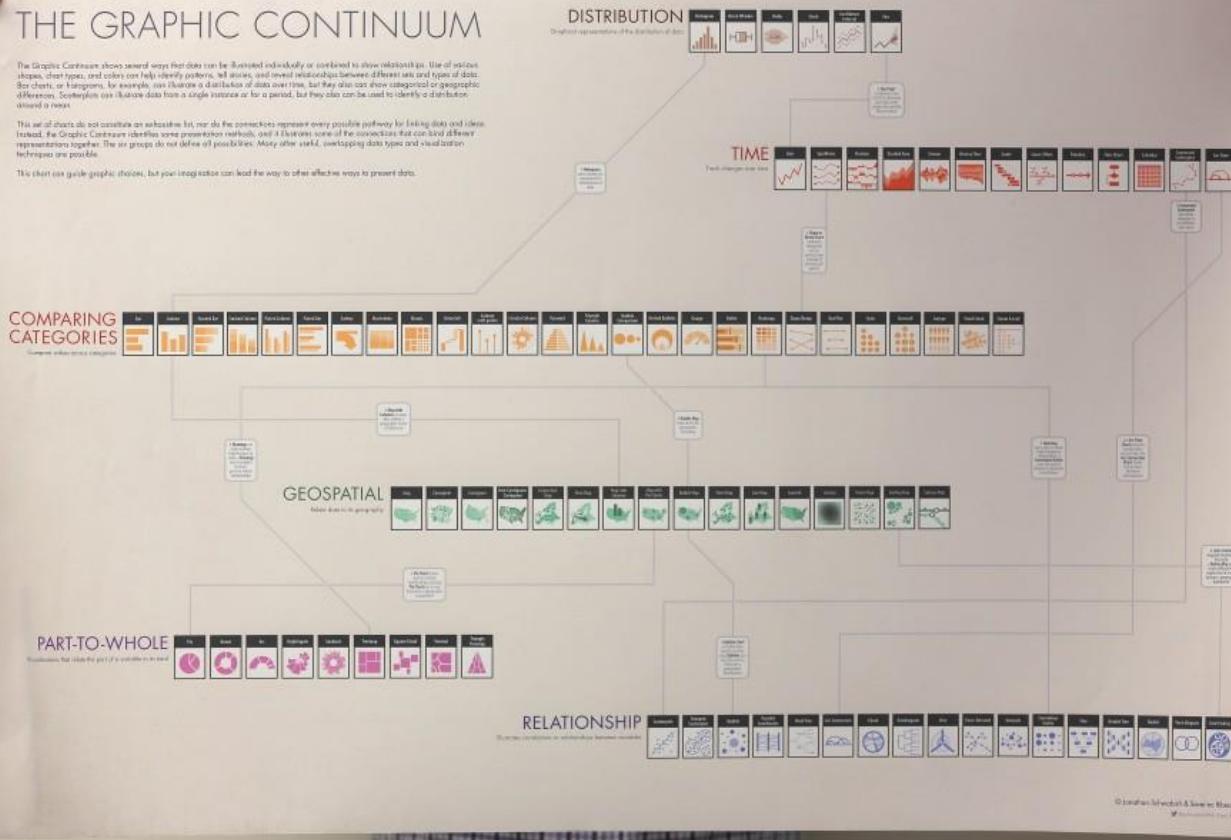
THE GRAPHIC CONTINUUM

The Graphic Continuum shows several ways that data can be illustrated individually or combined to show relationships. Use of various shapes, chart types, and colors can help identify patterns, tell stories, and reveal relationships between different sets and types of data.

Box charts, or histograms, for example, can illustrate a distribution of data over time, but they also can show categorical or geographic distributions. Box charts can also relate data from a single dimension to a second, but they also can be used to identify a distribution across a range.

This set of charts do not constitute an exhaustive list, nor do the connections represent every possible pathway for linking data and ideas. Instead, The Graphic Continuum identifies seven primary methods, and it illustrates some of the connections that can link different representations together. The six groups do not define all possibilities. Many other useful, overlapping data types and visualization techniques are possible.

This chart can guide graphic choices, but your imagination can lead the way to other effective ways to present data.



"The Graphic Continuum" by Jonathan Schwabisch and Severino Ribecca

#30DayChartChallenge

April 2021 • 30 Days • 30 Charts • 5 Categories



comparisons

1. part-to-whole
2. pictogram
3. historical
4. magical
5. slope
6. experimental

distributions

7. physical
8. animals
9. statistics
10. abstract
11. circular
12. strips

relationships

13. correlation
14. space
15. multivariate
16. trees
17. pop culture
18. connections

timeseries

19. global change
20. upwards
21. downwards
22. animation
23. tiles
24. monochrome

uncertainties

25. demographic
26. trends
27. educational
28. future
29. deviations
30. 3D

Follow @30DayChartChall for more!

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Every April • 30 Days • 30 Charts • 5 Categories

comparisons

distributions

relationships

timeseries

uncertainties



Edit profile

#30DayChartChallenge

@30DayChartChall

A #DataViz challenge by @CedScherer and @dr_xeo

2nd edition in April 2022

Check #30DayChartChallenge for contributions to the 1st edition!

Worldwide ⚡ github.com/Z3tt/30DayChartChallenge Joined February 2021

2,485 Following 2,264 Followers



#30DayChartChallenge

@30DayChartChall

Hello World 🌎🌐🌐

We are excited to announce the first
#30DayChartChallenge, happening in April 2021!

Stay tuned for more information about our inspiration
and categories later!

#30DayChartChallenge

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Join us during April 2021 and
follow @30DayChartChall for more!

Dominic Royé and Cédric Scherer

5:26 PM · Feb 21, 2021 · Twitter Web App



#30DayChartChallenge

@30DayChartChall

...

The challenge has started!

❓ How to participate? Tag **#30DayChartChallenge** when sharing your contribution.

📊 Resources + Collection of Contributions per day:
github.com/Z3tt/30DayChartChallenge

⌚ Dedicated **#Rstats** Collection:
github.com/dominicroye/rstats

📅 Daily Challenge Topics 

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Follow @30DayChartChall for more!

github.com/z3tt/30DayChartChallenge_Collection2021



#30DayChartChallenge
@30DayChartChall

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How to contribute?

Anyone is welcome to contribute, no matter which data source or tool you use.

If you share your contributions on Twitter, please use the hashtag **#30DayChartChallenge** and/or tag the **@30DayChartChall** account.

Data

You are free to pick whatever data you want—we do not provide any particular dataset for each challenge. Either use the same dataset for all or different datasets each day, as you like! Search the internet, collect your own, visualize daily experiences or funny stats. Nevertheless, we would like to provide a starter kit of possible data sources:

- Google dataset search
- data.world
- kaggle
- Data Is Plural
- OurWorldInData
- Eurostats
- UN Stats
- WHO
- OECD Stats
- Socioeconomic Data and Applications Center (NASA)
- MakeoverMonday
- TidyTuesday (search through old datasets [here](#), [here](#) and [here](#))
- IMDB datasets
- Free GIS data
- WorldClim — maps, graphs, tables, and data of the global climate
- Rdatasets — over 1300 datasets originally distributed in R packages
- List of R packages to import data

Chart Type Selection

There are many great selection helpers out there, guiding you through the many different boxes you can fit the endless number of (sub)chart types in. Here is a non-exhaustive list:

- Chart Suggestions—A Thought-Starter by Andrew Abela — an all-time classic ([latest version](#))
- Graphic Continuum by Jon Schwabish and Severino Ribecca — the main source for the five categories
- Visual Vocabulary by the Financial Times Visual Journalism — chart choice helpers with lots of further links
 - interactive version
 - static version
- From Data to Viz by Yan Holtz — interactive, with information and codes for each chart type
 - R code collection
 - Python code collection
 - D3js code collection
- DataVizProject by ferdio — interactive with lots of examples
- Visualization Universe by Adioma and Google News Lab
- How to Choose the Right Chart Type — another, very compact, decision tree to help you



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uncertainties

Contributions

Collection of all contributions per day (shared on Twitter with the hashtag and/or mentioning @30DayChartChall account). For now just named images in a folder—hopefully going to clean it up once the challenge is over.

Comparisons:

- Day 1: Part-to-Whole
- Day 2: Pictogram
- Day 3: Historical
- Day 4: Magical
- Day 5: Slope
- Day 6: Experimental

Distributions:

- Day 7: Physical
- Day 8: Animals
- Day 9: Statistics
- Day 10: Abstract
- Day 11: Circular
- Day 12: Strips

Relationships:

- Day 13: Correlation
- Day 14: Space
- Day 15: Multivariate
- Day 16: Trees
- Day 17: Pop Culture
- Day 18: Connections

Timeseries:

- Day 19: Global Change
- Day 20: Upwards
- Day 21: Downwards
- Day 22: Animation
- Day 23: Tiles
- Day 24: Monochrome

Uncertainties:

- Day 25: Demographic
- Day 26: Trends
- Day 27: Educational
- Day 28: Future
- Day 29: Deviations
- Day 30: 3D



#30DayChartChallenge
@30DayChartChall

The challenge has started!

❓ How to participate? Tag **#30DayChartChallenge** when sharing your contribution.



Resources + Collection of Contributions per day:
github.com/Z3tt/30DayChar...

⌚ Dedicated **#Rstats** Collection:
github.com/dominicroye/rs...

📅 Daily Challenge Topics 🎉

#30DayChartChallenge

April 2021 • 30 Days • 30 Charts • 5 Categories



comparisons



distributions



relationships



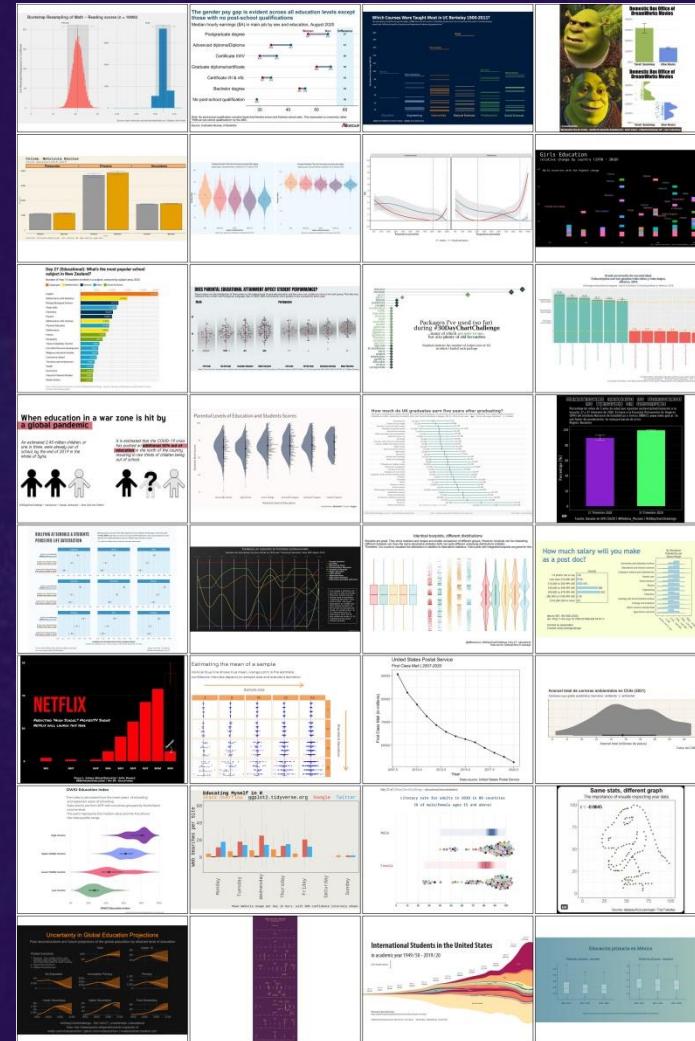
timeseries



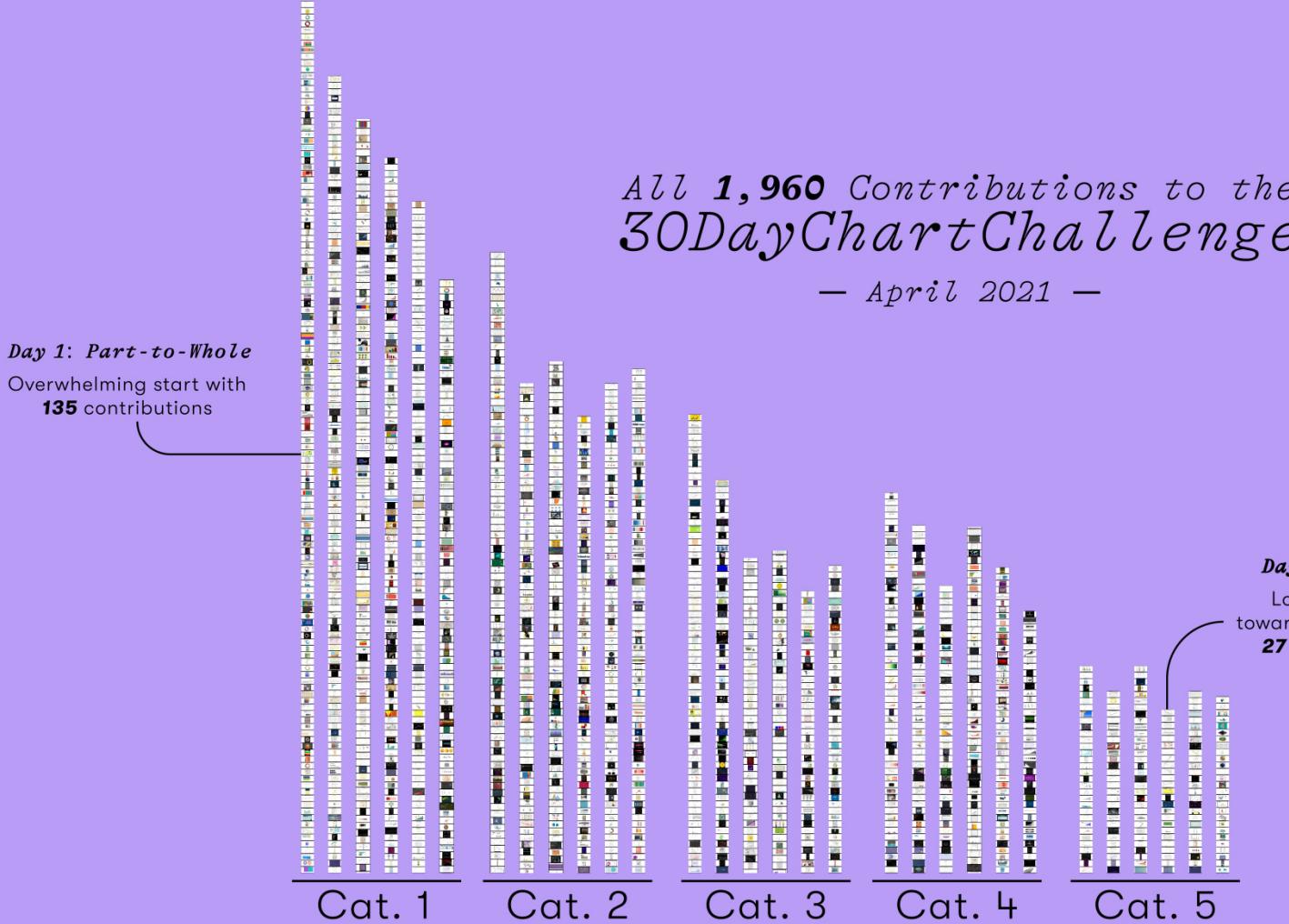
uncertainties

- | | | | | |
|------------------|---------------|------------------|-------------------|-----------------|
| 1. part-to-whole | 7. physical | 13. correlation | 19. global change | 25. demographic |
| 2. pictogram | 8. animals | 14. space | 20. upwards | 26. trends |
| 3. historical | 9. statistics | 15. multivariate | 21. downwards | 27. educational |
| 4. magical | 10. abstract | 16. trees | 22. animation | 28. future |
| 5. slope | 11. circular | 17. pop culture | 23. tiles | 29. deviations |
| 6. experimental | 12. strips | 18. connections | 24. monochrome | 30. 3D |

Follow @30DayChartChall for more!



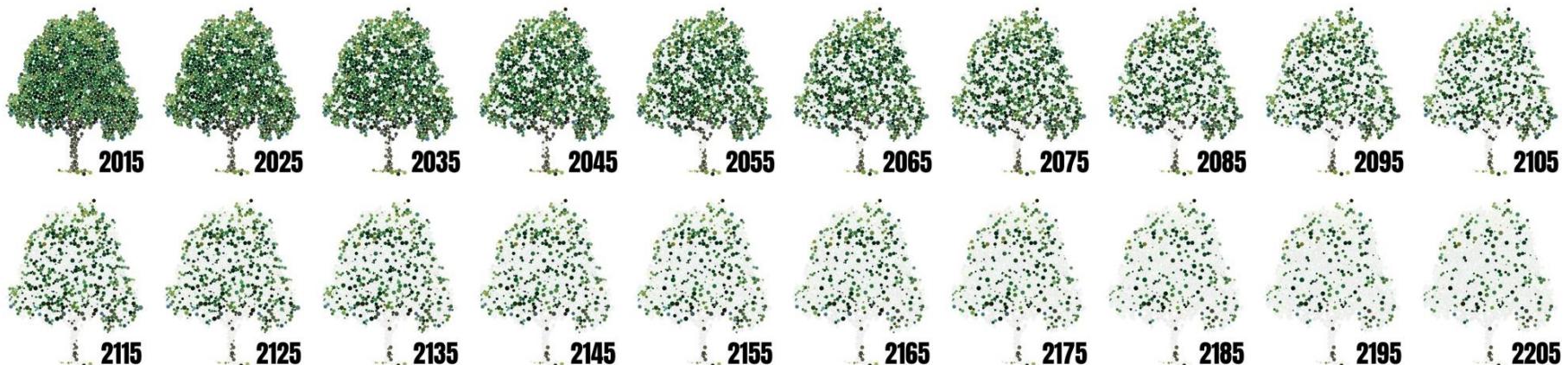
SHOWCASE



My Personal Favorites

Unless someone like you cares a whole awful lot, nothing is going to get better. It's not.

In a 2015 study, published in Nature, Thomas Crowther and colleagues mapped tree density across the world. They estimated that there were approximately 3.04 trillion trees in the world. The authors also estimated that over 15 billion trees are cut down each year, and the global number of trees has fallen by almost half (46%) since the start of human civilization. Each dot on the trees below represent one billion trees. Each year 15 dots are faded out to illustrate the progressive loss. At this rate, our forests will evaporate within 200 years.



Data: ourworldindata.org/forests | Article: doi.org/10.1038/nature14967 | Graphic: @jakekaupp

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Data: ourworldindata.org/forests | Article: doi.org/10.1038/nature14967 | Graphic: @jakekaupp

94% of

**BLACK
LIVES
MATTER**

demonstrations
involved no violent or
destructive activity



data : ACLED, 2021 | @j_marlier

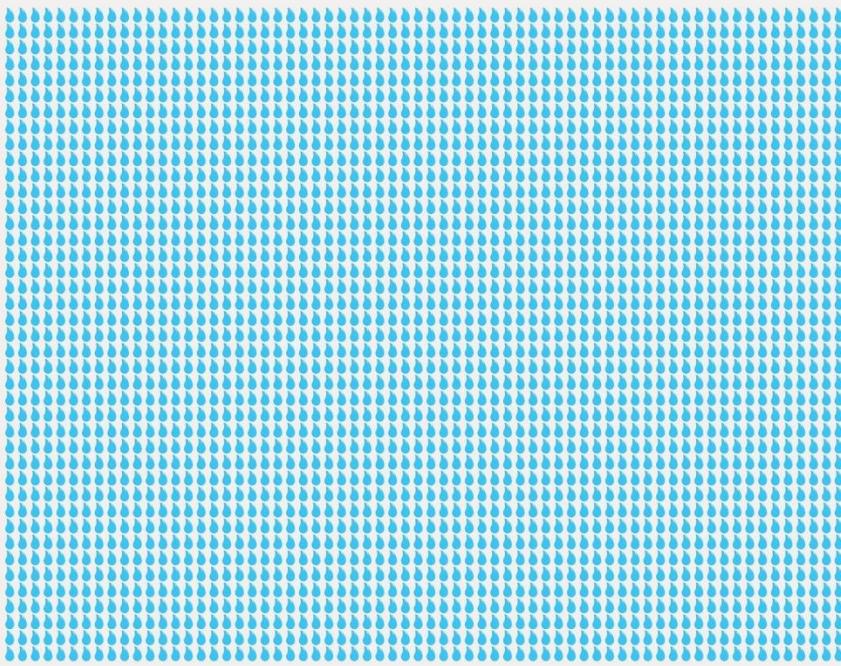
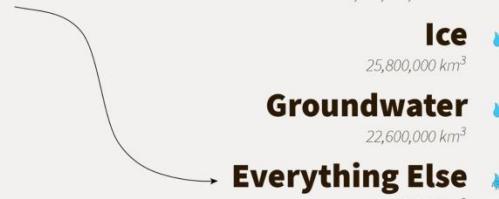
Day 1: Part-to-Whole | @maxthamt

Data from Abbott et al 2019,
Chart by E. Bechtel & M. Wernimont, USGS

Volume of All Water on Earth



“Everything else” includes water in the atmosphere, permafrost, lakes, rivers, wetlands, artificial reservoirs, seasonal snowpack, and biological water stored in living creatures.



Wellington City Rents, 1993-2020

Average weekly rent, to nearest \$50

#30DayChartChallenge

Day 6 - experimental



Data: MBIE

Created by David Friggins using Townscaper and GIMP

ORANGUTAN

then and now



Visualized by Muhammad Aswan Syahputra
Data from OFI and WWF
Image credit to freepik.com

Now it's only 104,700
Bornean orangutans left

Since four decades ago,
2,000-3,000 Bornean
orangutans were killed
every year!

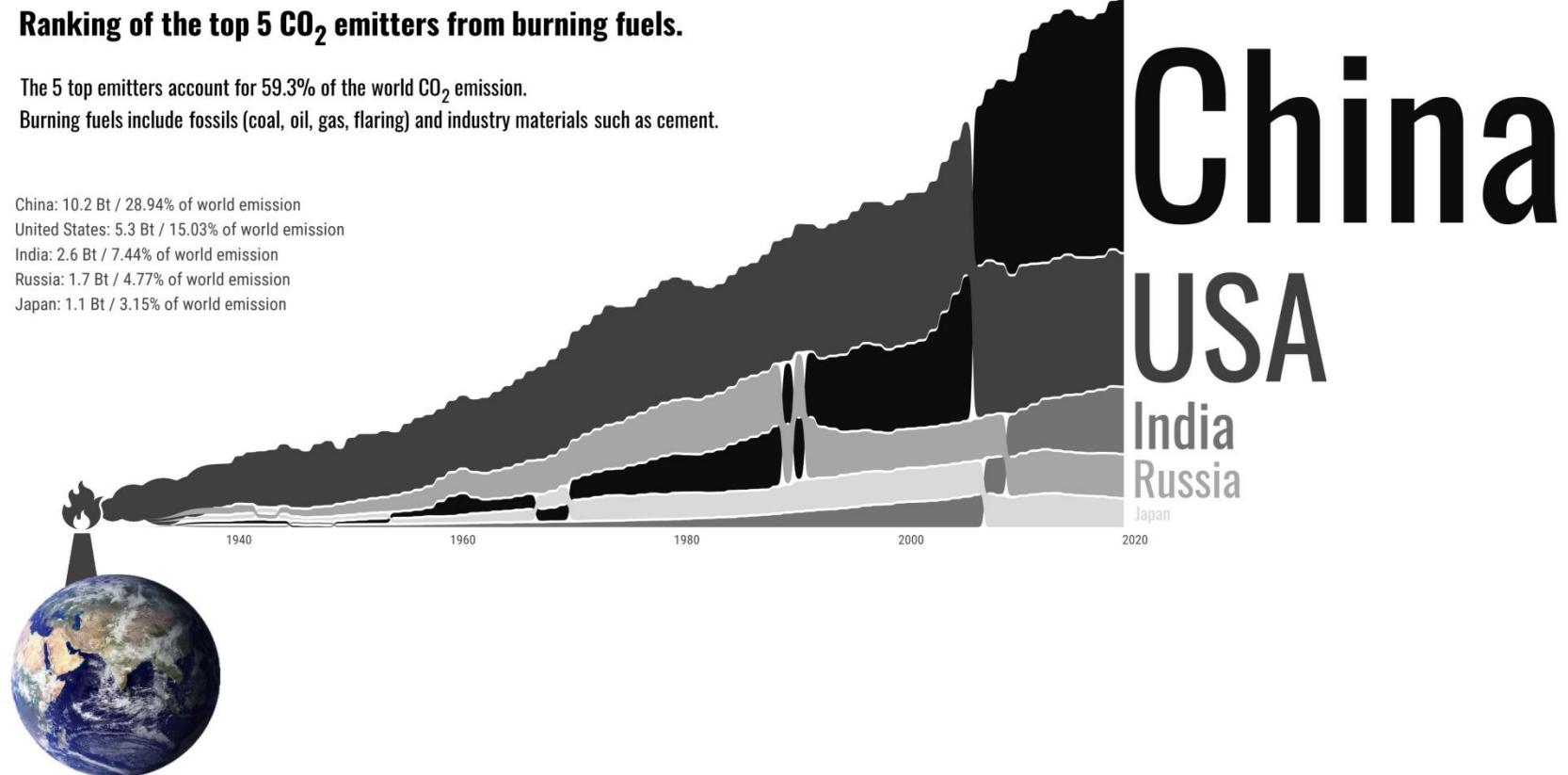
About 230,000 orangutans
lived a century ago

Ranking of the top 5 CO₂ emitters from burning fuels.

The 5 top emitters account for 59.3% of the world CO₂ emission.

Burning fuels include fossils (coal, oil, gas, flaring) and industry materials such as cement.

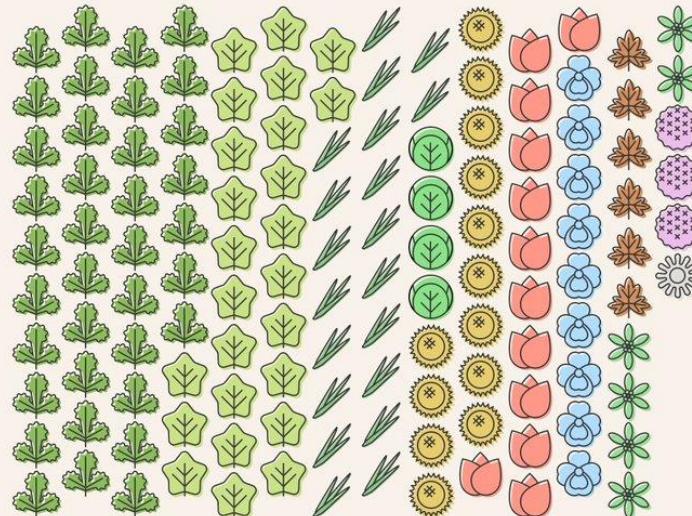
China: 10.2 Gt / 28.94% of world emission
United States: 5.3 Gt / 15.03% of world emission
India: 2.6 Gt / 7.44% of world emission
Russia: 1.7 Gt / 4.77% of world emission
Japan: 1.1 Gt / 3.15% of world emission



#30DayChartChallenge Day 24 | Viz: Christophe Nicault | Data: Our World in Data

Day 24: Monochrome | @cnicault

This Spring, in My Garden



Font: Ribeye Marrow by Astigmatic, Public Domain
Data and icons: by myself

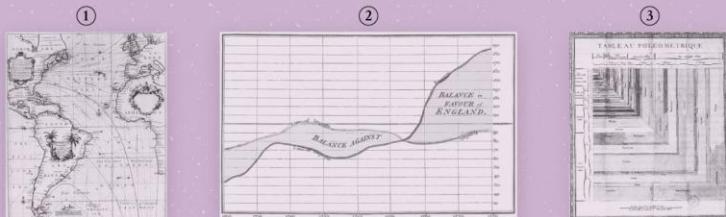
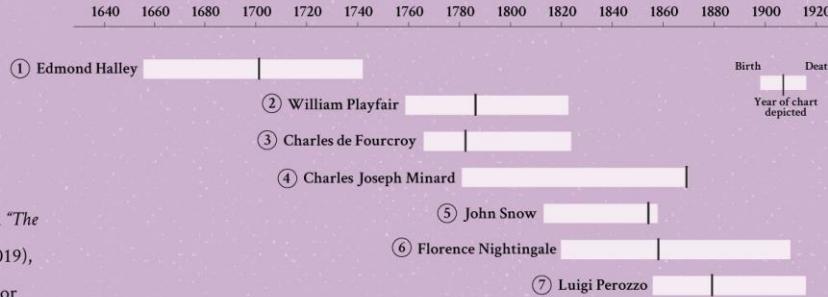
Wendy Shijia @ShijiaWendy 2 Apr 2021

Dataviz History

Visualizations that made history

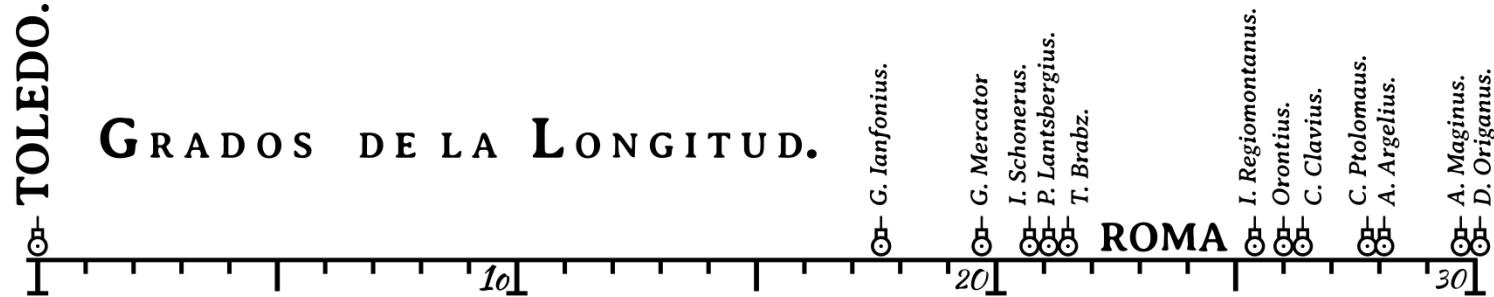
As Sandra Rendgen documents in her book "*The History of Information Graphics*" (Taschen, 2019), data visualization is a long-standing field. For centuries men and women have turned to visual communication to understand the world in a deeper way.

This chart shows the work of seven authors who defined the development of data visualization with their contributions.



Sources: Infogram (2016). Key Figures in the History of Data Visualization | Wikipedia

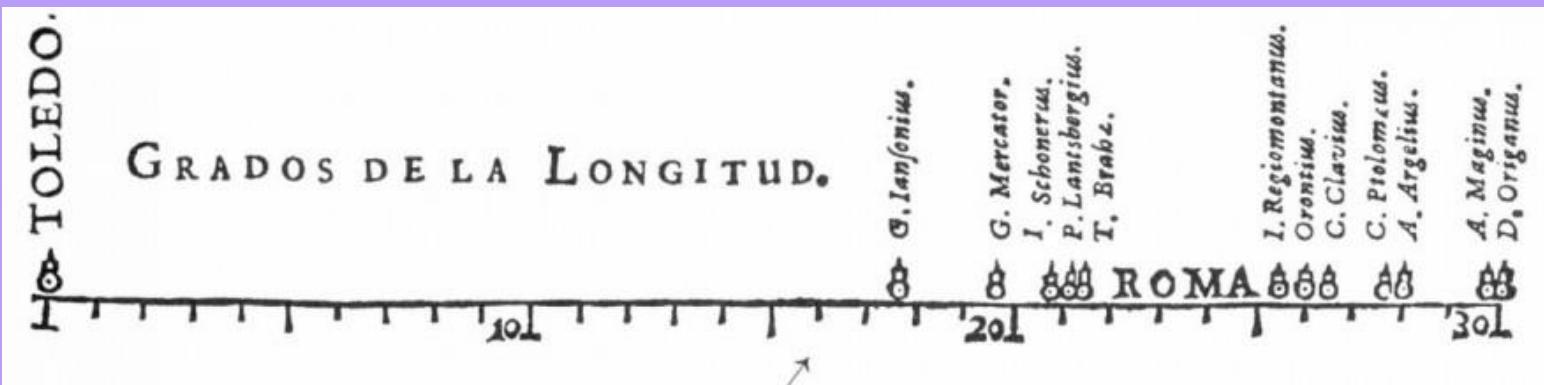
Design: Max Tham | #30DayChartChallenge 2021 | Day 3: Historical



Remake of (one of?) the first visual representation of statistical data by Michael Florent Van Langren, drawn in 1644. The Flemish astronomer illustrated the twelve known estimates in longitude between Toledo and Rome at that time.

Created with ggplot2 by Cédric Scherer | #30DayChartChallenge 2021 | Day 3: Historical

Day 3: Historical | @CedScherer



Michael Florent van Langren
The First (Known) Statistical Graph

DIAGRAM OF THE CAUSES
OF MORTALITY IN THE ARMY
IN THE EAST

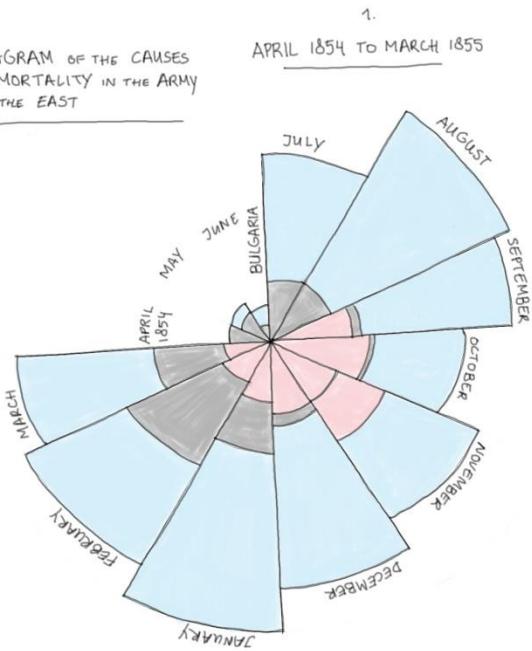
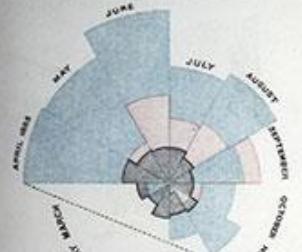
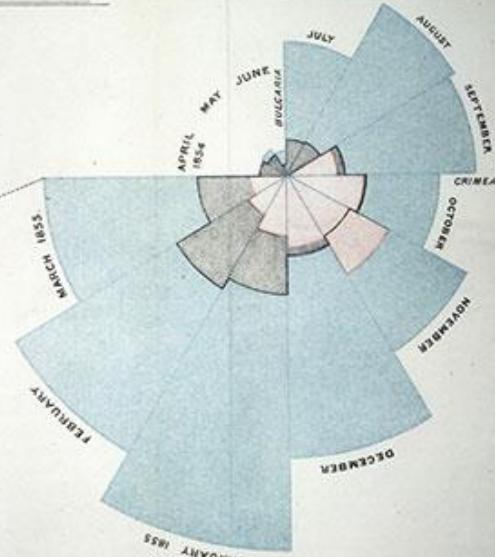


DIAGRAM OF THE CAUSES OF MORTALITY
IN THE ARMY IN THE EAST.

2.
APRIL 1855 to MARCH 1856



1.
APRIL 1854 to MARCH 1855.



The Areas of the blue, red, & black wedges are each measured from
the centre as the common vertex.

The blue wedges measured from the centre of the circle represent areas
for area the deaths from Preventable or Mitigable Zymotic diseases, the
red wedges measured from the centre the deaths from wounds, & the
black wedges measured from the centre the deaths from all other causes.
The black line across the red triangle in Nov^r 1854 marks the boundary
of the deaths from all other causes during the month.

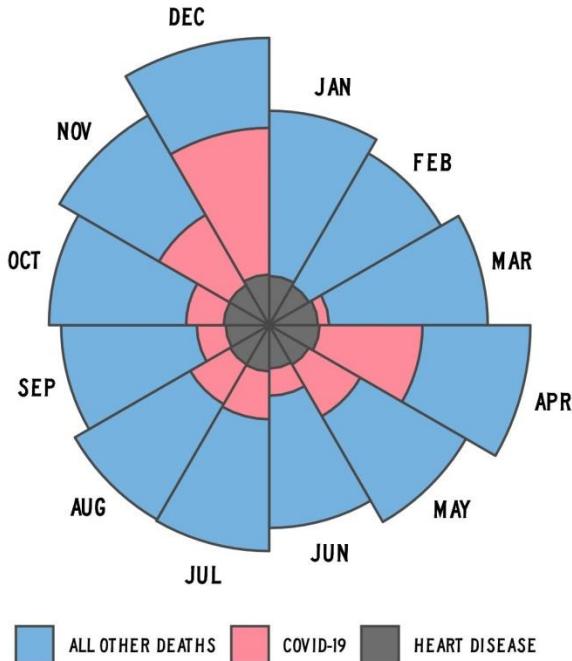
In October 1854, & April 1855, the black area coincides with the red;
in January & February 1855, the blue coincides with the black.

The entire areas may be compared by following the blue, the red & the
black lines enclosing them.

DIAGRAM OF THE CAUSES OF MORTALITY

IN THE UNITED STATES IN 2020.

DESIGN INSPIRED BY FLORENCE NIGHTINGALE'S "ROSE" DIAGRAM.



Created by @klyctn | Data from CDC

Day 3: Historical | @klyctn

covid-19

THE IMPACT OF COVID-19 ON EDUCATION



NUMBER OF DAYS WITH SCHOOLS FULLY CLOSED

SOURCE: UNICEF, 2021



Day 7: Physical + Day 11: Circular | @maxthamt

SCHOOL CLOSURES CAUSED BY COVID-19 IN LATINAMERICA

Unlike what happened in the Northern Hemisphere, in most Latin American countries, school closures due to the COVID-19 pandemic began just weeks after the start of the school year. This generated a period marked by distance learning, with only partial openings in some countries in the region.

- Schools fully open
- Schools partially open
- Schools fully closed
- Academic break

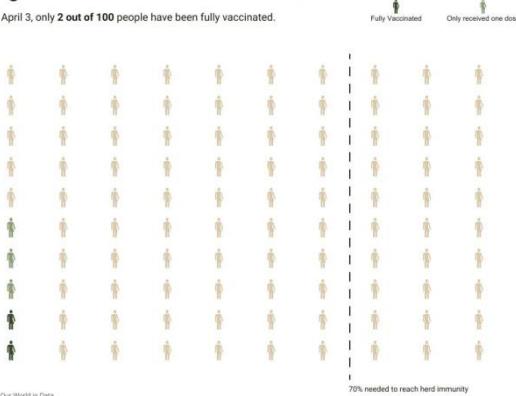


Source: Unesco (2021). COVID-19 impact on education
<https://en.unesco.org/covid19/educationresponse>

Design: Max Thamt @maxthamt
#30DayChartChallenge 2021 Day 11: Circular

Long road ahead for Covid-19 Vaccines

As of April 3, only 2 out of 100 people have been fully vaccinated.



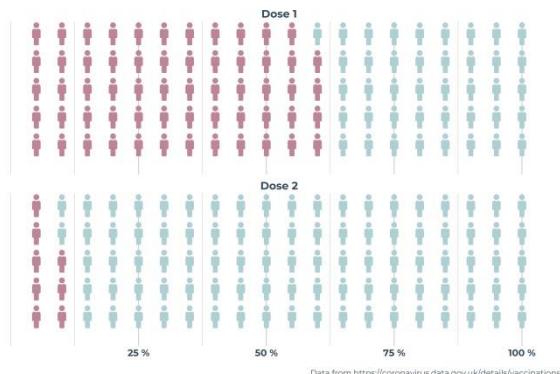
Data by: Our World in Data

Viz by: @AhmadGrewal

UK COVID Vaccination Progress

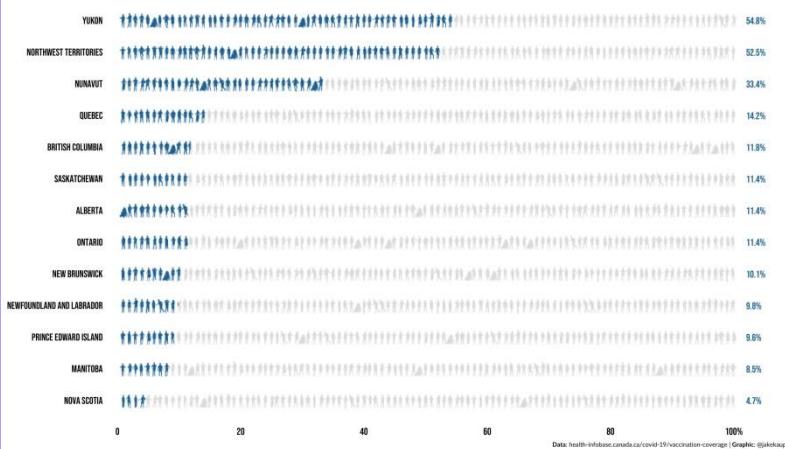
Proportion of adults in the UK who are vaccinated vs unvaccinated, as of 30/03/2021.

Each figure represents 5 % of the adult population.



PERCENTAGE OF POPULATION IN CANADIAN PROVINCIES WITH AT LEAST ONE COVID-19 VACCINE DOSE

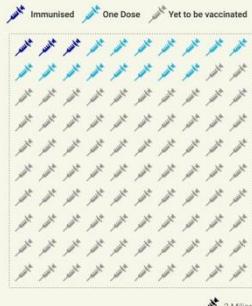
Pictogram style bar chart showing percentages of the population with at least one COVID vaccine dose as of March 27th, 2021.



India's Vaccination Drive

World's largest COVID-19 vaccination drive

A slow start with a long way to go.....
.....but we will get there



In the two-and-a-half months since the start of the vaccination drive on January 16, India has administered at least one shot to only **18%** of the **300 Million** target.

So far, the country has managed to completely vaccinate (with both doses) only **3%** of the 300-million target, while another **15%** have received only one shot.

India's vaccine drive has seen a slow start, relative to the size of the country and the number of people that need to be vaccinated. Part of this can be attributed to vaccine hesitancy.

What can we do for it?
**Spread Awareness
Reach People**

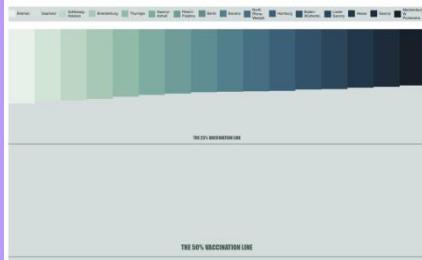
Be Safe & Get Vaccinated

Design : Ajay Varghese | @the_pi_art

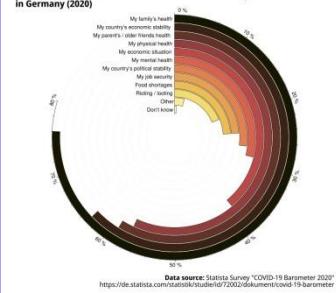
Day 1: Part-to-Whole | @AhmadGrewal
Day 2: Pictogram | @jakeapp + @sianbladon + @the_pi_art

Playing Piano with the Vaccine in Germany

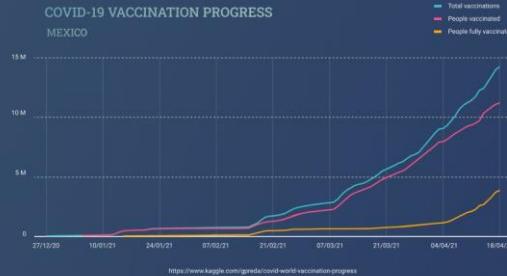
Day 18 of 30DayChartChallenge - abstract distributions



Main worries or concerns about the COVID-19/Corona pandemic in Germany (2020)

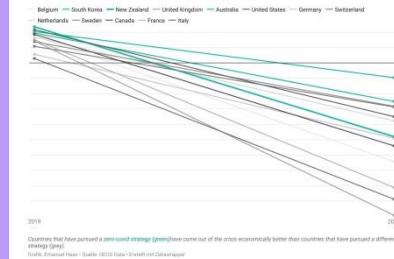


COVID-19 VACCINATION PROGRESS MEXICO



ZERO COVID: An investment that pays off

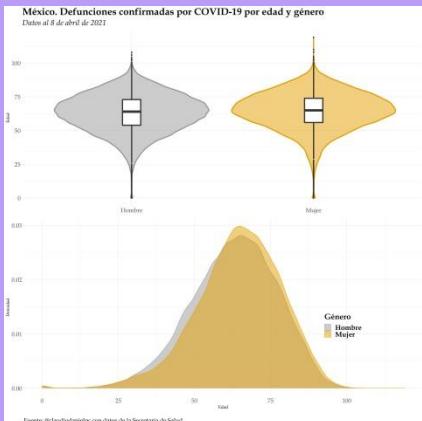
Change in yearly GDP compared to the same period a year earlier (%)



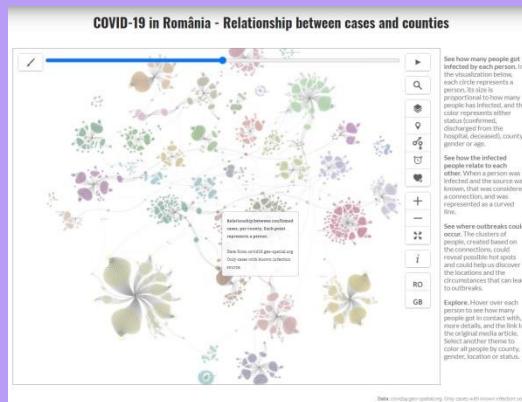
Day 10: Abstract | @terezai + Day 11: Circular | @varaktor + Day 20: Upwards | @whiterabbit_sci + Day 5: Slope | @dermanuskript

Méjico. Defunciones confirmadas por COVID-19 por edad y género

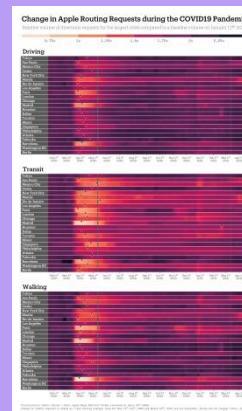
Datos al 8 de abril de 2021



COVID-19 in Romania - Relationship between cases and counties



Change in Apple Routing Requests during the COVID19 Pandemic



COVID vaccination rates in England



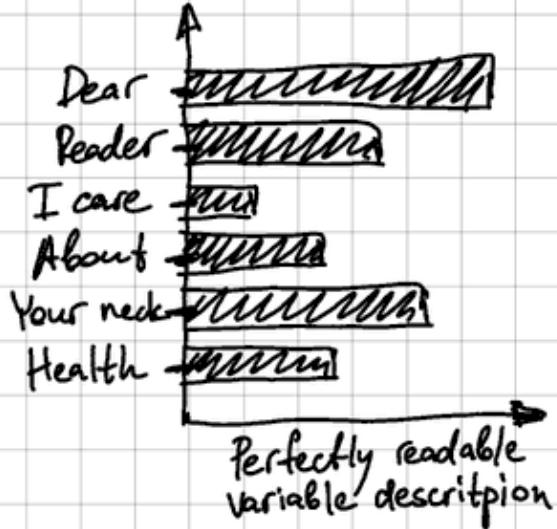
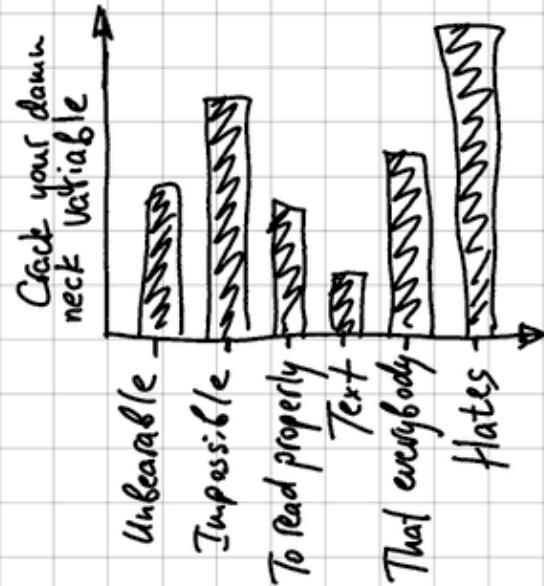
Day 9: Circular | @claudiodianelpc + Day 18: Connections | @maptheclouds + Day 23: Tiles | @CedScherer + Day 30: 3D | @VictimOfMaths

**HAND
DRAWN**

ROTATE THE DAMN PLOT

THE SINGLE EASIEST AND MOST USEFUL DATAVIZ

TRICK



Data: quasi-random mind walk
Tools: reMarkable2

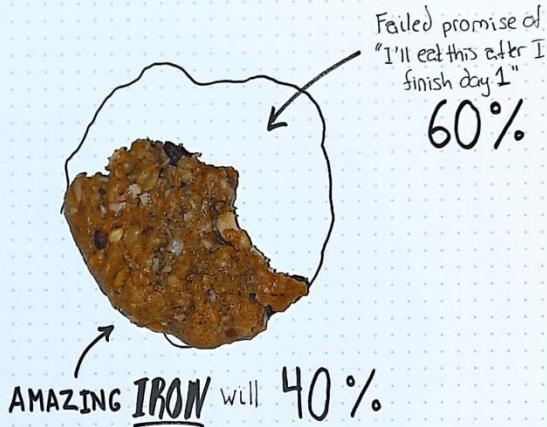
@ikashnitsky
#30DayChartChallenge

30 DAY CHART

CHALLENGE

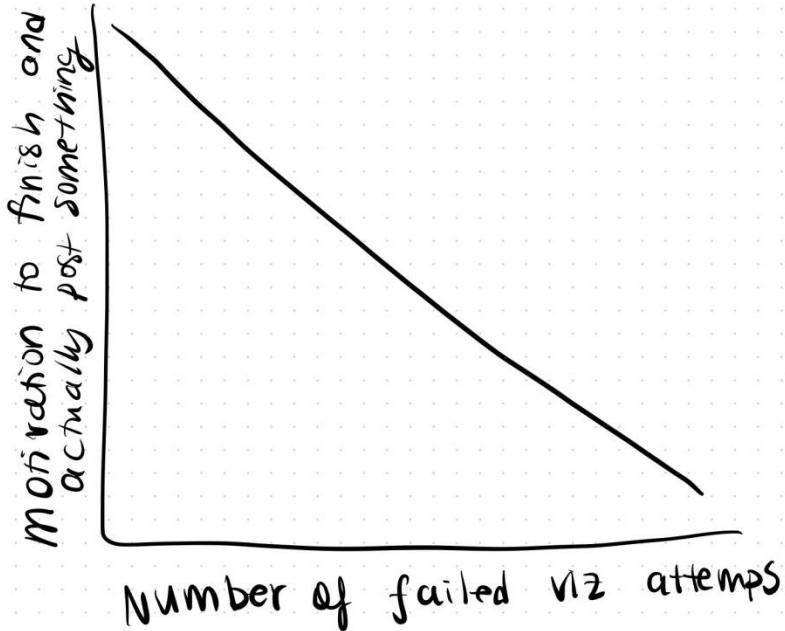
DAY ONE

Part to WHOLE



graphic: ©jakekaupp | cookie: My Mother-in-law
DATA: #entirely not made up

30 Day chart challenge be like

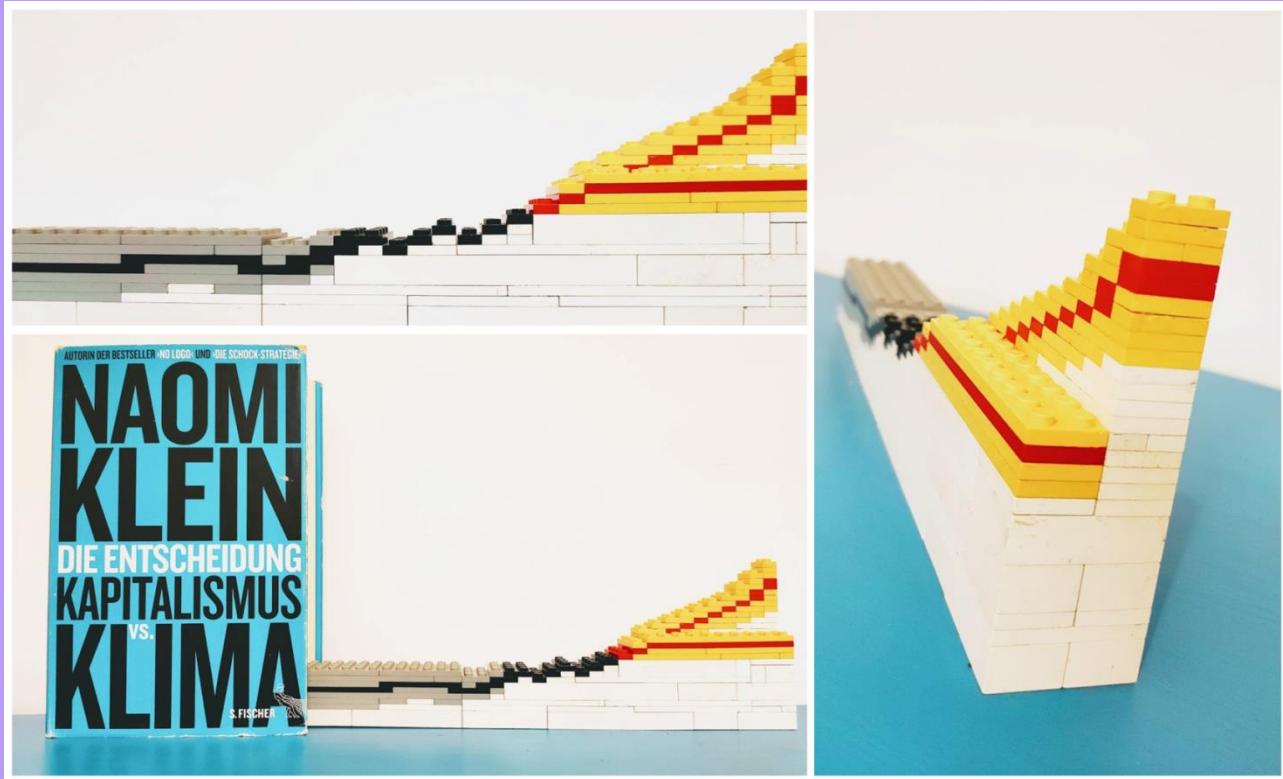


Day 1: Part-to-Whole | @jakekaupp + Day 13: Correlation | @sharlagelfand

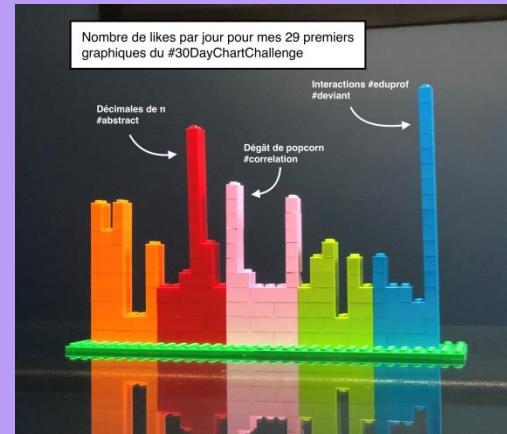
**HAND
MADE**



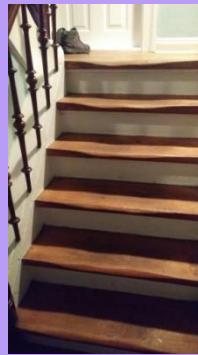
Day 12: Strips | @BecViv



Day 30: 3D | @CedScherer + @mideschenes
Day 7: Physical | @alenka_gucek



Carrot consumption in the US (per capita, in kg)



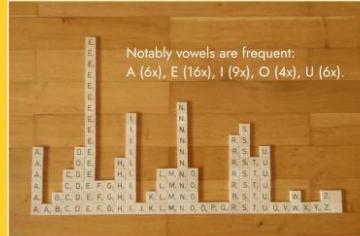
Impact of Work From Home on Caffeine Consumption



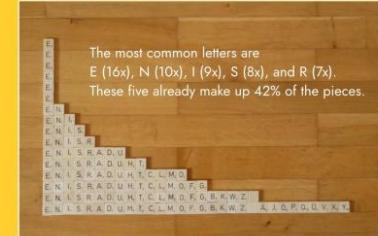
S₁ C₂ R₁ A₁ B₃ B₃ L₂ E₁ L₂ E₁ T₂ T₂ E₁ R₁ S₁

Frequencies and points of letters in the German language edition (before 1987)

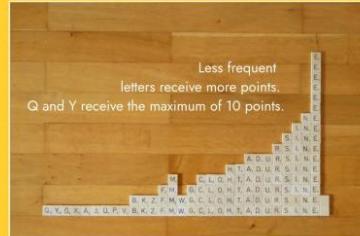
Sorted alphabetically



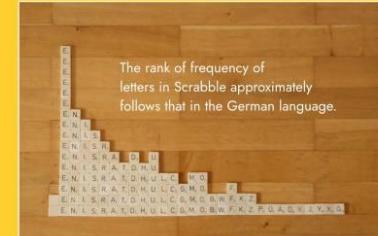
Sorted by frequency (desc.), alphabetically



Sorted by points (asc.), frequency (asc.), alphabetically



Sorted by frequency of occurrence
in the German language (desc.)



#30DayChartChallenge, 9.Statistics @JohannesWirges

Day 7: Physical | @Mbozukova + @ikashnitsky + @shijiawendy + @sarahannes (right)
Day 9: Statistics | @JohannesWirges (left)

Art

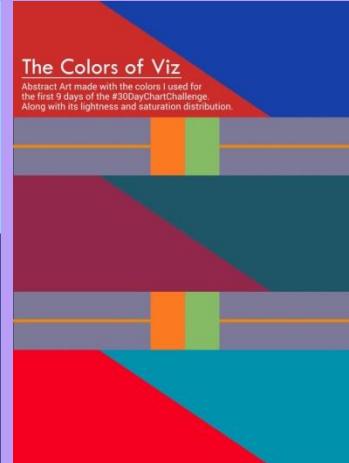
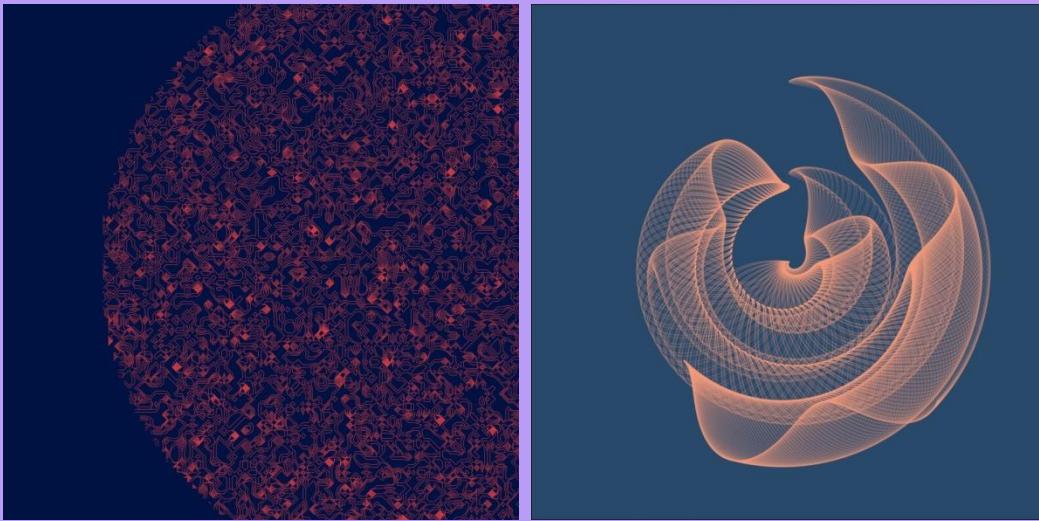


The Gladstone Pottery Museum (Stoke-on-Trent, UK)

#30DayChartChallenge | @CSHoggard



Day 10: Abstract | @CSHoggard + @dosullivan019

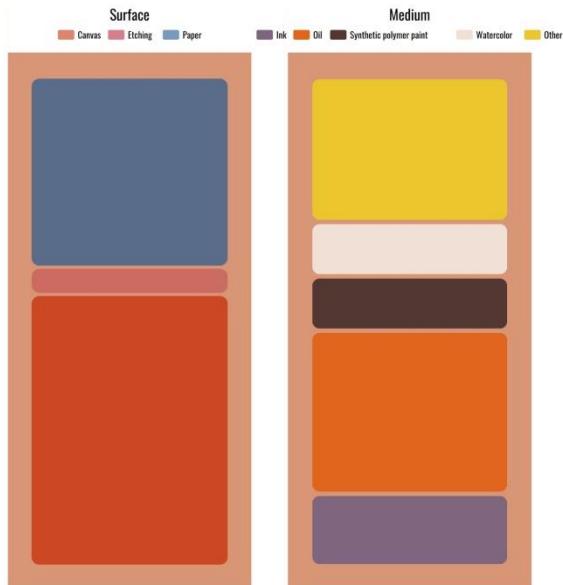
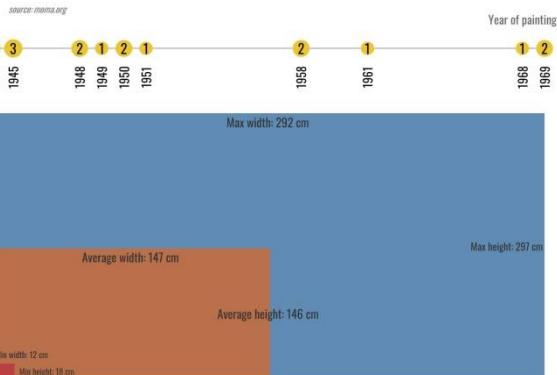


Day 10: Abstract | @ijeamaka_a + @ingrid_zoll + @kkakey_ + @luisfrei

Mark Rothko

Mark Rothko Paintings at Modern the Museum of Modern Art

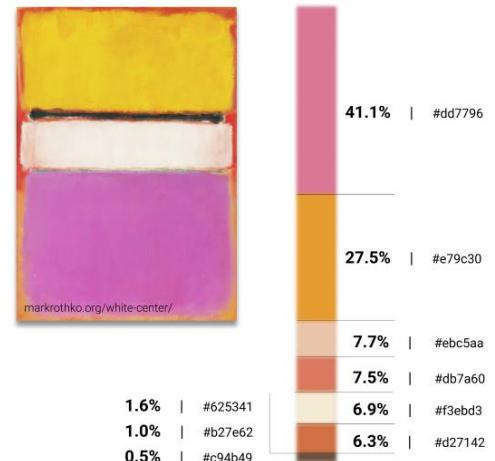
Mark Rothko was an American Abstract artist of the mid-20th century. He had joined the vanguard of the new American artist – abstract expressionist by the mid 1940s. Rothko first developed this compositional strategy in 1947. Described as "Color Field painting", which is a style characterized by significant open space and an expressive use of color. This visualization gives an overview of Rothko's works at the the Museum of Modern Art.



Mark Rothko's *White Center*

(Yellow, Pink and Lavender on Rose), 1950

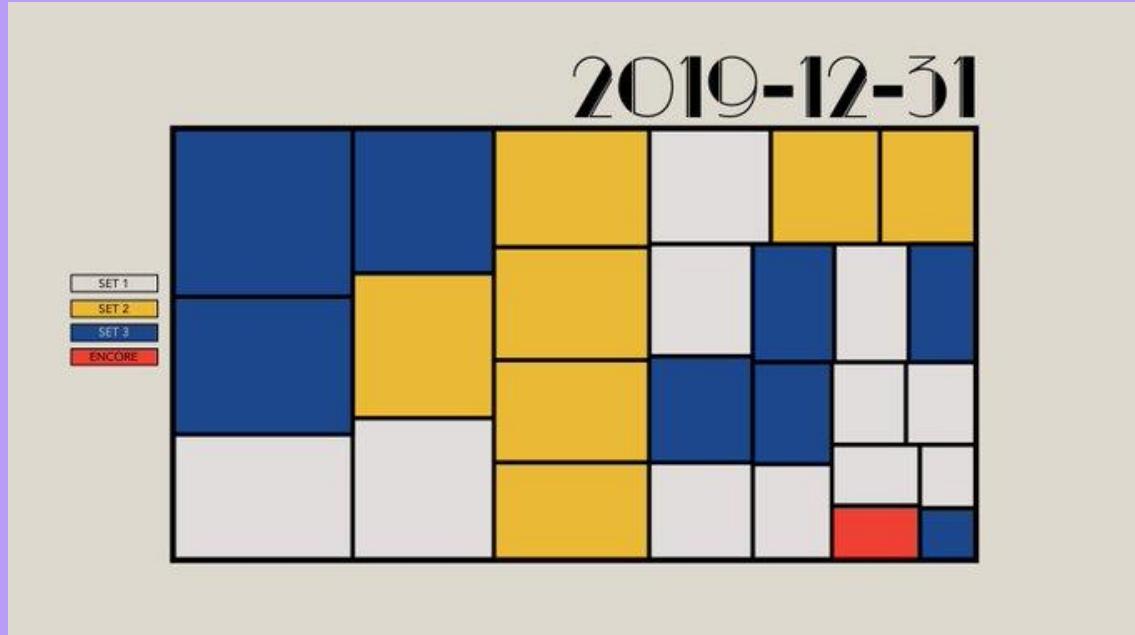
Proportional color palette generated with labs.tineye.com



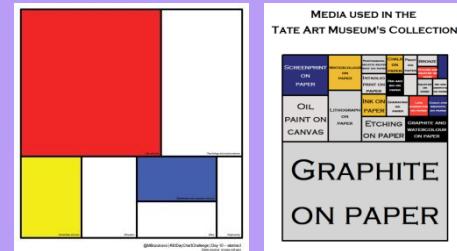
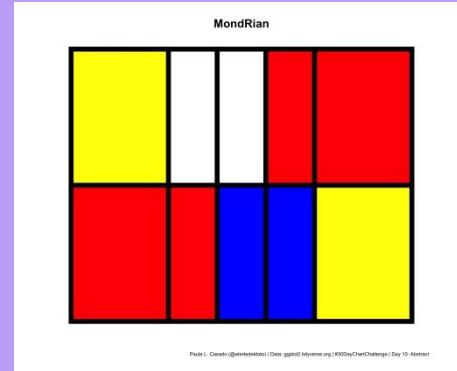
#900dayChartChallenge | abstract | Klaudia Jankowska

Day 10: Abstract | @m_cnakhaee + @ K_Jankowska_

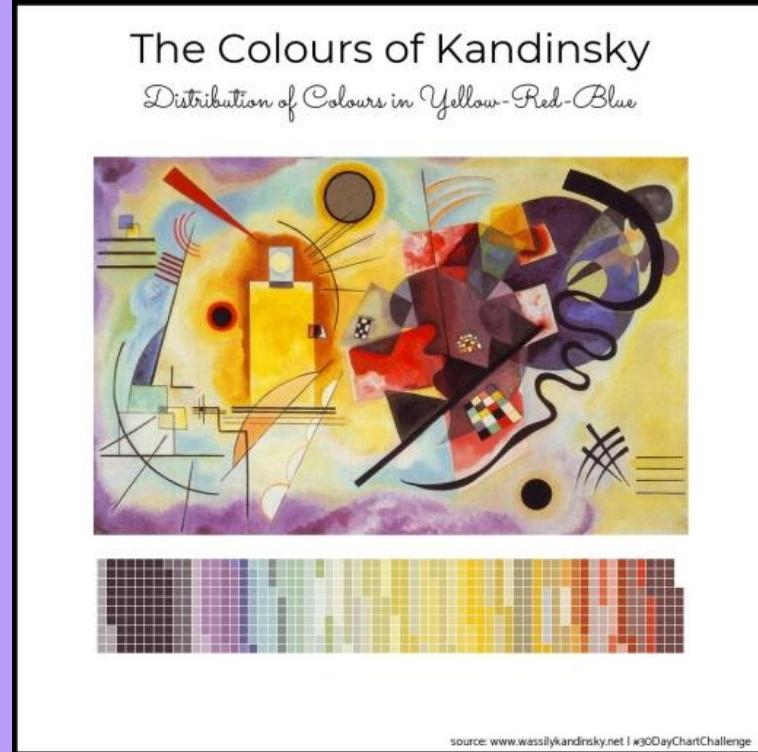
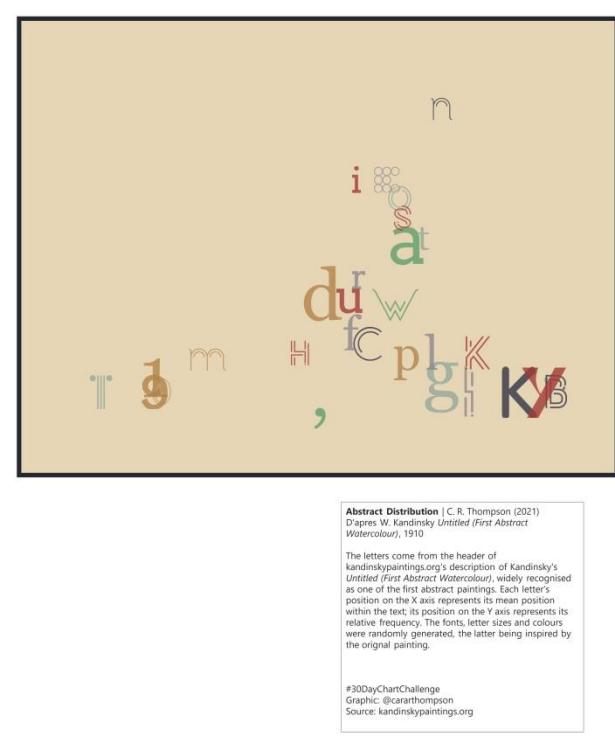
Piet Mondrian



Day 10: Abstract | @Mayacelium + @elartedeldato + @Mbozukova + @JuliaMuellerFr



Wassily Kandinsky

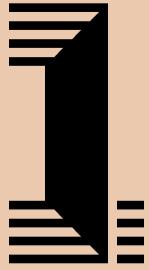


Day 10: Abstract | @cararthompson + @li_bennett_

VALUES



CHALLENGES



**GET OUT OF YOUR
COMFORT ZONE**

Learnings

“**The uncertainty category was the most challenging** as I rarely have a need to create charts with features such as prediction intervals and confidence bands etc. That said, it was **a good opportunity to learn** more about these features and the types of data they best work with.”

— MARC REID



Tereza Iofciu
@terezaif

...

This is by far the hardest topic to date in the
#30DayChartChallenge .. #uncertainty .. learning so
much 🚧

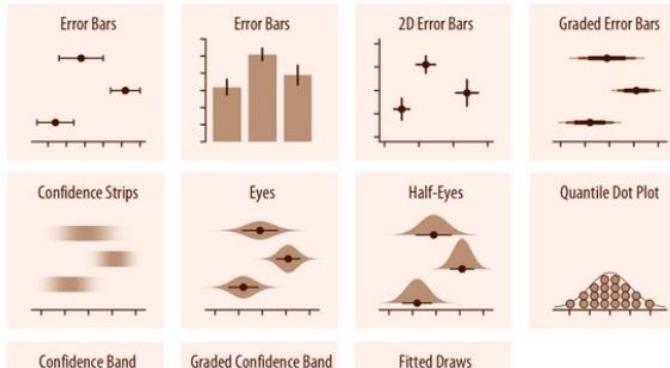
⌚ #30DayChartChallenge @30DayChartChall · Apr 26

Welcome to the last category: UNCERTAINTY ?

The last six topics and we're done with the first edition of the
#30DayChartChallenge 🎉 Heads up to everyone who's still participating and
following along!

[Show this thread](#)

Charts to Visualize Uncertainty





Mihaela Bozukova
@MBozukova

...

Replying to [@MBozukova](#)

I wanted to expand my **#Rstats** and **#dataviz** skills, so I set myself the following goals:

1. post a chart every single day for 30 days, and
2. explore either one new dataset or one new **#Rstats** package every day.

2/

12:05 PM · May 1, 2021 · Twitter Web App

1 Retweet 4 Likes



Mihaela Bozukova @MBozukova · May 1

...

Replying to [@MBozukova](#)

Looking back, I am extremely happy to have pushed myself out of my comfort zone every single day.

3/



1



2



GET OUT OF YOUR COMFORT ZONE

- Skillset
- Tool
- Topic
- Chart Type
- SHARE IT!



**GET INSPIRED,
GET CREATIVE**



Mick

@jacnah63

...

The data viz skills of some people are just off the charts awesome. I'm inspired to learn more and practice more.
#30DayChartChallenge

10:16 AM · May 2, 2021 · Twitter Web App

Community

“During the challenge I also learned many tricks by looking at other participants’ submissions and codes. The creativity and visualization capabilities of the others for each one of these topics was outstanding and looking for #30DayChartChallenge on Twitter will be worth a visit.”

— RICHARD VOGG



judkacag @juditbekker · Apr 28

Do you know any good courses / resources for learning R?
I started it a few years back, but I'm looking for something that is well-structured and practice oriented.

25

4

29



Fred Najjar @FredrickNajjar · Apr 28

ooo! new toy! me want to learn R too

1



1



judkacag

@juditbekker

...

Replying to @FredrickNajjar

yeah, I saw all the great submissions in rstats for the
#30DayChartChallenge and I thought learning R might
drag me out of feeling stuck 🚀

12:55 PM · Apr 28, 2021 · Twitter Web App

6 Likes



akomissaroff @anakomissarof · Apr 28

...

Replies to @juditbekker and @FredrickNajjar

Yes, me the same! Looking at so many brilliant works made for
30DayChartChallenge I started learning R. I mainly use CodeAcademy
courses. But it depends on what type of studying you prefer: books, videos,
or interactive platforms



1





judkacag @juditbekker · Apr 28

...

Do you know any good courses / resources for learning R?
I started it a few years back, but I'm looking for something that is well-structured and practice oriented.

25

4

29



Klaudia Jankowska (she/her)

@K_Jankowska_

...

Replying to [@juditbekker](#)

Planned to ask the same! 🙌 The challenge is real fun
but also made me realise that R for data viz is
something I'll need to look into rather sooner than
later, as right now I feel like a total outcast...

1:37 PM · Apr 28, 2021 · Twitter Web App

2 Likes



Cédric Scherer @CedScherer · Apr 28

...

Replies to [@K_Jankowska_](#) and [@juditbekker](#)

Whatever tools make you feel confident and productive are good tools!
There is, definitely a bias towards [#rstats](#) among participants in the
[#30DayChartChallenge](#) because the two who initiated it are working with R

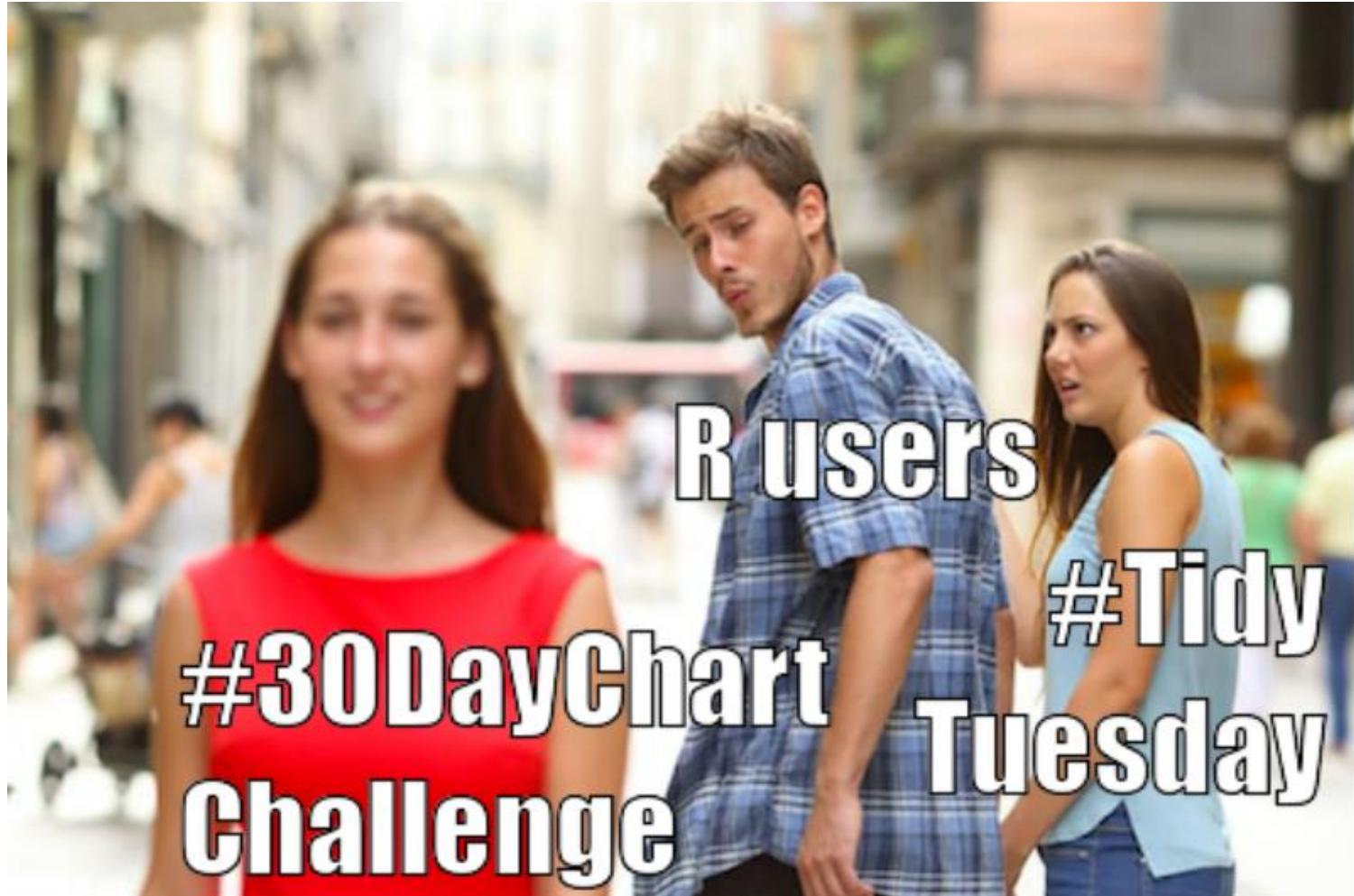


1



5





TidyTuesday

A weekly data project in R from the
R4DS online learning community

Nischal Shrestha, Titus Barik, and Chris Parnin (2021)

Remote, but Connected: How #TidyTuesday Provides an Online Community of Practice for Data Scientists.
Proc. ACM Hum.-Comput. Interact. 5, CSCW1, Article 52

“I’m not looking to necessarily practice my skills as much as I am **to be inspired and know what I can do** based on what other people share.”

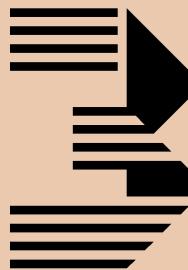
P3 in *Proc. ACM Hum.–Comput. Interact. 5, CSCW1, Article 52*

“#TidyTuesday became a ‘choose your own adventure game’, which allowed participants **to ‘pursue something really weird’ beyond traditional visualizations.**”

try and broaden their skillset and approach to data visualization. See the article 52

GET INSPIRED, GET CREATIVE

- Prompt → Topic and/or Design
- New Datasets
- New Tools
- Inspiring Contributions
- Playground to “pursue something weird”



**GET FEEDBACK
AND SUPPORT**



Mihaela Bozukova @MBozukova · May 1

...

Thank you @CedScherer and @dr_xeo for organising the #30DayChartChallenge. The prompts were creative and stimulating and helped me grow and expand my #dataviz skillset.

4/

1

3

8

↑



Mihaela Bozukova
@MBozukova

...

Replying to @MBozukova

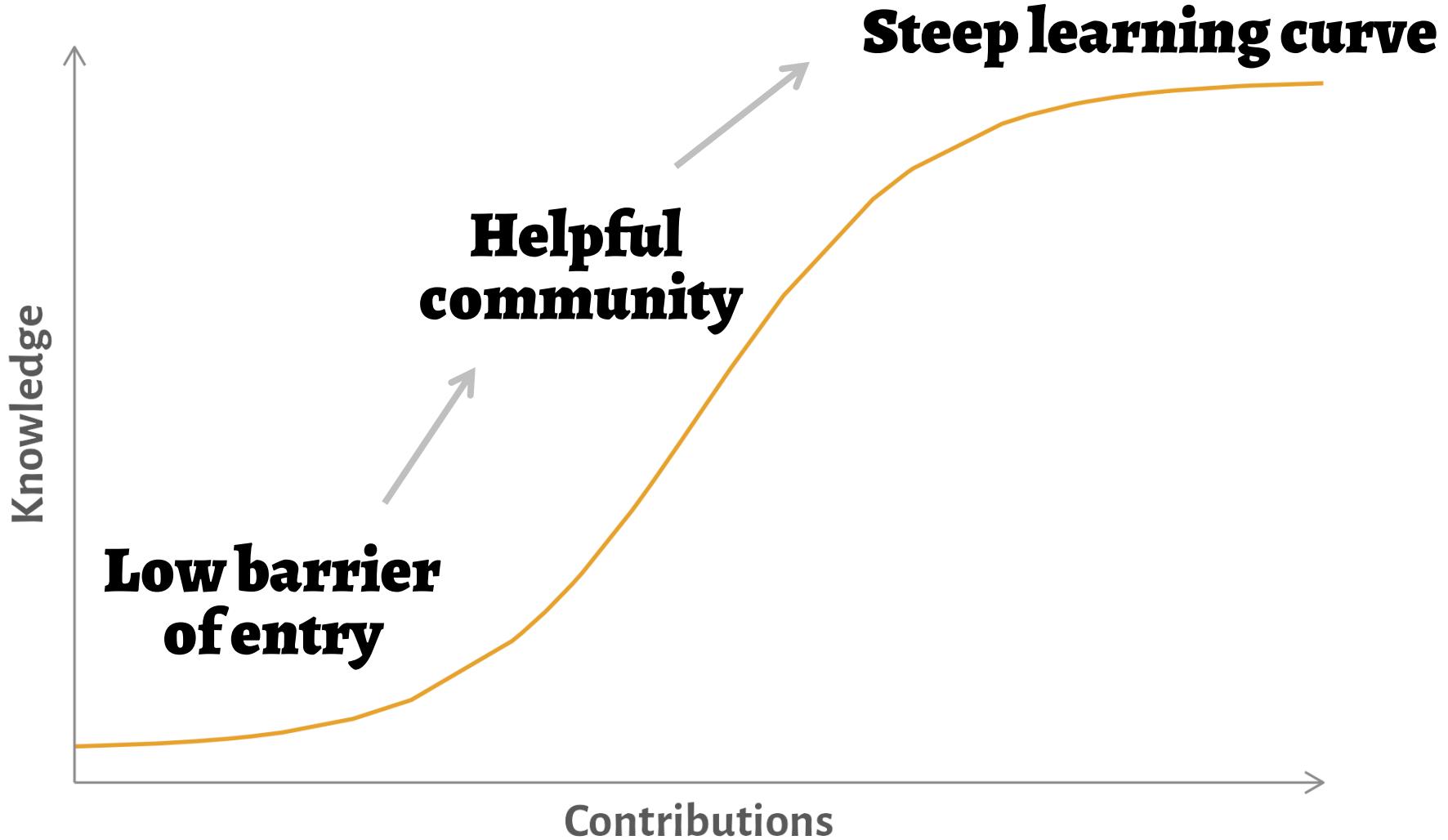
Thanks also to the incredibly supportive and helpful #30DayChartChallenge community. I am in awe of all the beautiful #dataviz you all created.

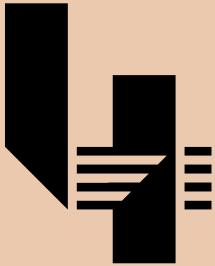
5/

12:06 PM · May 1, 2021 · Twitter Web App

“On Twitter I’ve kind of had to come out of my shell to post stuff but every time I posted things or interacted with people, **they’ve just been so wonderful and supportive.**”

C19 in *Proc. ACM Hum.–Comput. Interact. 5, CSCW1, Article 52*





**GET NEW FRIENDS
AND CONNECTIONS**

Data scientists can get socially isolated in their efforts for practice without a community of practice, which can negatively impact motivation for consistent practice.

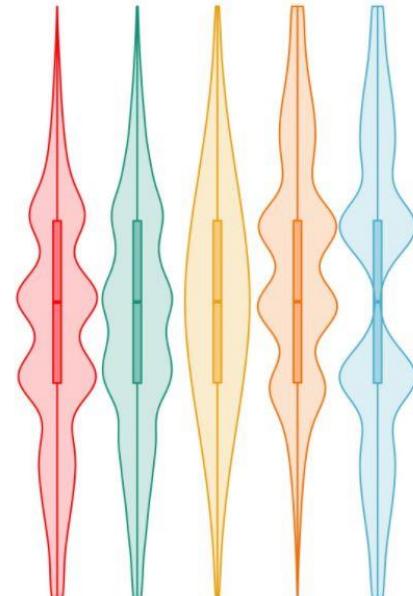
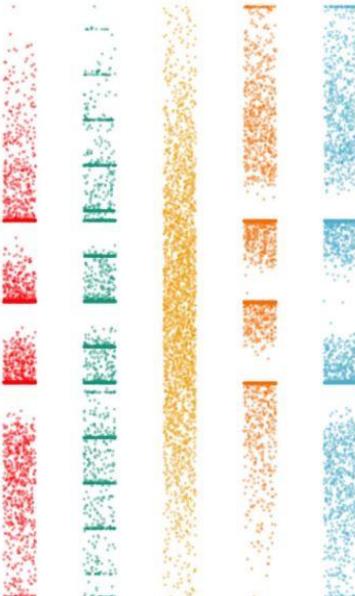
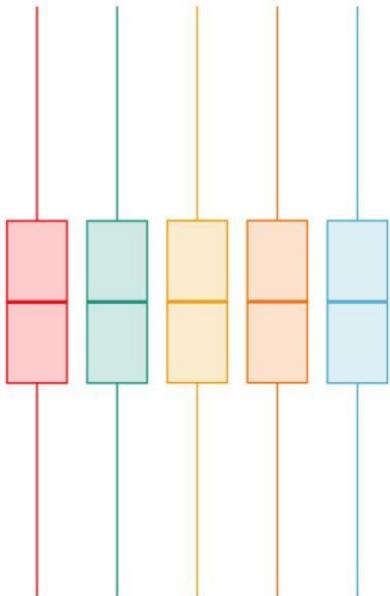
Proc. ACM Hum.–Comput. Interact. 5, CSCW1, Article 52



Identical boxplots, different distributions



Boxplots are great. They show medians and ranges and enable comparison of different groups. However, boxplots can be misleading. Different datasets can have the same descriptive statistics (left), but quite different underlying distributions (middle). Therefore, it is crucial to visualize the distribution in addition to descriptive statistics. Violin plots with integrated boxplots are great for this.



Mihaela Bozukova
@MBozukova

...

Visualizing summary statistics in a `#boxplot` is great. But don't forget to explore the underlying data distribution.

Thanks to [@JustinMatejka](#) for this great educational dataset.

#30DayChartChallenge |
#Day27 | #educational

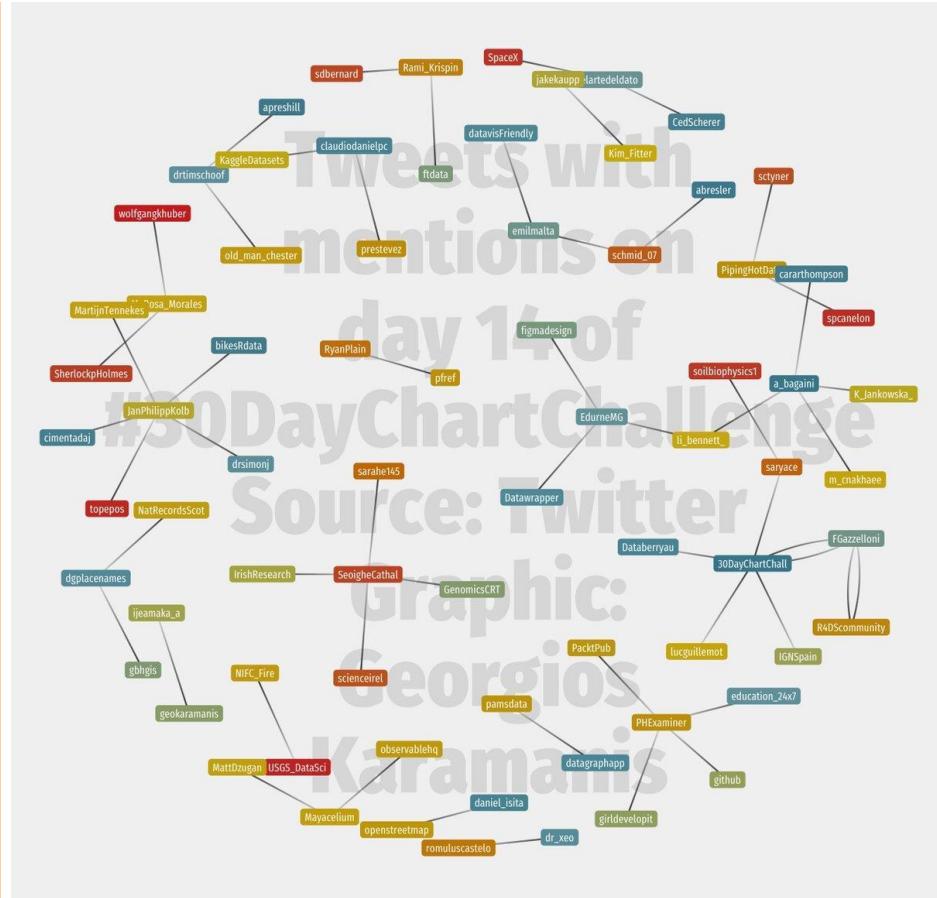
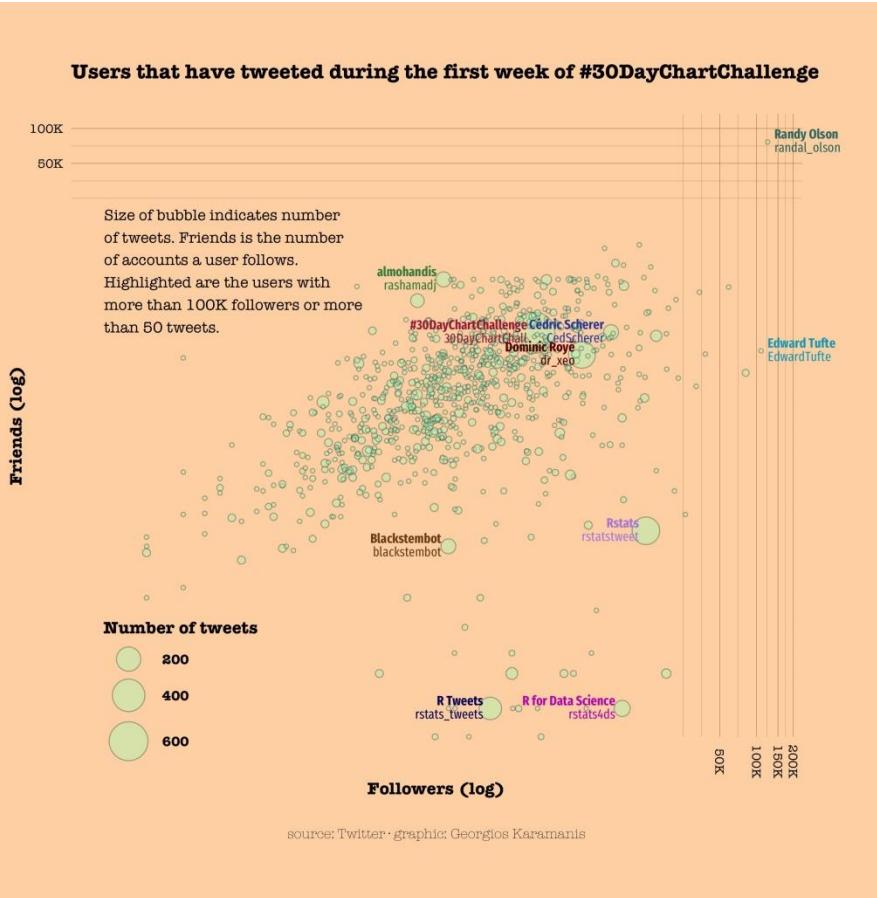
#dataviz #Rstats #ggplot2
#statistics #violinplot

7:22 PM · Apr 27, 2021 · Twitter Web App

124 Retweets 15 Quote Tweets

684 Likes





Day 13: Correlation + Day 18: Connections | @geokaramanis



GET THE DATA (READY)

Learnings

“I found that **locating a suitable data source and enriching it, if needed, and cleaning it took the most time**. This wasn’t too surprising as I often find this to be the case, but with the daily cadence, this became a challenge and sometimes I ended up using a data source which I wasn’t totally happy with due to time.”

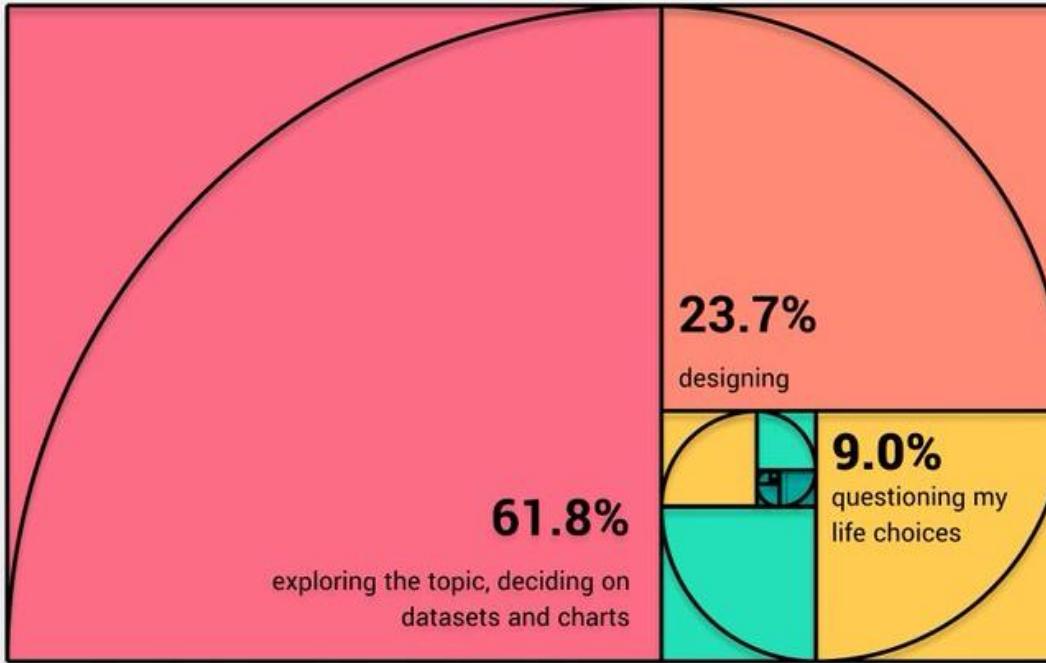
— MARC REID

Data Sources

“The only few frustrating moments were almost all related to datasets. Sometimes I did not have a great inspiration or a dataset at hand, so I spent a lot of time browsing through Kaggle and looking on Google for interesting datasets, while I felt that I was using the time I should actually spend on the visualization.”

— RICHARD VOGG

Golden ratio of shaping a viz



3.5%

checking
#30DayChartChallenge
updates

1.3%

refilling my water
bottle

0.6%

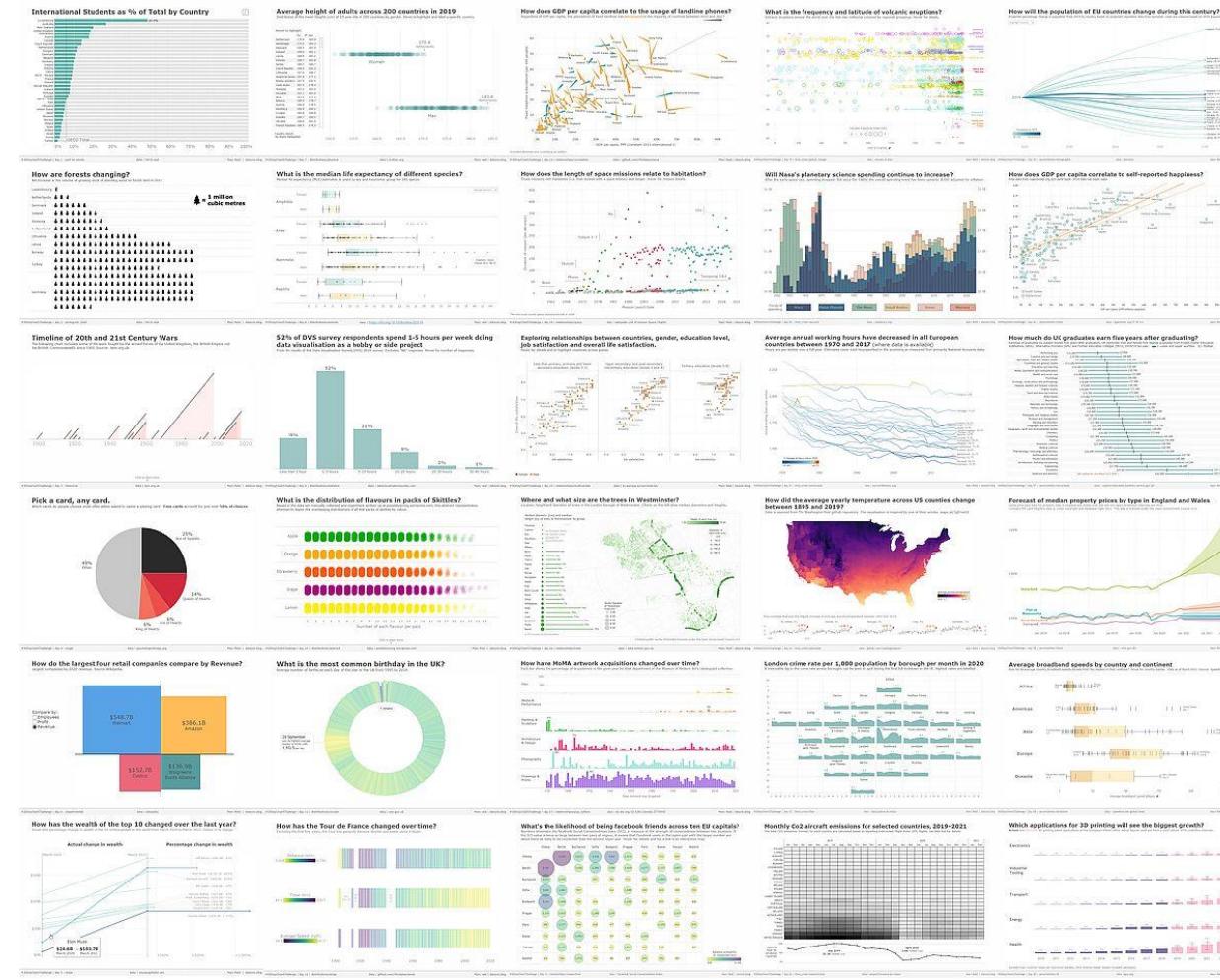
dealing with the
consequences of
drinking that much

0.1%

making tea

<0.1%

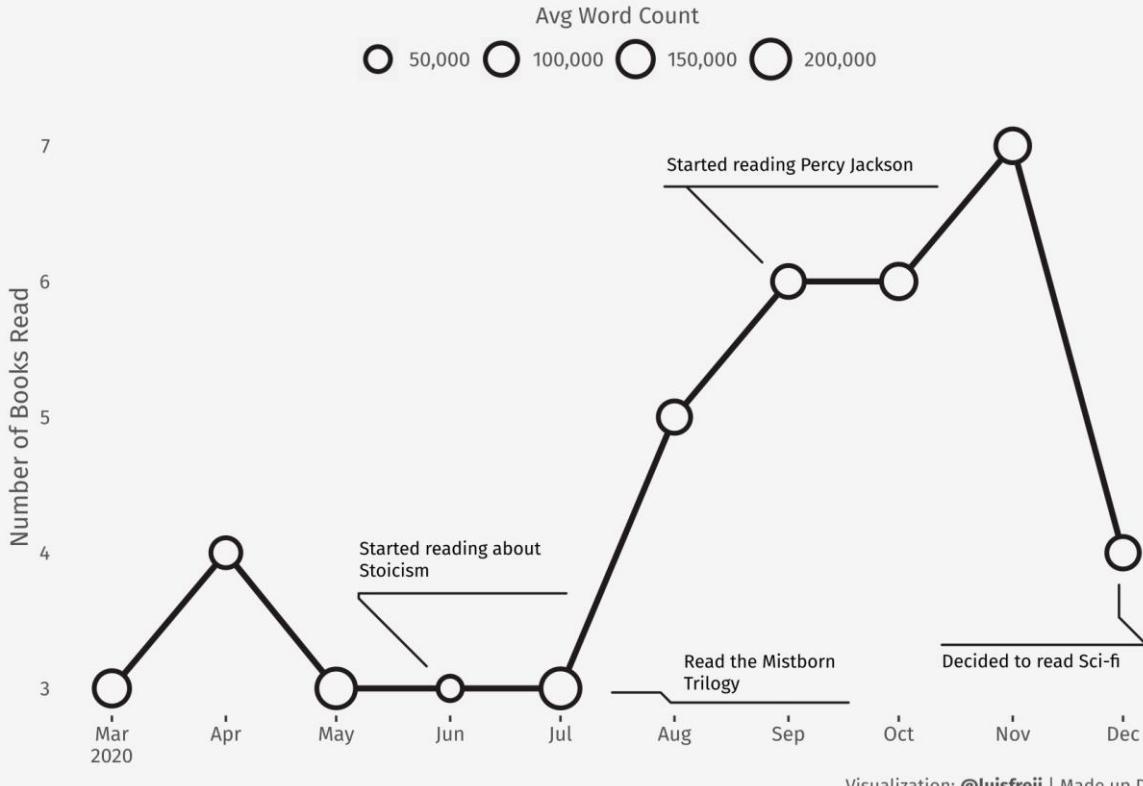
re-wrapping myself in a
blanket



PERSONAL DATA

My Reading Timeline (2020)

Started reading in March after lockdown started.

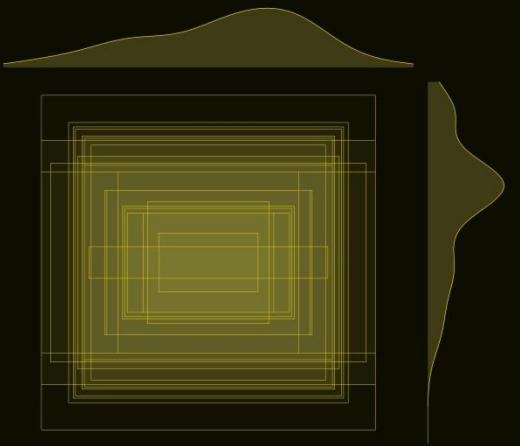


My network of "geom(s)_"

Plot shows the co-occurrences of geoms (gemoetric objects added to a plot) used in all my R scripts. Point size represents the distinct frequency (%) of the geom across all scripts, where the top 10 most common geoms are highlighted

Our collection of board games

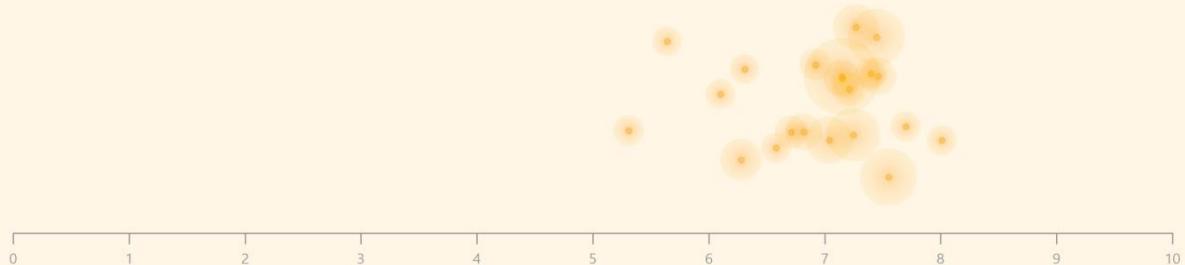
The chart below shows physical dimensions of 30 of board games from our collection:
+ Main chart shows boxes overlapping each other, sharing the same central position.
+ Density curves scales from 0 to 40 cm are located on the vertical and horizontal margins.



Visualisation: Marcin Stepniak • Data collection: Dominika Stepniak

Distribution of average ratings of board games from our collection

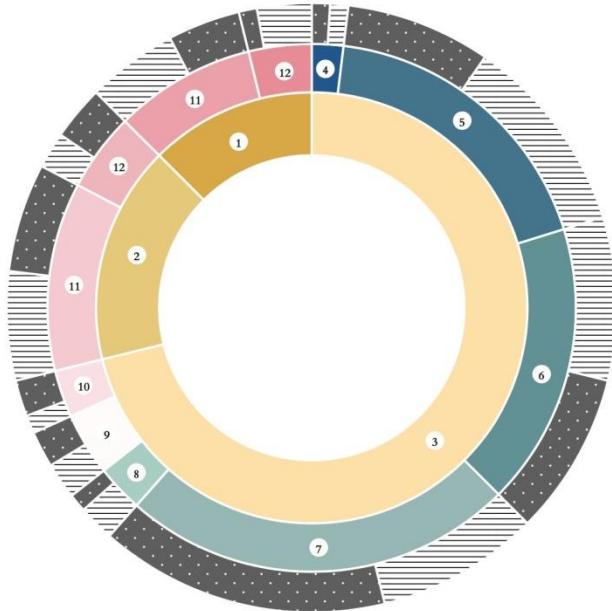
Average ratings according to boardgamegeek.com
The size of the blurr shows the number of votes



Visualisation: Marcin Stepniak • Data: boardgamegeek.com

Day 7: Physical + Day 9: Statistics | @marcin_stepniak

Schön,
DASS DU DA BIST.



Du bist

- 1 verwandt mit Maria
- 2 verwandt mit Manu
- 3 befreundet

Wir kennen uns von

- 4 Hamburg
- 5 Schiedlberg
- 6 Graz
- 7 Saulgau
- 8 Hagenberg
- 9 München
- 10 Feldbach

Die Verwandtschaft ist

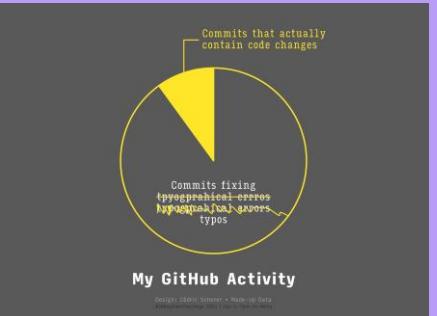
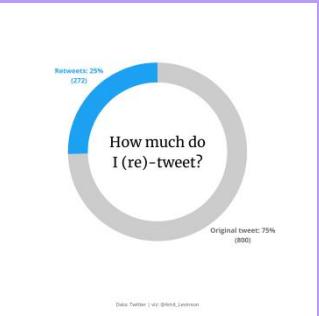
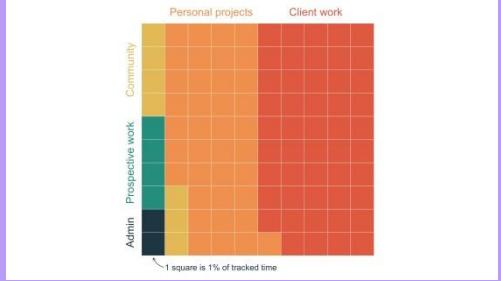
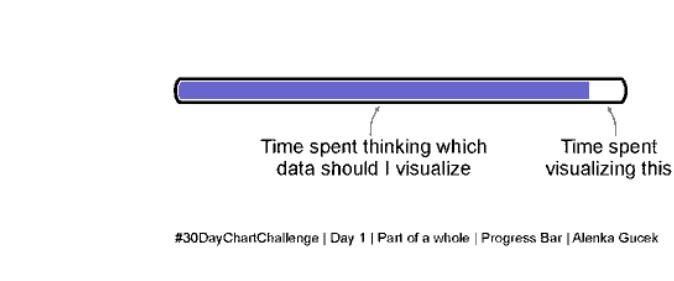
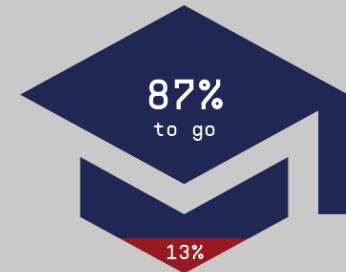
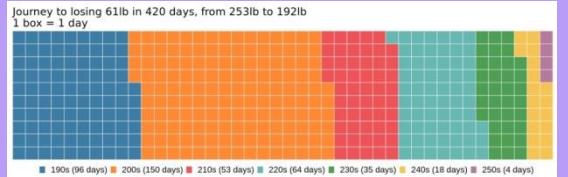
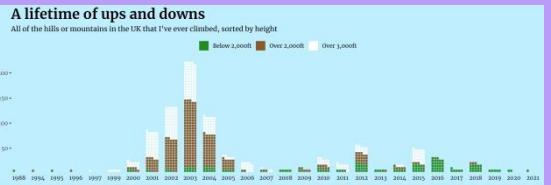
- 11 direkt / nah
- 12 verschwägert

Du bist

- ♂
- ♀

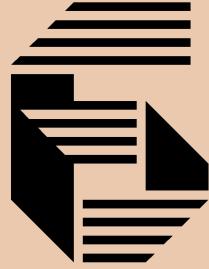


Fruitables Whole Jerky Bites Purchases
for my dog, Waffles



GET THE DATA (READY)

- Pick a topic you enjoy
- Build your own data sets
- Find an interesting story
- Pick a data set of other contributions



GET IT OUT!

Participants are engaged to share visualizations on a daily basis.

Motivation:

Daily rhythm helps to maintain engagement.

Responsibility:

Crafting visualizations takes time.

Participants might come up with a cool-looking chart without having time to understand the (meta)data and check their story.

No Data Provided

#SWDchallenge

monthly topic • all tools

#IronViz

yearly theme • Tableau

#IronQuest

monthly theme • Tableau

#30DayMapChallenge

daily theme • all tools

#30DayChartChallenge

daily theme • all tools

Data Provided

#MakeoverMonday

weekly dataset • Tableau

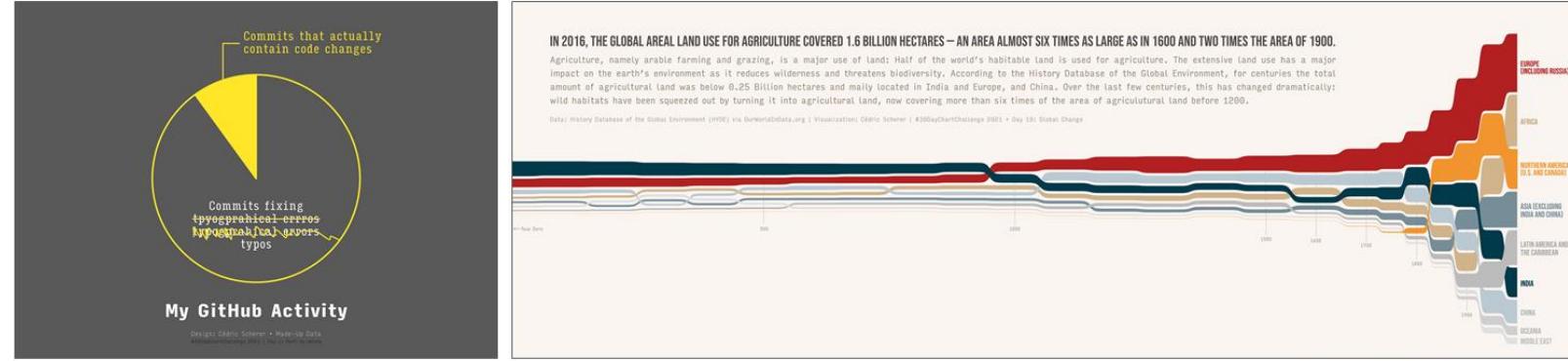
#TidyTuesday

weekly dataset • R (tidyverse)

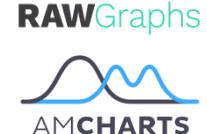
GET IT OUT!

- Motivation to share a visualization with the community
- Time constraint problematic?
- Target data literacy and ethics?

PERSONAL RECAP



Datawrapper



PERSONAL RECAP

- *Automate things (or get some help)*
- *Prepare contributions (cheating?)*
- *Use platform to educate and raise awareness (diversity, accessibility)*

THE VALUES AND CHALLENGES OF DATA(VIZ) CHALLENGES

- 1 Get out of your comfort zone
- 2 Get inspired, get creative
- 3 Get feedback and support
- 4 Get new friends and connections
- 5 Get the data (ready)
- 6 Get it out!

Thank you!



@CedScherer
cedricscherer.com

@30daychartchall
#30DayChartChallenge

Appendix

More Great
Contributions
(sorted by day)

Lunar Calendar

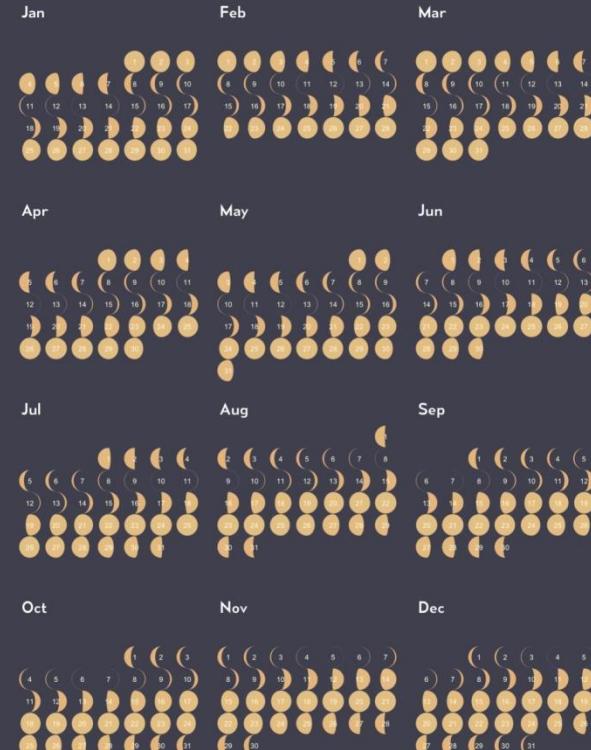
2021



#30daychartchallenge
@emilmalta

Lunar Calendar

2021



#30daychartchallenge
@emilmalta

Day 2: Pictogram | @emilmalta

Israel has experienced only one **female** prime minister

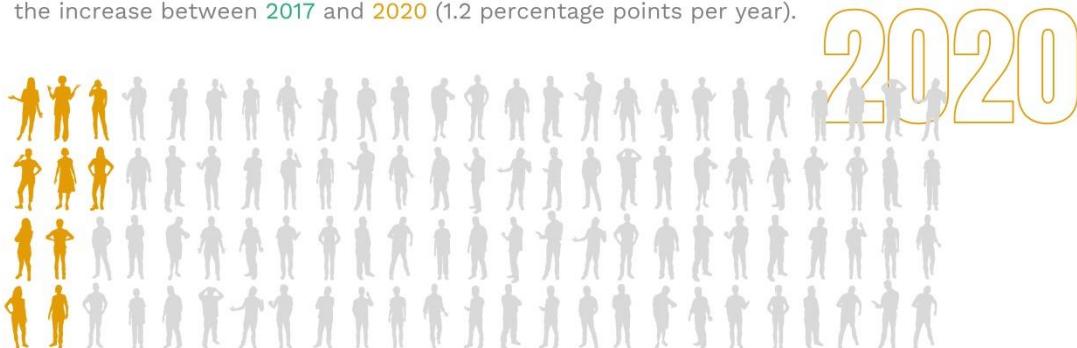


Viz: Amit_Levinson

The proportion of female chairs in board or CEOs in German companies remains vanishingly low



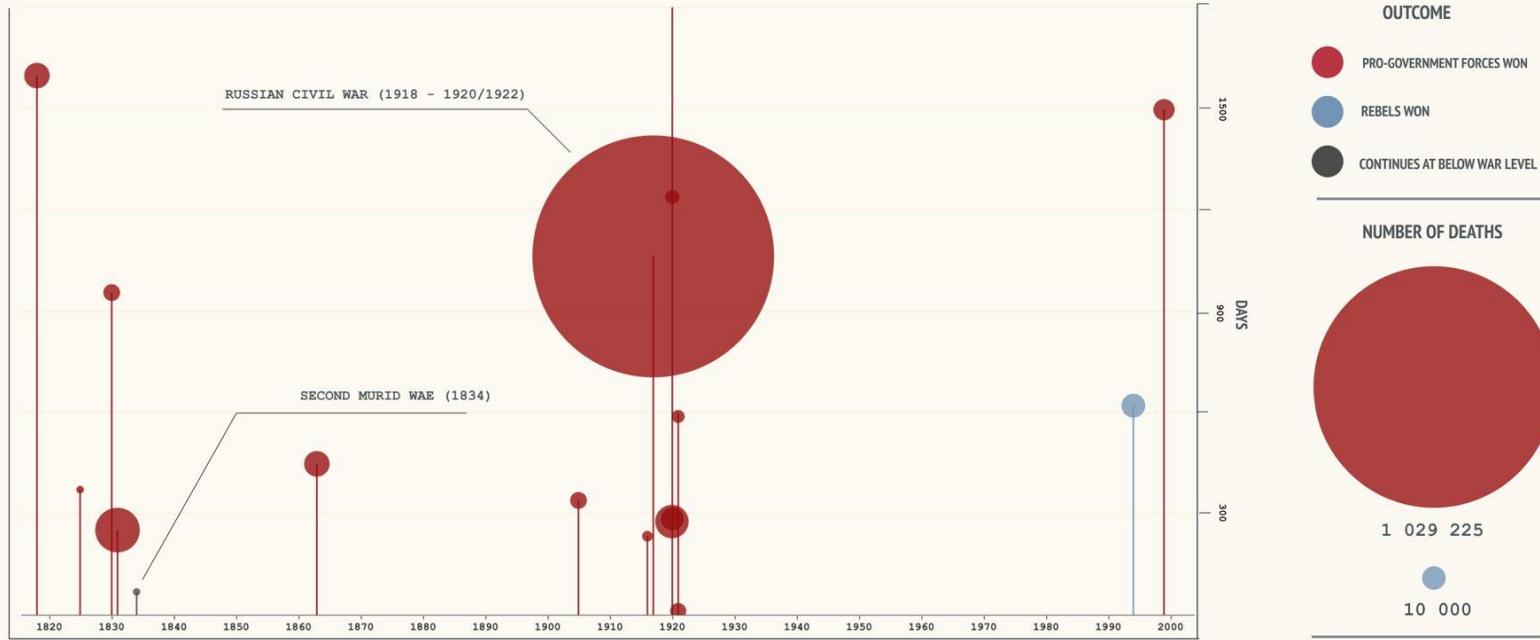
If the growth continues at the same pace, it will take more than 30 years to achieve gender parity on Germany's boards, assuming a linear progression of the increase between **2017** and **2020** (1.2 percentage points per year).



Visualization: Cédric Scherer | Data Source: BCG Gender Diversity Index 2017 and 2020 | Silhouettes: Wee People by ProPublica
#30DayChartChallenge 2021 | Day 2: Pictogram

CIVIL WARS AND INTERNAL CONFLICTS IN RUSSIA

In a civil war the firing line is invisible, it passes through the hearts of men.
Antoine de Saint-Exupéry



1. Moiraine Damodred
2. Nynaeve al'Meara
3. Egwene al'Vere
4. Elayne Trakand
5. Siuan Sanche

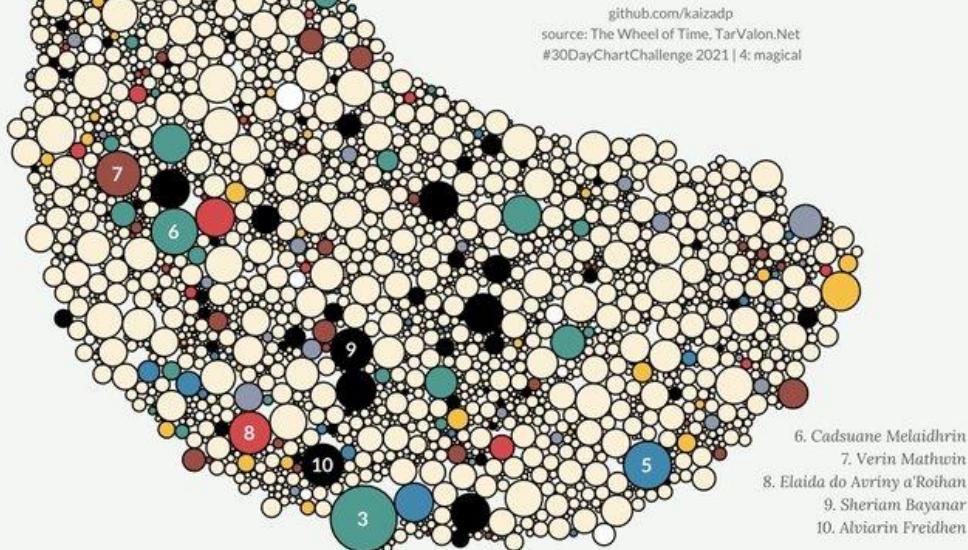
The Aes Sedai

from *The Wheel of Time*

Known Aes Sedai are represented by their Ajah colors.
Sizes represent relative importance in the WOT storyline.

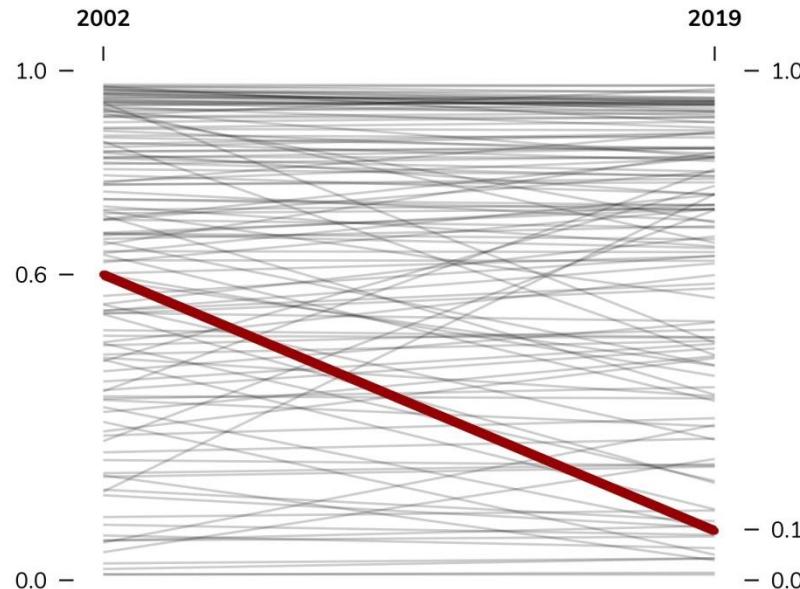
github.com/kaizadp

source: *The Wheel of Time*, TarValon.Net
#30DayChartChallenge 2021 | 4: magical

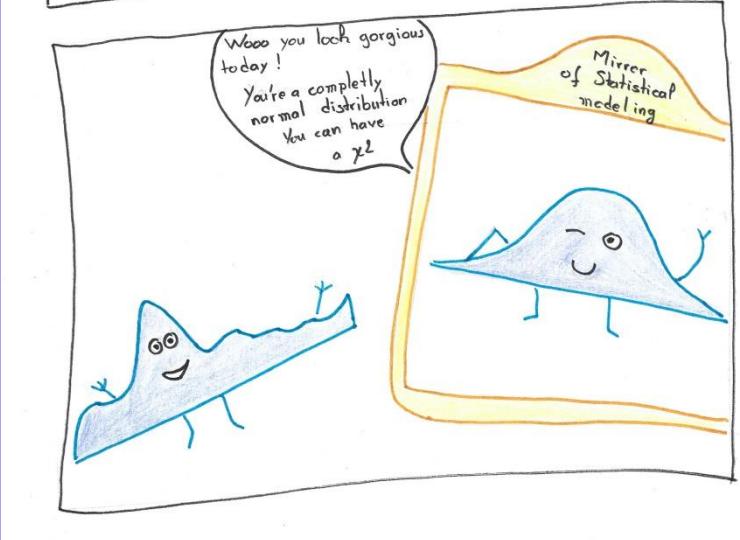
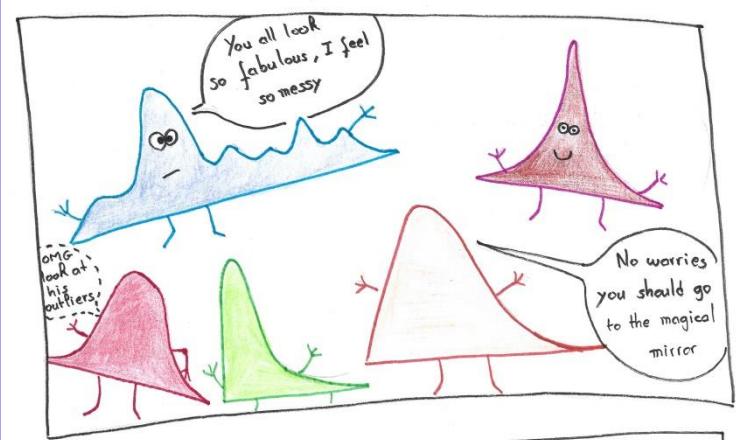


Academic Freedom in Turkey

Turkey has been ruling by **Justice and Development Party** since 2002. The red slope shows how the academic freedom in Turkey changes 2002 to 2019 according to V-Dem academic freedom index. Grey lines represents the other countries in the world.



Data from V-Dem
Visualization by Botan Ağın
#30DayChartChallenge



Day 9: Statistics | @Melau_Yellau

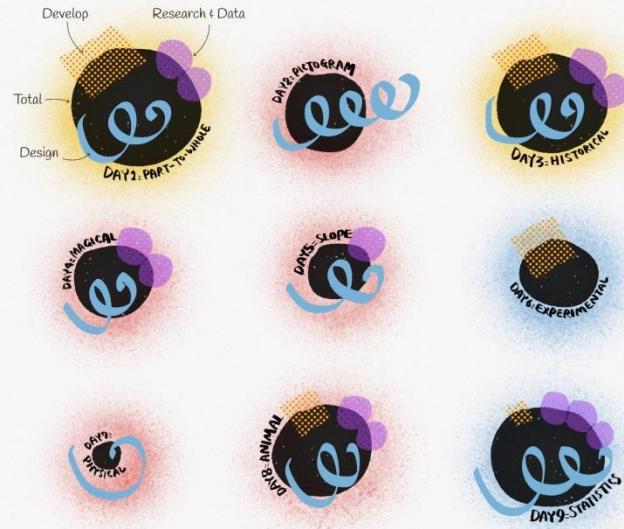
A timesheet of my 30-Day Chart Challenge

Primary tools

D3.js

Figma

Tableau



#30DayChartChallenge Day10: Distribution + Abstract

Wendy Shijia @ShijiaWendy 11 April 2021

Day 10: Abstract | @ShijiaWendy

Sleep Patterns from Jan 2021 - April 2021

I have been recording my sleep schedule every day in a bullet journal and visualizing that data leads to some interesting patterns.

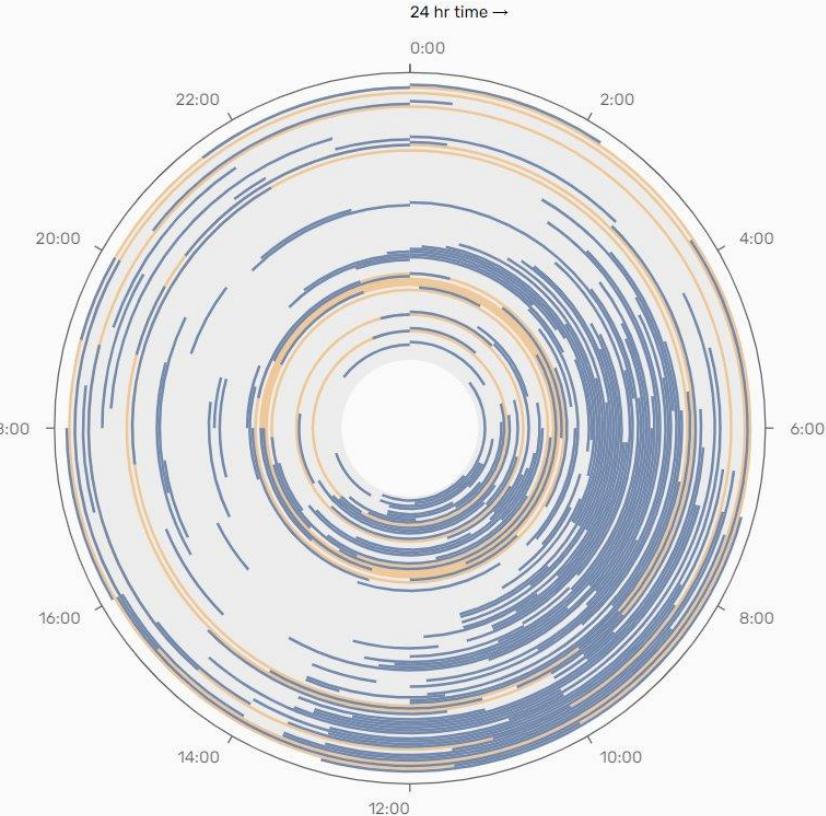
Although I sleep at strange times, I do get on average 6.84 hours of sleep per day.

Blue arcs represent hours when I am asleep



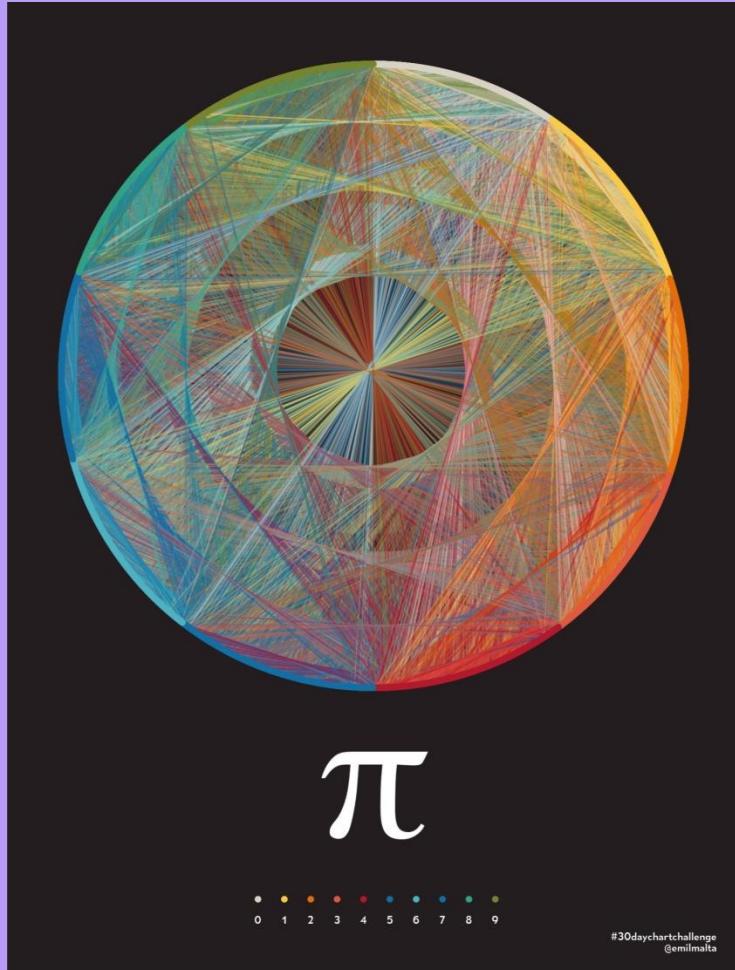
Orange rings represent days with an all nighter

One ring represents one day, with Jan 1st at the center and days progressing outward



@NINGN418|DAY 11|#30DAYCHARTCHALLENGE

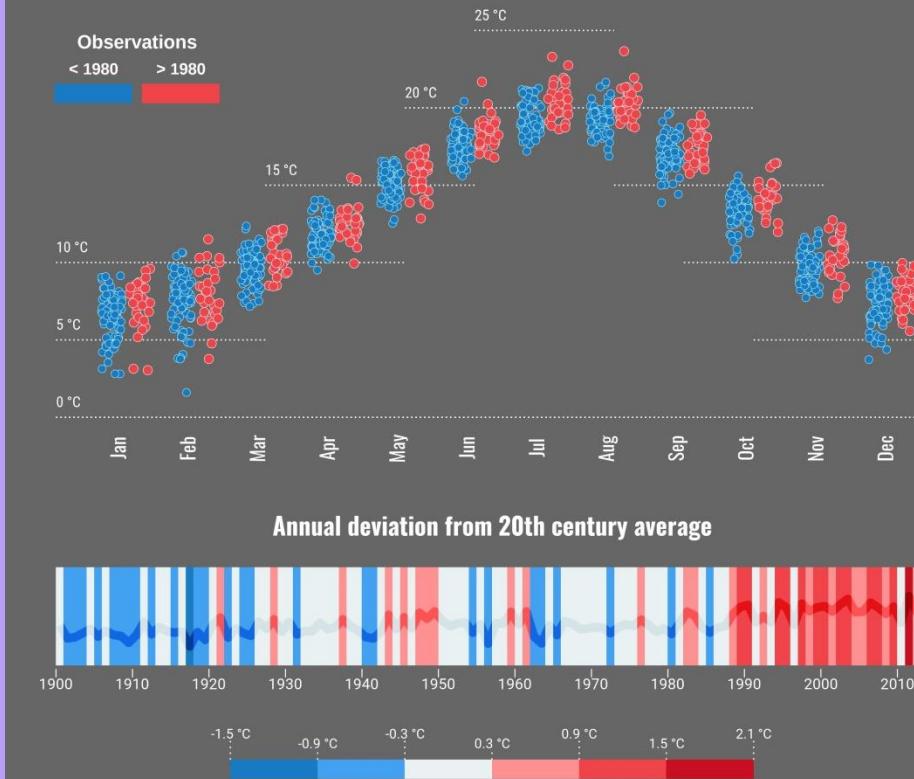
Day 11: Circular | @ningn418



Day 11: Circular | @emilmalta

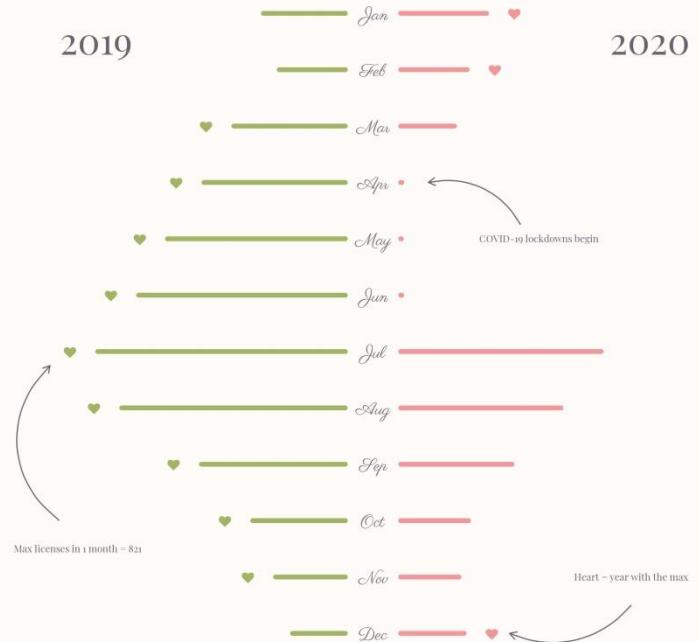
Temperature evolution in France

The strip chart shows the monthly average before / after 1980.
The stripes shows the yearly temperature deviation from 20th century average.



Who's Getting Married?

Total marriage licenses purchased in Ottawa



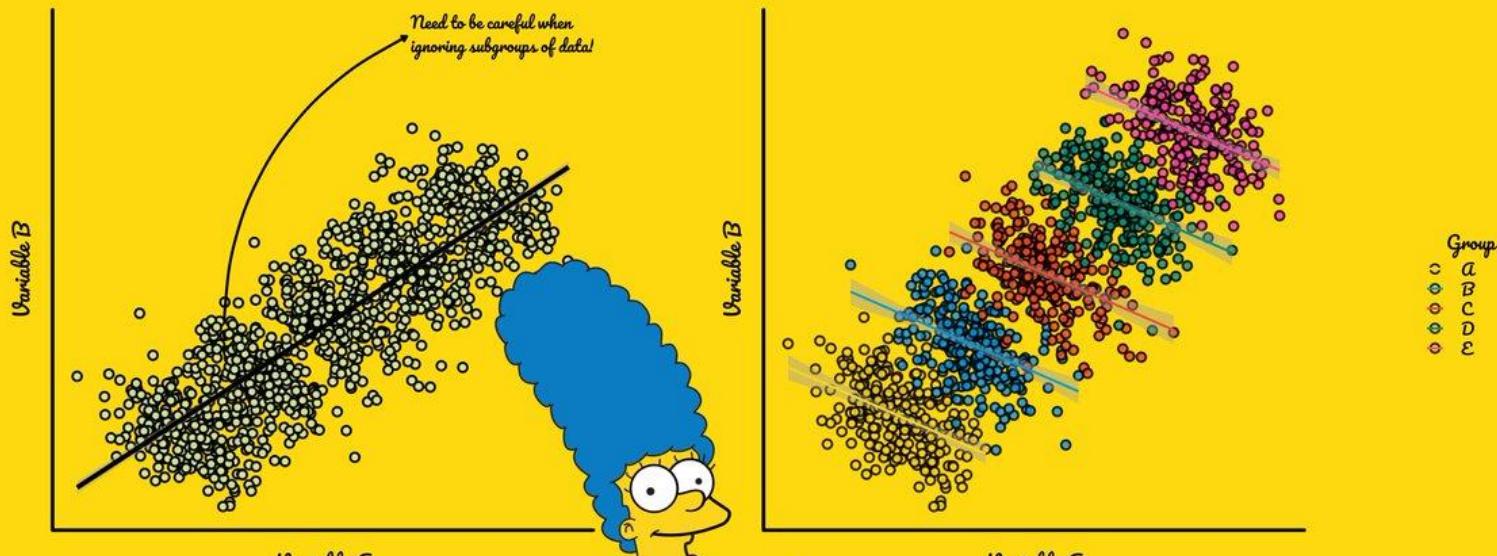
Viz - @MaiaPelletier | Data - Open Ottawa



Simpson's Paradox

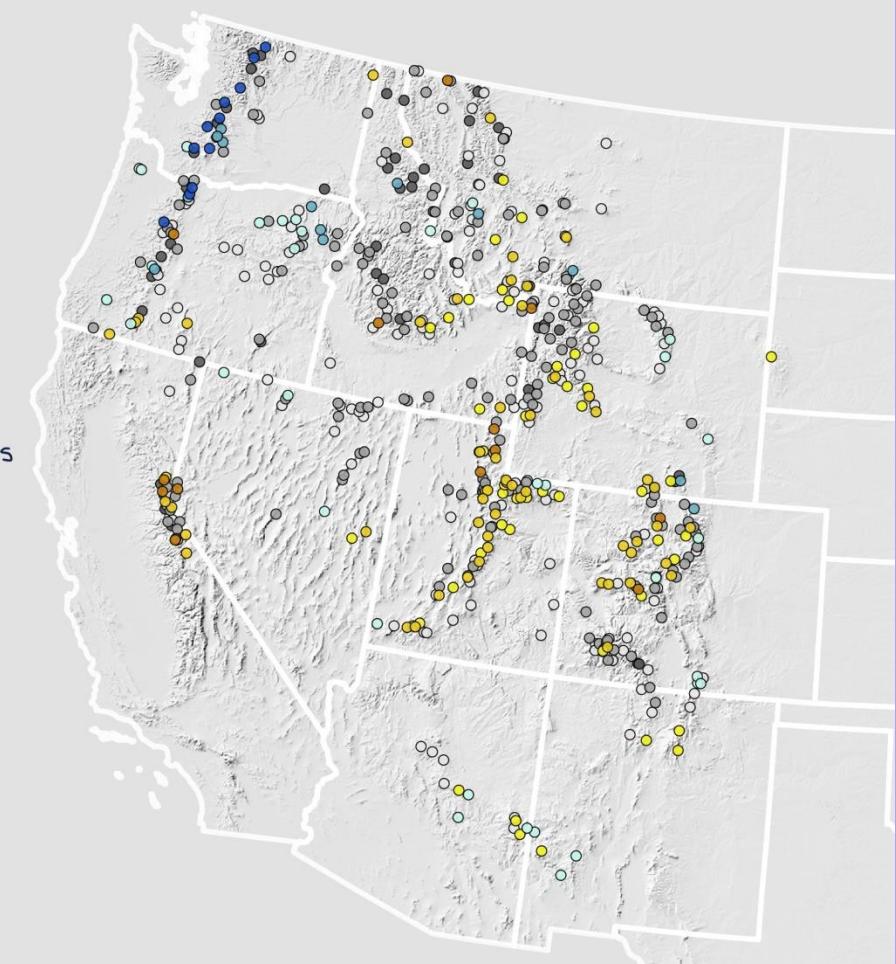
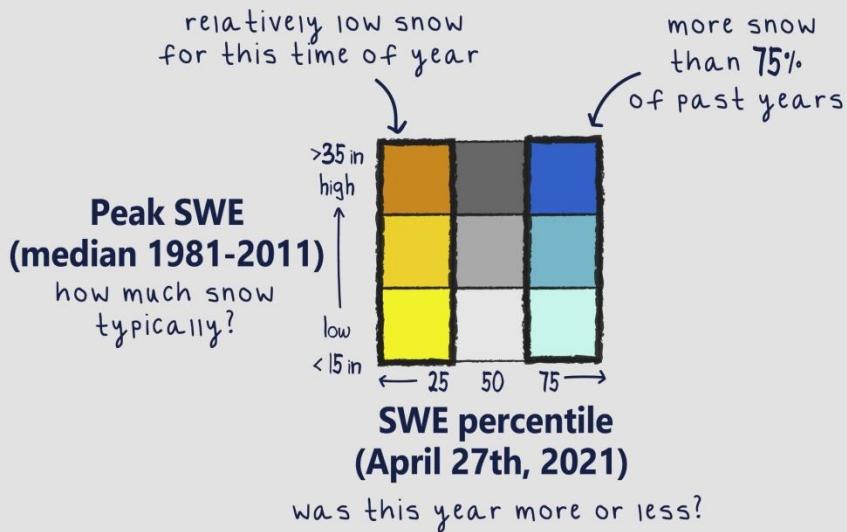


Simpson's Paradox is a statistical phenomenon where an association between two variables in a population emerges, disappears or reverses when the population is divided into subpopulations. For instance, two variables may be positively associated in a population, but be independent or even negatively associated in all subpopulations. Edward H. Simpson first addressed this phenomenon in a technical paper in 1951, but Karl Pearson et al. in 1899 and Udny Yule in 1903, had mentioned a similar effect earlier.



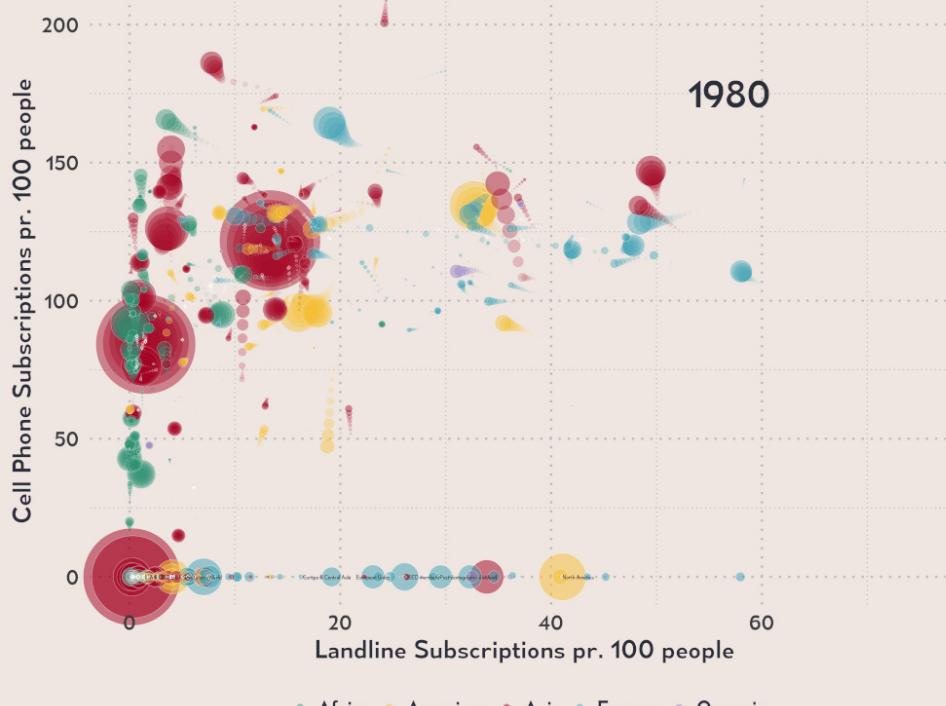
Text: plots.stanford.edu and Pearl, 2013 | Images: pagimage.net, pagagg.com and pagimage.com | Data generated using (correlation) | #30DayChartChallenge | @a_bagaini

Are snowy places getting snowier?



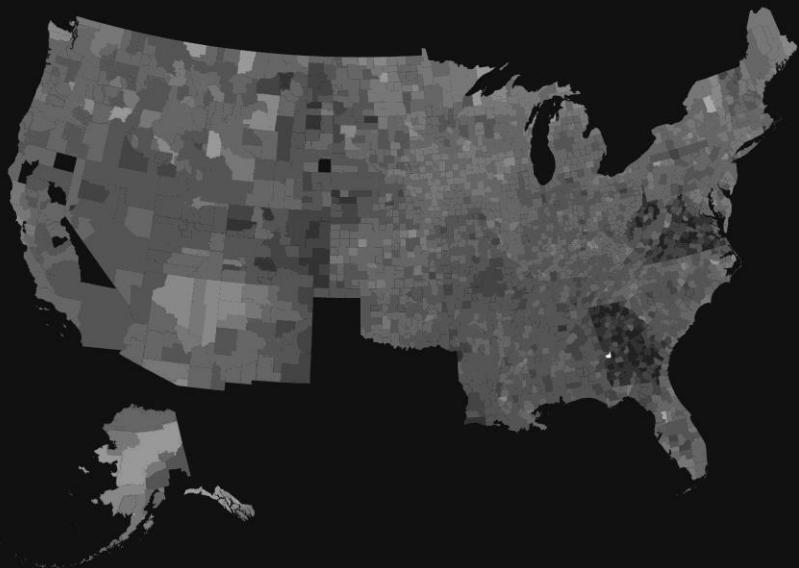
Rise of Cell Phones

Cell phones are not only more convenient for the end user. They are also much easier to implement in regions with poor infrastructure. Countries with low income never saw the rise of landline phones, but achieved widespread use of cell phones within two decades



Shining a Light on COVID-19 Vaccination Status

All counties that currently report vaccination status data



% County Population Vaccinated

0% 25% 50% 75% 100%

Source: 2021-04-24 COVID-19 Integrated County View <<https://covid.cdc.gov/covid-data-tracker/#county-view>>

Shining a Light on COVID-19 Vaccination Status

All counties with $\geq 50\%$ county population vaccinated.



% County Population Vaccinated

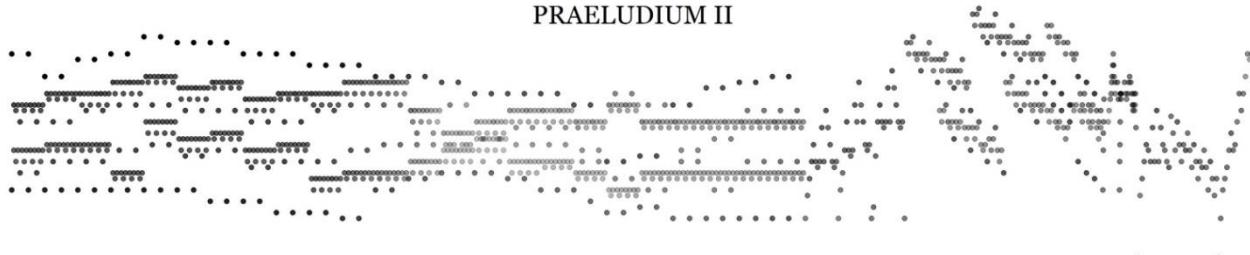
0% 25% 50% 75% 100%

Source: 2021-04-24 COVID-19 Integrated County View <<https://covid.cdc.gov/covid-data-tracker/#county-view>>

Johann Sebastian Bach.

BWV 847

PRAELUDIUM II



FUGA II



#30DayChartChallenge | Graphic: @carathompson | Source: www.piano-midi.de

Day 24: Monochrome | @carathompson