



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

96801 - LANGUAGE LABORATORY: COMMUNICATION OF STATISTICS AND DATA BUSINESS ANALYTICS

LESSON 7 - 01/12/2025

Alice Corona

Dipartimento di Scienze Statistiche "Paolo Fortunati"

COMMUNICATING DATA

Tools & Tips

Create suspense & guide the reader through

PROGRESSIVE DISCLOSURE



[The Workers Who Face the Greatest Coronavirus Risk](#) by Lazaro Gamio (NYT 2020)

HOW?

-  Export **different .png from the same chart**, each one focusing on a single aspect
-  Add direct text annotations gradually
-  Add white rectangles to hide parts of the chart in first iterations.
-  Insert each image in a different slide/card

Complaints over time

NUMBER OF COMPLAINTS



Complaints over time

NUMBER OF COMPLAINTS



Complaints over time

NUMBER OF COMPLAINTS



Complaints over time

NUMBER OF COMPLAINTS



Complaints over time

NUMBER OF COMPLAINTS



Complaints over time

NUMBER OF COMPLAINTS



How do I incorporate visual design into our monthly deck? • Elizabeth Ricks

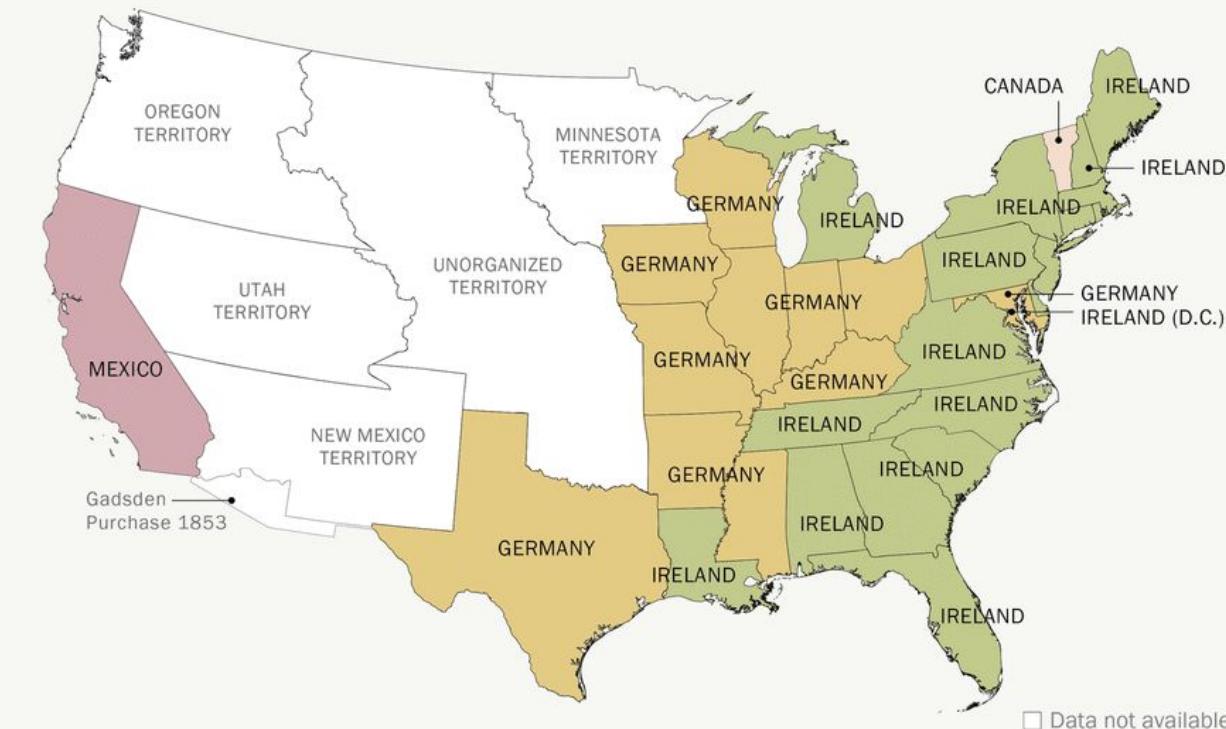
HOW?

-  Export **different .png from the same chart**, each one focusing on a single aspect
-  Add direct text annotations gradually
-  Add white rectangles to hide parts of the chart in first iterations.
-  Create a .GIF

How America's Source of Immigrants Has Changed Over Time

1850

Top country of birth among U.S. immigrants, by state



Above federal standard

b

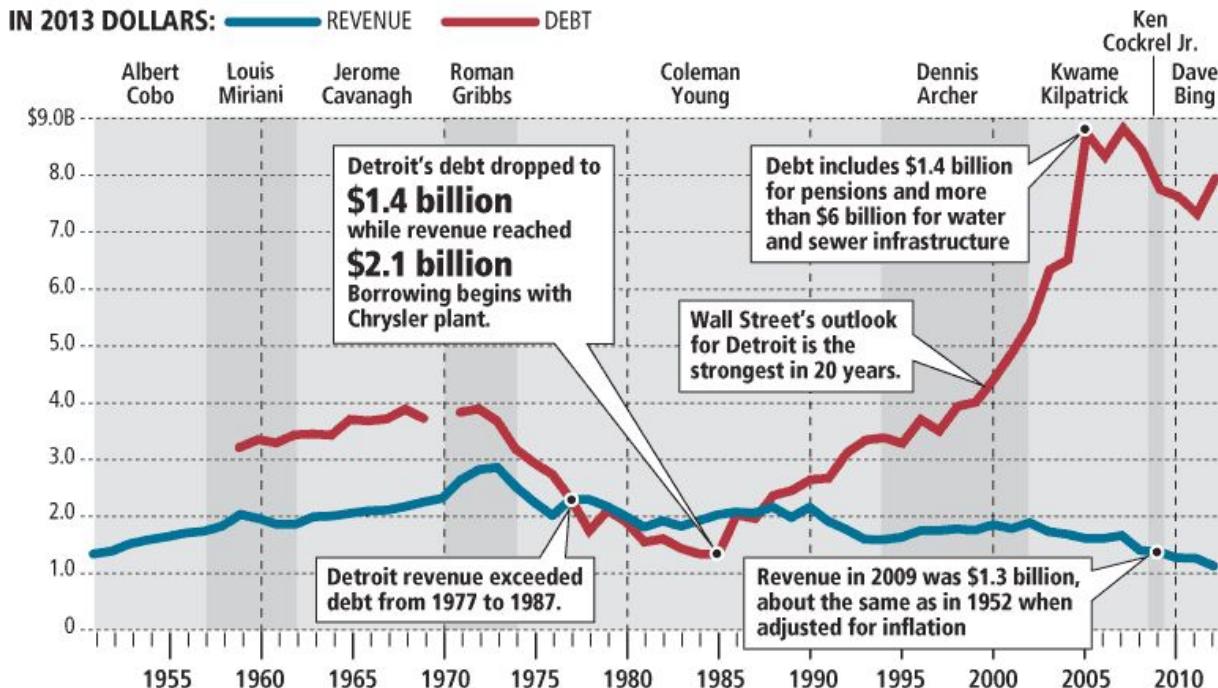
5 parts per billion

Source: Michigan Department of Environmental Quality

Vice

DETROIT'S DEBT EXPLODES IN 2000s

The city's revenue exceeded its debt for a decade starting in 1977 under Mayor Coleman Young. But when the city's bond rating improved in 1985, a surge of new borrowing began. Bonds were sold for many projects, including Chrysler's Jefferson North Assembly Plant, improvements to Cobo Center, water and sewer infrastructure and downtown redevelopment. Chart does not include future accrued liabilities such as pension, retiree health care or interest on bonds, which emergency manager Kevyn Orr says total \$18 billion.



NOTE: All dollar amounts have been adjusted for inflation and are in 2013 dollars. 1970 debt records were unavailable. Debt includes total general obligation bonds; certificates of indebtedness and notes payable (general, not including water and sewers) through 1973; net debt for overlapping debt from 2006 to 2012; pension debt from 2005 to 2012.

SOURCE: Detroit's annual financial reports

KOFI MYLER/DETROIT FREE PRESS

Pew Research Center

Data Gifs

Lena Groeger | @lenagroeger

HOW?

- ✓ Record your screen as you filter and iterate through a chart



HOW?



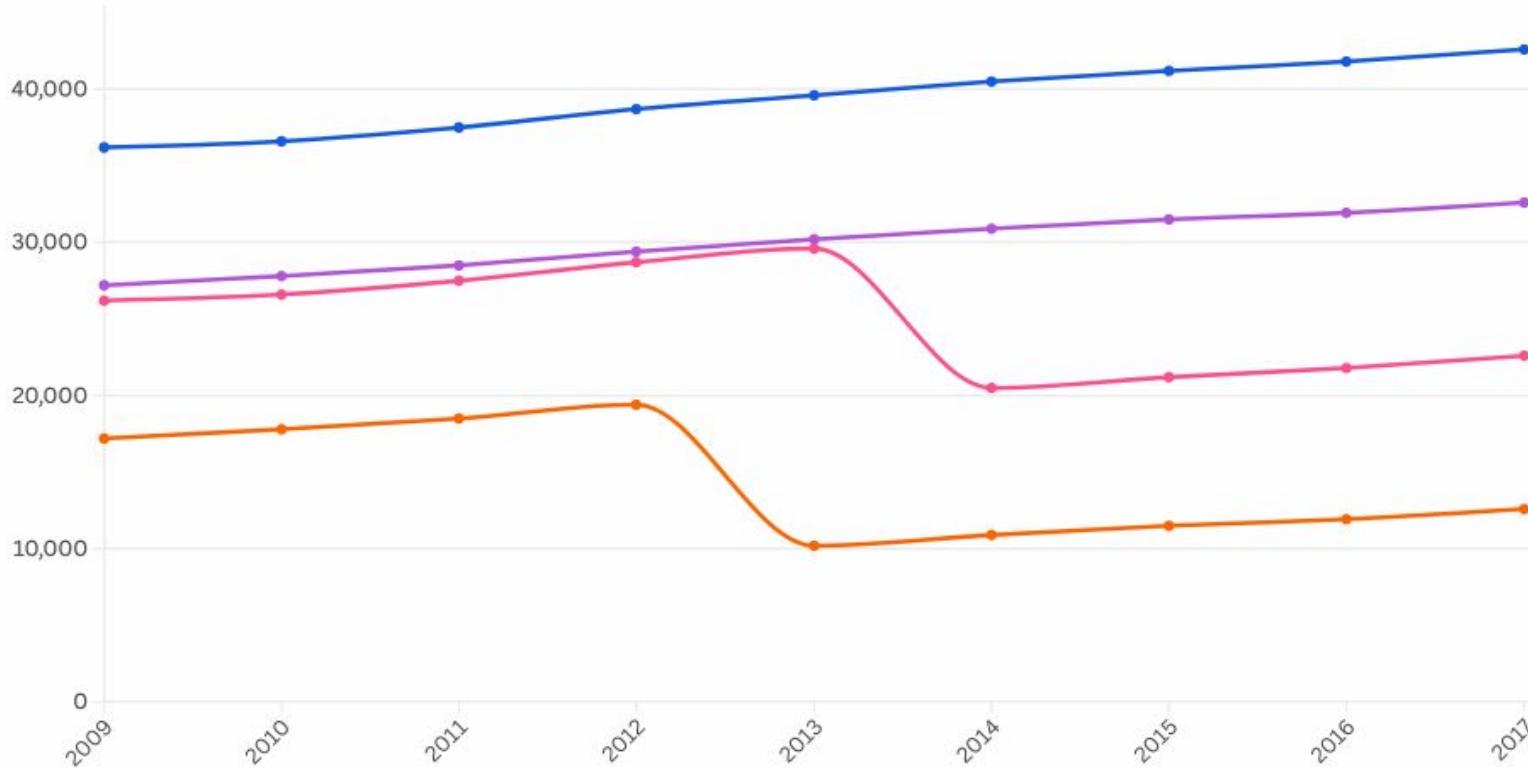
Use Flourish's Stories feature



In Flourish, **even basic charts have magic powers**. Click next for a tour...

1 of 10

Column 1 Column 2 Column 3 Column 4



Ideas for choosing

FONTS AND COLORS

Tabular and Proportional Figures

The image shows two sets of numbers, '12345' and '67890', side-by-side. Each set is enclosed in a vertical dashed grid. The left set, labeled 'Tabular figures', has all digits at the same width. The right set, labeled 'Proportional figures', has digits of varying widths: '1' and '2' are narrow, '3' is wider, '4' is very wide, '5' is narrow, '6' is very wide, '7' is narrow, '8' is wide, and '9' is very wide.

12345
67890

Tabular figures

The image shows two sets of numbers, '12345' and '67890', side-by-side. Each set is enclosed in a vertical dashed grid. The left set, labeled 'Tabular figures', has all digits at the same width. The right set, labeled 'Proportional figures', has digits of varying widths: '1' and '2' are narrow, '3' is wider, '4' is very wide, '5' is narrow, '6' is very wide, '7' is narrow, '8' is wide, and '9' is very wide.

12345
67890

Proportional figures

- Tabular figures have the same width, similar to monospaced fonts.
- Tabular figures are perfect for setting tables, charts or numbered lists as the figures align vertically.

- Proportional figures have different widths depending on the shape of the figure.
- Proportional figures don't align vertically, so use them in paragraphs of text.

 Search fonts

Sentence ▾ Type something

40px ▾

[Categories ▾](#)[Language ▾](#)[Font properties ▾](#) Show only variable fonts [i](#)

1321 of 1321 families

Sort by: Trending ▾



Roboto
Christian Robertson

12 styles

Almost before we
knew it, we had left
the ground.

Outfit
On Brand Investments Pty Ltd, Rodrigo Fuenzalida

Variable

Almost before we
knew it, we had left
the ground.

M PLUS 1 Code
Coji Morishita

Variable

Almost before we
knew it, we had
left the ground.

Open Sans
Steve Matteson

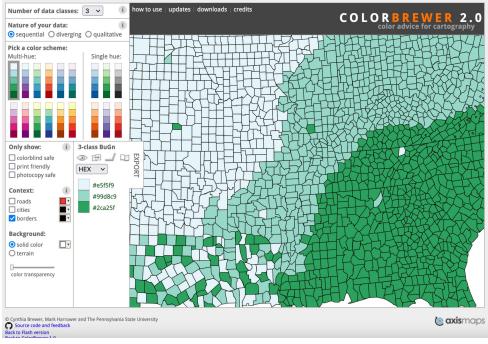
Variable

Noto Sans Japanese
Google

6 styles

Lato
Łukasz Dziedzic

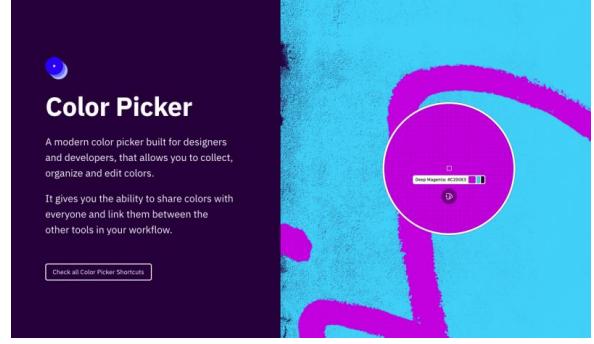
10 styles



Color Brewer

This screenshot shows the Chroma.js Color Palette Helper. It includes a step-by-step guide: 1. Selecting the palette type (sequential) and number of colors (9). 2. Inputting specific hex codes for the colors. 3. Configuring the resulting palette with options like "correct lightness" and "bezier interpolation". A preview bar at the bottom shows the resulting sequential color palette.

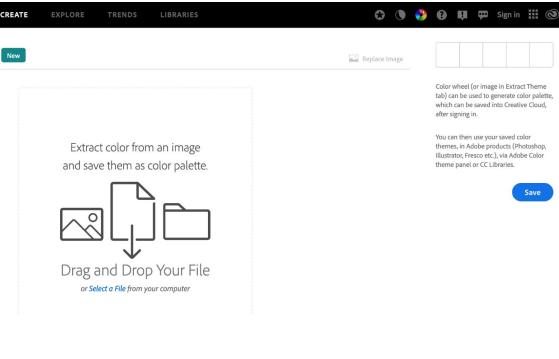
Chroma.js Color Palette Helper



SIP Color picker



Wes Anderson Palettes



Adobe Color tool

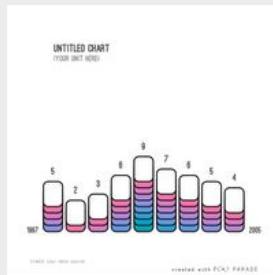
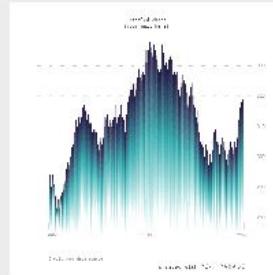
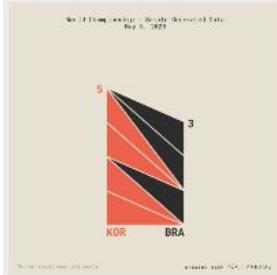
Other tools you can use to make

CUSTOM CHARTS

PL•T PARADE BETA

data art project by [Krisztina Szucs](#)

[Krisztina Szucs](#) [About](#) [@szucsi](#)



← Pick a chart and play

This a small artsy chart generator I've created while learning [d3.js](#).

I've come across some nice pictures from the field of Graphic Design and I've turned them into data vis.

I'm interested in your feedback:
hello@krisztinaszucs.com

[Get started!](#)



Home File Resize Unsaved changes Untitled design - Presentat... Try Canva ... Share Present ...

Templates

Search your projects

California	Golden State	
Colorado	Centennial State	
Connecticut	Constitution State	

Elements

Uploads

Searchable table

Line, bar, pie visualization

Flourish

More

Projection map

Animate

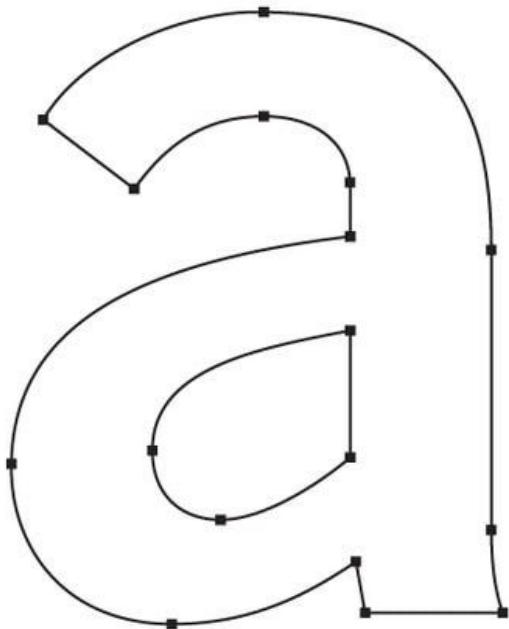
Notes

36%

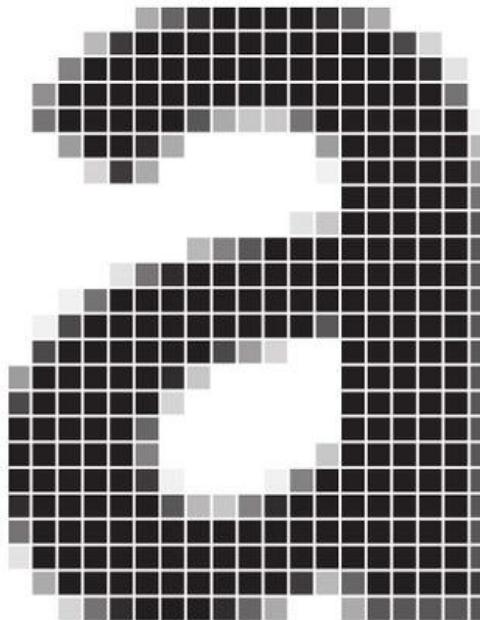
CONCEPT: VECTOR GRAPHICS



CONCEPT: VECTOR GRAPHICS

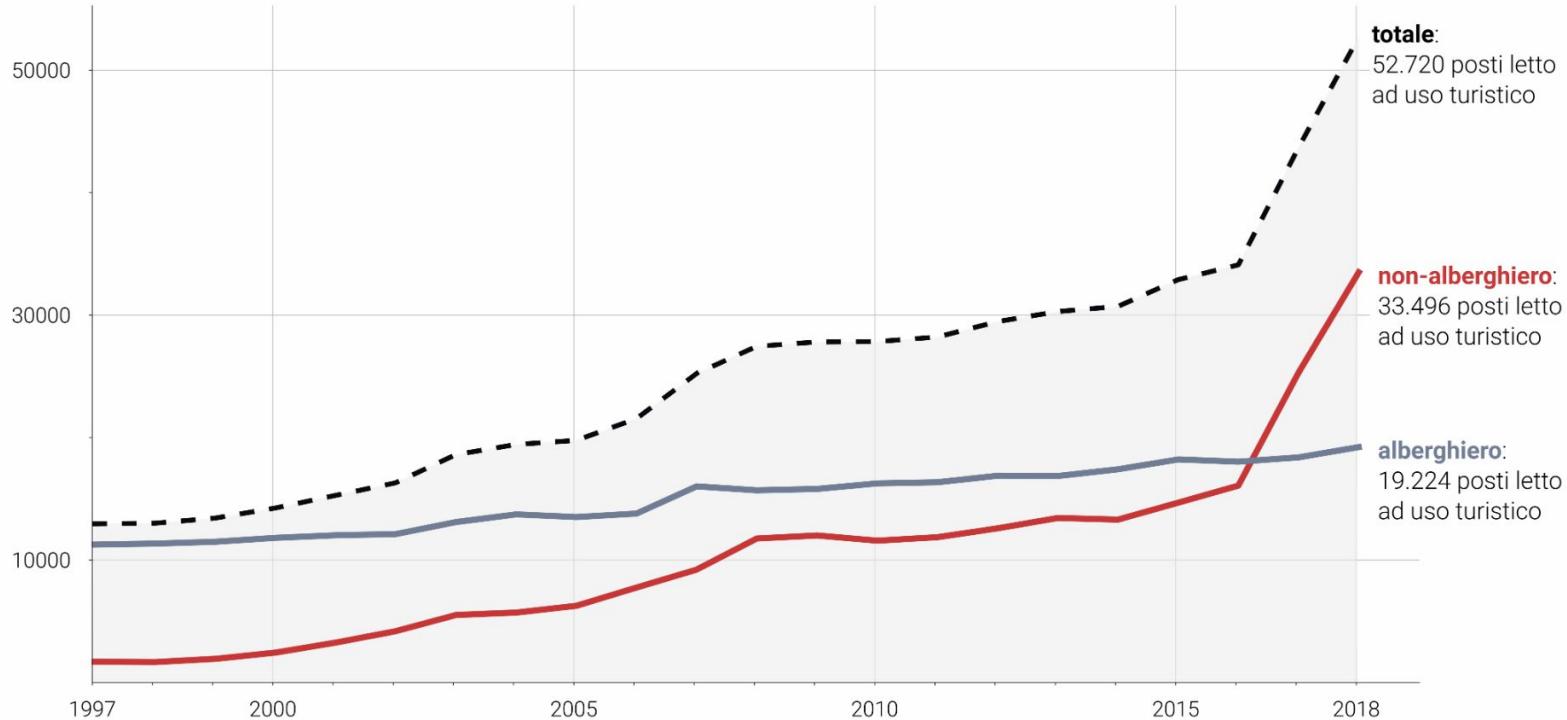


VECTOR



RASTER

L'andamento dell'offerta ricettiva, Venezia Insulare



Note: "non alberghiero" fino alla redefinizione introdotta con la Legge Regionale del 2013 si riferisce alle strutture extralberghiere, poi include sia le strutture complementari che le locazioni turistiche, in base alla nova normativa.

Fonte: Elaborazione di OCIO su dati Ufficio di Statistica della Regione Veneto

```
-2.97,-4.6547 31.783,-19.6374 0.444,0.6207" />
<path
  style="font-style:normal;font-weight:400;font-size:medium;font-family:'SF NS Text';vector-effect:none;fill:#ffe497;fill-opacity:1;fill-rule:evenodd;stroke:#ffffff;stroke-width:1.38560569;stroke-linecap:square;stroke-linejoin:bevel;stroke-miterlimit:4;stroke-dasharray:none;stroke-opacity:1"
  inkscape:connector-curvature="0"
  id="path5018"
  d="m 14214.249,-2026.4013 -13.565,8.1123 -14.806,8.1119 -9.663,-7.802 -1.552,-0.9307 15.737,-10.9048 0.798,-0.3103 11.835,-6.8708
  9.043,-4.9647 0.621,5.6297 1.552,9.9294" />
<path
  style="font-style:normal;font-weight:400;font-size:medium;font-family:'SF NS Text';vector-effect:none;fill:#d0f0e1;fill-opacity:1;fill-rule:evenodd;stroke:#ffffff;stroke-width:1.38560569;stroke-linecap:square;stroke-linejoin:bevel;stroke-miterlimit:4;stroke-dasharray:none;stroke-opacity:1"
  inkscape:connector-curvature="0"
  id="path5022"
  d="m 13666.014,-2005.2124 -60.446,14.9831 -7.793,-33.0248 4.522,-1.5514 -0.776,-2.5265 55.144,-13.6977 9.349,35.8173" />
<path
```

CONCEPT: VECTOR GRAPHICS

-  **HIGH RESOLUTION IS NOT A PROBLEM**
A vector graphic can be scaled an infinite amount of times, always looking sharp and crisp → great for print.
-  **EDIT ANYTHING**
You can edit any single primitive, both in its geometric properties (like coordinates) and in its attributes (like fill color, stroke width, stroke style, stroke color, size, opacity, etc.).
-  **EXCELLENT FOR WEB**
You can edit and animate via HTML and CSS.

TOOLS FOR CREATING .SVG OR EDITING EXPORTED .SVG



RAWGraphs

TOOLS FOR EXPORTING CHARTS AS SVG



Figma



Inkscape



Adobe
Illustrator

Tools for

PUBLISHING ARTICLES



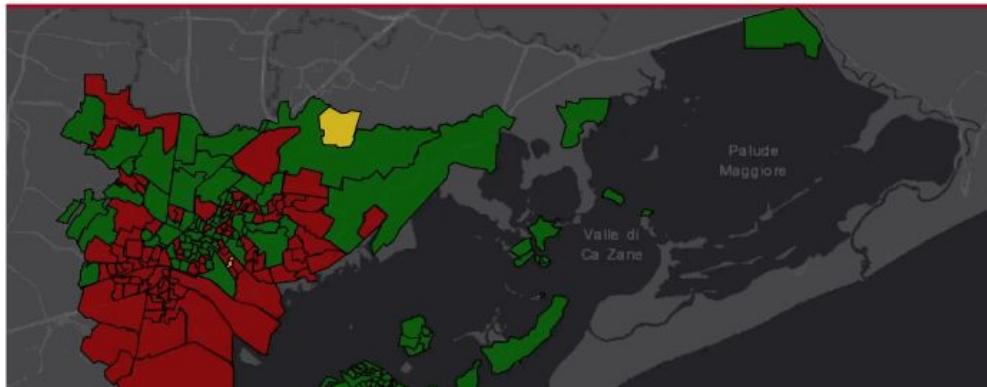
Alice Corona

Dec 4, 2019 · 8 min read



...

Referendum Venezia: quello che i dati dicono, quello che i dati non dicono, quello che i dati suggeriscono



[Tutorial for Datawrapper \(but the same works with any other tool\)](#)

LAPIS BY KONTINENTALIST

Untitled story
Draft ✓ Saved Last edited 454 days ago

Collaborate Share Preview Save Publish...

/

+ =

A section can house multiple content blocks.

- Blank section
- Horizontal scroll section Coming soon
- Click-driven section Coming soon
- Scroll-driven section Coming soon
- Accordion section Coming soon

Text

H1 Heading 1

H2 Heading 2

Byline will be placed here. You can configure it in story settings before publishing.

dfirst

Data visualisation

- Create data visualisation
- Embed Flourish
- Embed Tableau
- Embed Datawrapper
- Embed Observable notebook
- Embed Mapbox

Image

Q*

Tips for

INTEGRATING AI

GET HELP WITH... SOURCING DATA

-  Write a **web scraper**
-  Extract data from **PDFs**
-  Brainstorm potential **data sources**
-  **Critique** data sources

GET HELP WITH... ORGANIZING CONTENT

-  Brainstorm **data questions** relevant to the scenario.
-  Provide context and audience. Setting the scene is always very important.

GET HELP WITH... ORGANIZING CONTENT



Suggest and quickly test **order and structure of insights** for different goals (persuasive, informative, etc.) and **Storyboard** ideas.



Answers will rarely be 100% usable as they are and will often contain hallucinations. But I still find that they provide useful material and ideas to kick-start the creativity.

GET HELP WITH... CHART DESIGN

-  Upload the charts you have made and ask it what's the **main message** and what **insights** it reads in it at first glance.
If they are different from the one you had as a communication goal for the chart, try to see if you can improve.

GET HELP WITH... CHART DESIGN



Get help with **titles** that resonate with your communication purposes.



Provide context, audience, desired tone and communication goal for the chart.

GET HELP WITH... CHART DESIGN

-  Quickly try out different **chart types** or design ideas to visually see the one that fits your goals best.
-  While these tools can help quickly test ideas, I recommend moving to Datawrapper (or other viz-specific tools) for creating the actual final version of the chart.

GET HELP WITH... REFINING IT ALL

-  Ask it to find redundant or unclear parts of your **text and arguments**.
-  But also be proud of your style choices and don't follow suggestions blindly.

GET HELP WITH... REFINING IT ALL

-  Ask it to **impersonate different types of audiences** and **give critical feedback** on text, contents, structure, charts, etc.
For example, ask what relevant information could be missing, which charts are too complex, which titles too bland, etc.
-  AI tends to be nice and to agree with you. Specify how critical you want it to be, or ask to impersonate specific stakeholders (a peer reviewer, a SEO-fixated marketing specialist, etc.)

GET HELP WITH... DOING SOMETHING MORE CREATIVE

Patterns create beautiful patterns with AI in seconds.

a construction site with workers |

Change pattern >

Use text >

Advanced settings >

Generate

Generations will appear here.



François Prosper
@frprosper

...

#IA + #dataviz comment obtenir un résultat visuellement beau et propre avec de VRAIES données ?

La réponse se trouve peut-être dans le détournement des outils de génération d'images type #stablediffusion ou #midjourney pour y "cacher" des dataviz dans des images générées

[Translate post](#)



GET HELP WITH... DOING SOMETHING MORE CREATIVE



sheldon.studio
Original audio

Following ...



sheldon.studio Edited • 72w

Sound on 🎵

Quant'è il consumo di cocaina nelle città italiane? 🏔️🏔️🏔️🏔️

Nelle 33 città osservate, il consumo medio di cocaina è il secondo solo dopo quello di Cannabis. Un dato significativamente in aumento dopo la pandemia. ↗

Questo quello che emerge dalla misurazione dei residui di sostanze psicoattive nelle acque reflue.

Fonte:

Relazione annuale al parlamento sul fenomeno delle tossicodipendenze in Italia - Istituto di Ricerche



46 likes

July 1, 2024



Add a comment...



DATASETS



DATASET #1: Museums and culture

[Source: Ministero della Cultura, ISTAT, Louvre, Tate Gallery]



DATASET #2: Diversity and inclusion

[Fonte: OECD, Kaggle, Grape, Google]



DATASET #3: Survey - Attitudes on the environment

[Fonte: Eurobarometer]

access Mural
workspace

EXERCISE → C. STORYBOARDING INSIGHTS

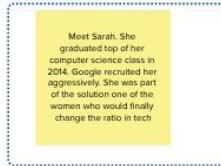
Continue working on the dataset you chose last time, for which you have identified an audience and a communication goal.

PART 2: Create a storyboard by:

1. Assigning a priority to the insights found: which is the more important? Which are useful but lower importance? Which can be discarded?
2. Create a narrative flow for the insights by reasoning on their **order** (think about the “storytelling arc” / the “overview-zoom-details” / “inverted pyramid” etc.) and which should be communicated through text and which through **charts**.
3. Insert also specific **storytelling strategies** (“Guess the data”, “Compare to what”, “Humor”, “Humanize”, etc).

Storyboard your content. Start ordering the insights in the squares depending on where you want them to be communicated. Use each square as a single insights or to coherent set of insight. You can add or delete squares as need. Other than for organizing the insights, use the single squares also for other types of relevant storytelling elements like "hook"/ rhetorical questions / transitions / contextualizations / call to actions, etc.

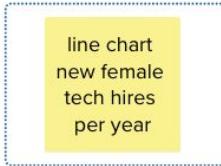
INTRO



hook / human story



set the stage

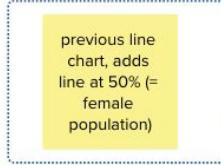


set the stage / prepare tension...



rhetorical question

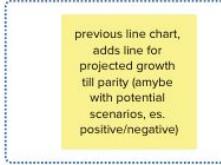
BODY



adds problem



increase tension



increase tension. Note: chart should have both new hires but also current representation to show prediction

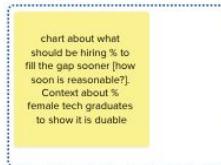


climax

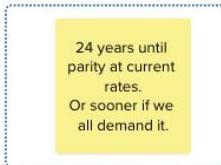


zoom & filter

END



dissolve tension, propose solution



call to action



Caption...



Caption...

IMAGINING A SOCIAL MEDIA CAMPAIGN FOR A “GENDER EQUALITY IN TECH” NGO

BEFORE WEDNESDAY 3rd:

- 👉 Create an account on Flourish