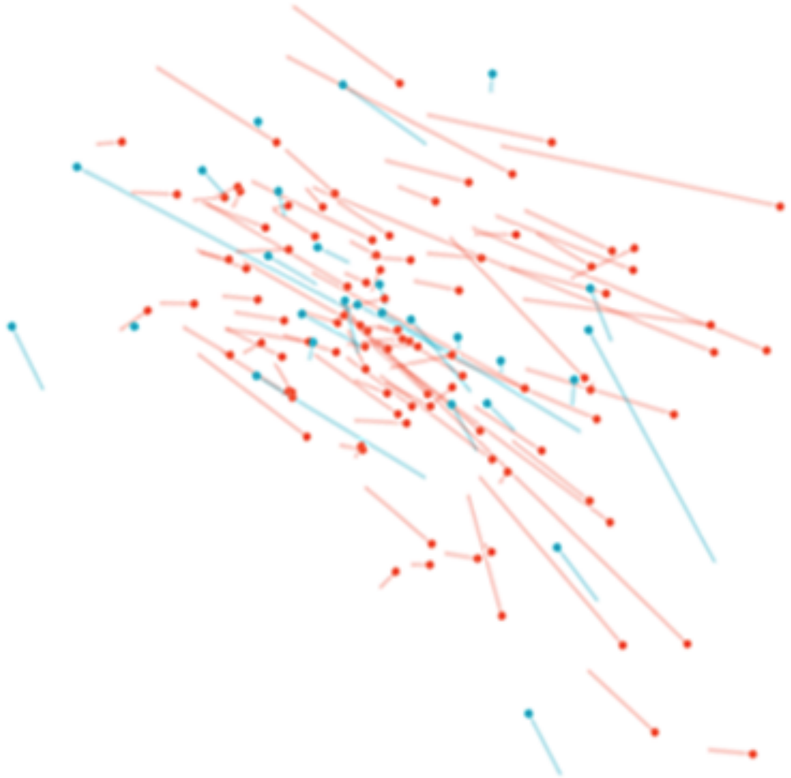
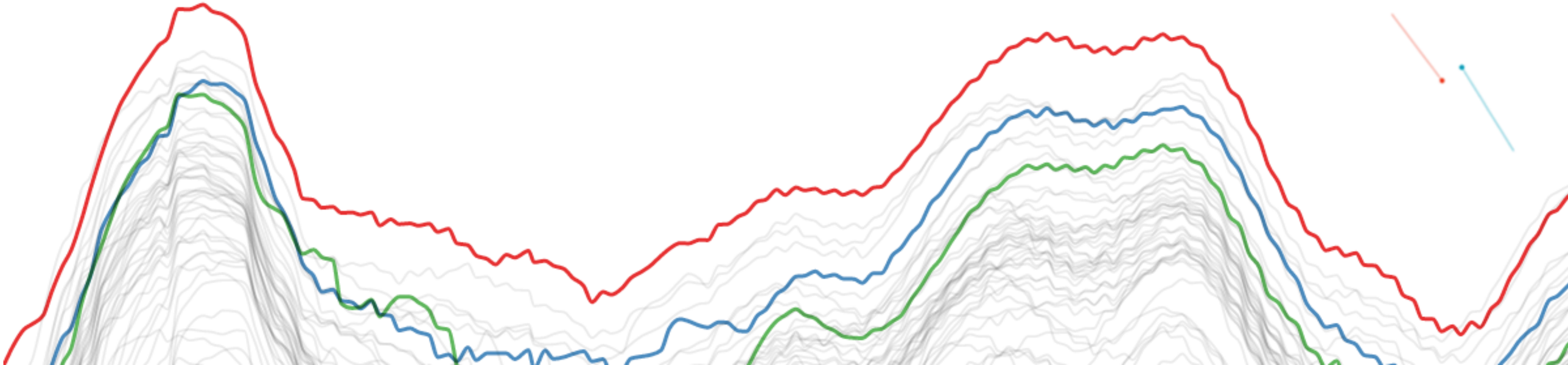
Visualización de la información



Fernando Becerra

f.becerra@udd.cl | @fdo_becerra | www.fernandobecerra.com

Magíster en Data Science, Universidad del Desarrollo



Proyecto Final

1. Entrega: viernes 14 de octubre a las 23:59

2. Notas: a más tardar el 18 de octubre a las 20:00

3. Reclamo: hasta el 19 de octubre a las 20:00

Recomendaciones

1. Hagan TODOS los gráficos que se les ocurran para explorar los datos: por región, por rango etario, por año.

2. Exploren correlaciones entre variables: región y rango etario, región y año. Aquí les puede servir la matriz de dispersión que vimos en clases.

3. Eviten dejarse llevar por ideas preconcebidas. Exploren y descubran las historias dentro de los datos.

Recomendaciones

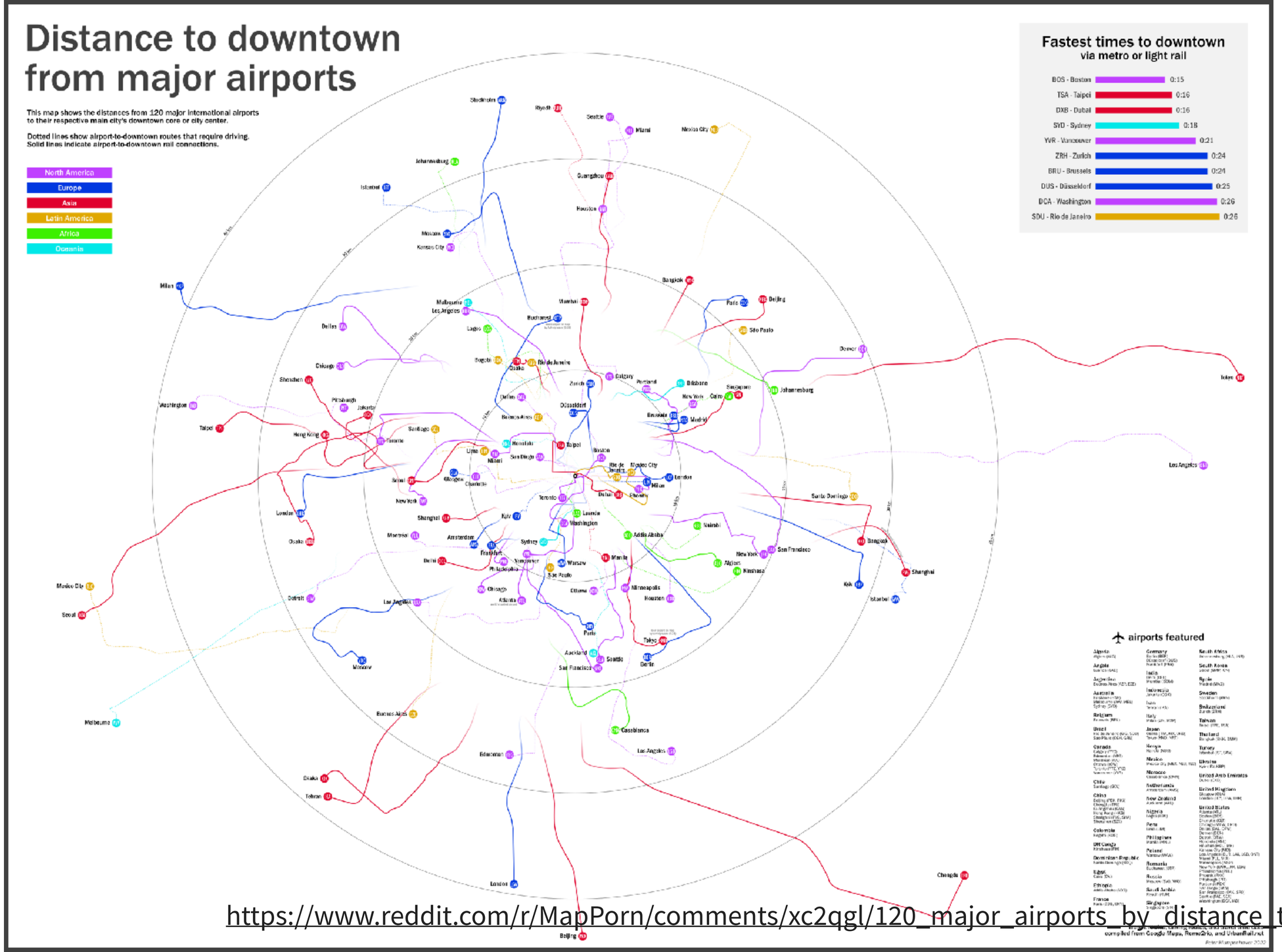
4. Utilicen varios tipos de visualización, para mostrar distintos puntos de vista.

5. No se apeguen a una idea. Si los datos no la sustentan, quizás sea mejor dejarla ir.

6. Coordinar otra llamada con el profesor para discutir el avance del proyecto.

Recomendaciones

7. Redacción

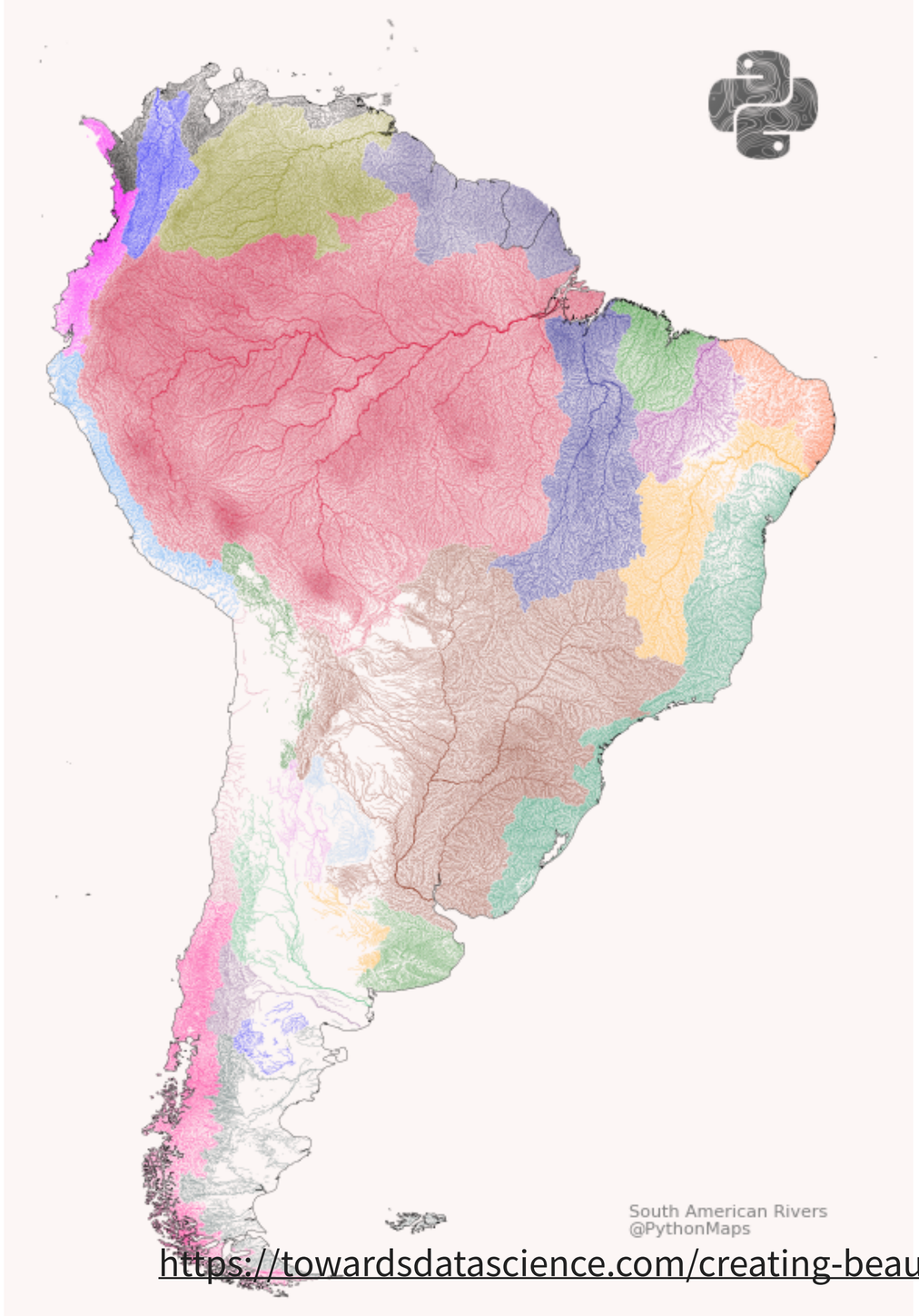


https://www.reddit.com/r/MapPorn/comments/xc2qgl/120_major_airports_by_distance_to_their_citys/

Visualización en Python

Otros recursos para graficar en Python

https://medium.com/nightingale/how-to-create-eye-catching-maps-with-python-and-kepler-gl-e7e897eff8ac#fe6b-d40ec8d73bab



https://towardsdatascience.com/creating-beautiful-river-maps-with-python-37c9b5f5b74c

https://vimeo.com/47408739

https://github.com/alex-parker/ADR4Movie/blob/master/ADR4_movie.py

D3

D3 · d3js.org
Bring your data to life.

Fork

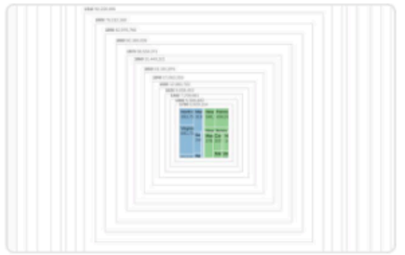
Visualization By Mike Bostock Published Feb 4, 2020 ISC 26 forks 671 Likes

Gallery

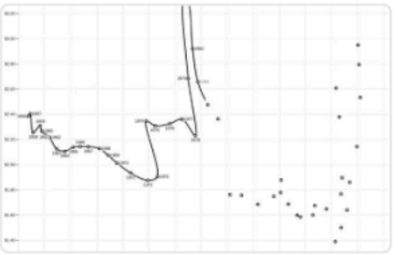
Looking for a good D3 example? Here's a few (okay, 168…) to peruse.

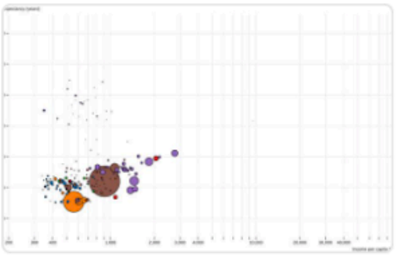
Animation

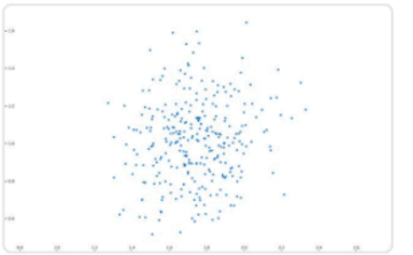
D3's data join, interpolators, and easings enable flexible animated transitions between views while preserving object constancy.

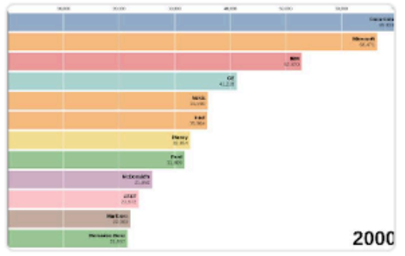

Animated treemap


Temporal force-directed gr…

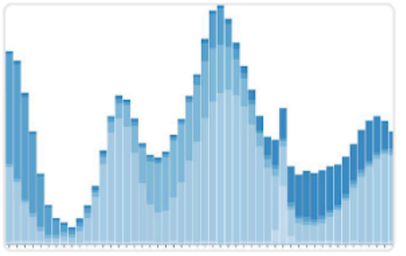

Connected scatterplot

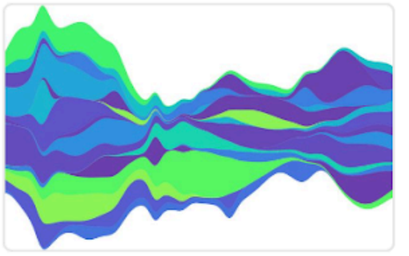

The wealth & health of nati…


Scatterplot tour



Bar chart race


Stacked-to-grouped bars


Streamgraph transitions


Smooth zooming


Zoom to bounding box

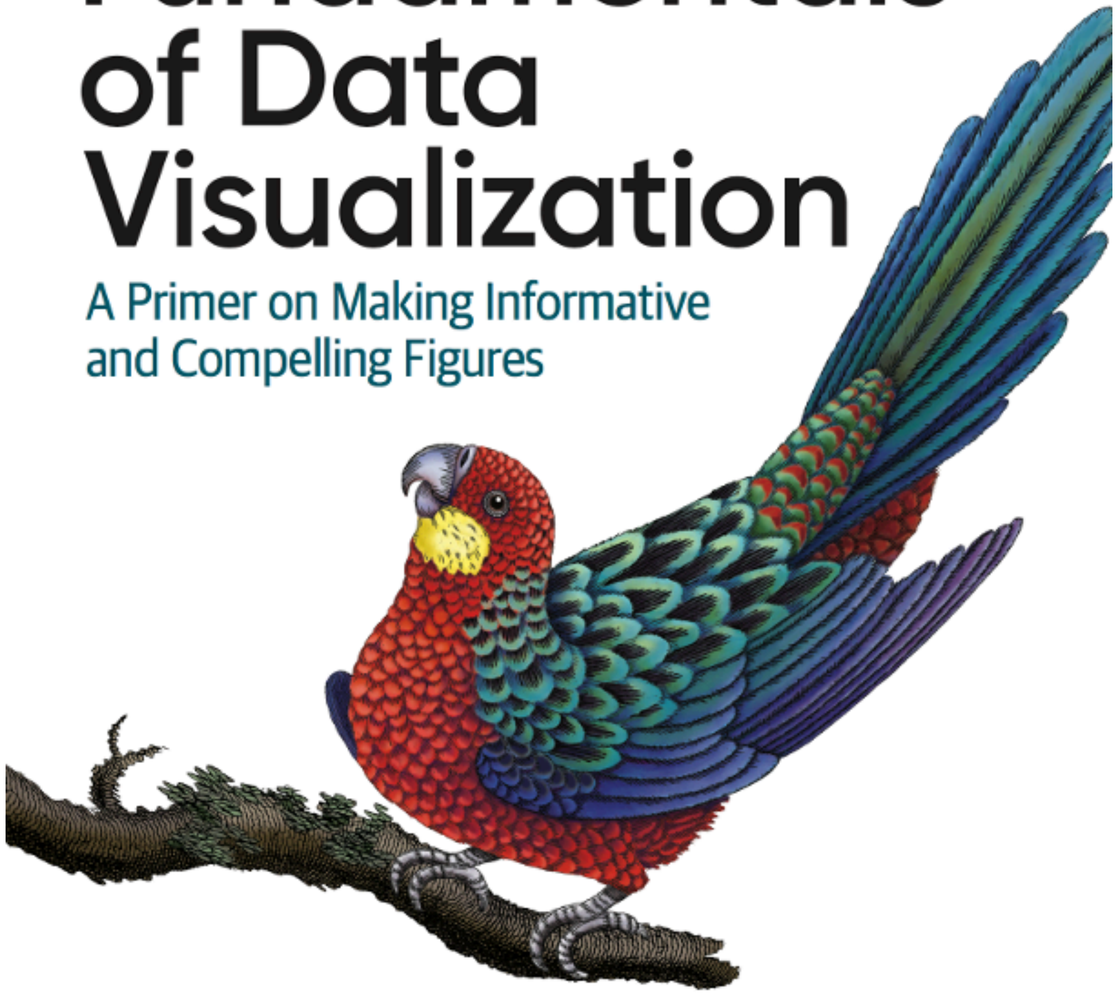
https://observablehq.com/@d3/gallery

Bibliografía

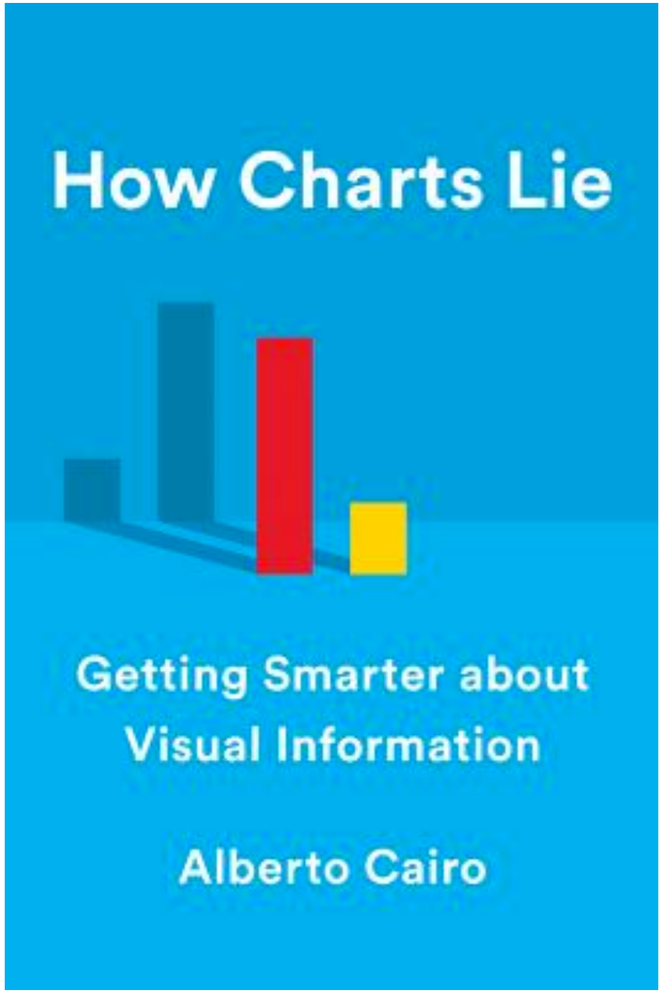
O'REILLY®

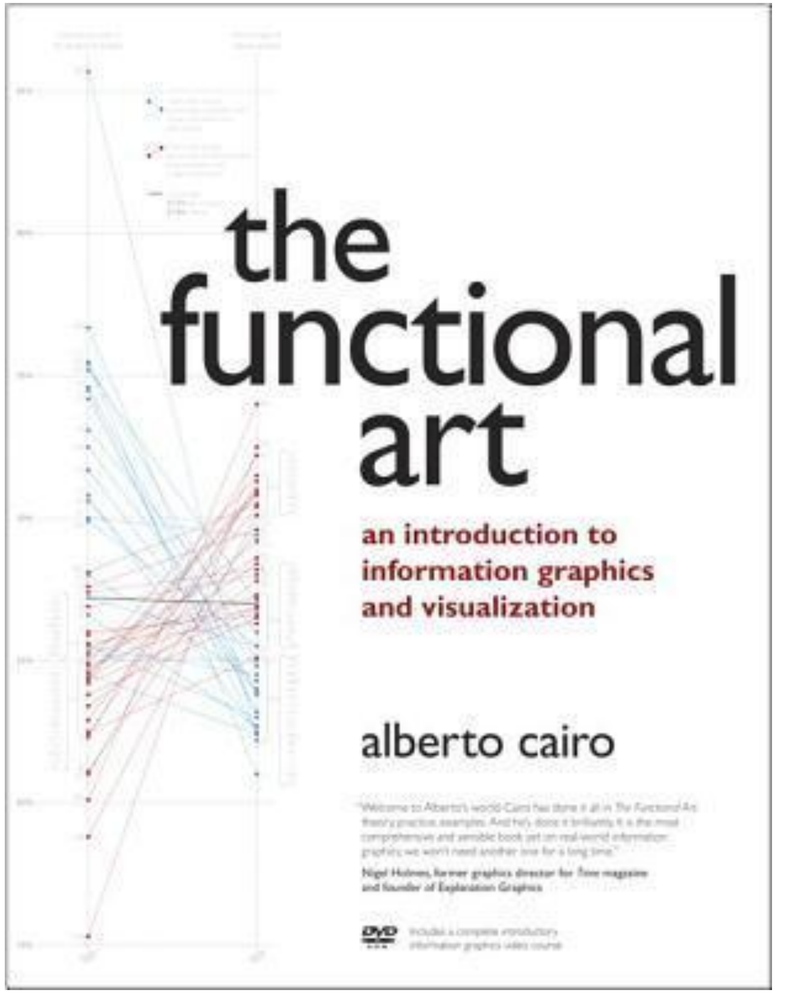
Fundamentals of Data Visualization

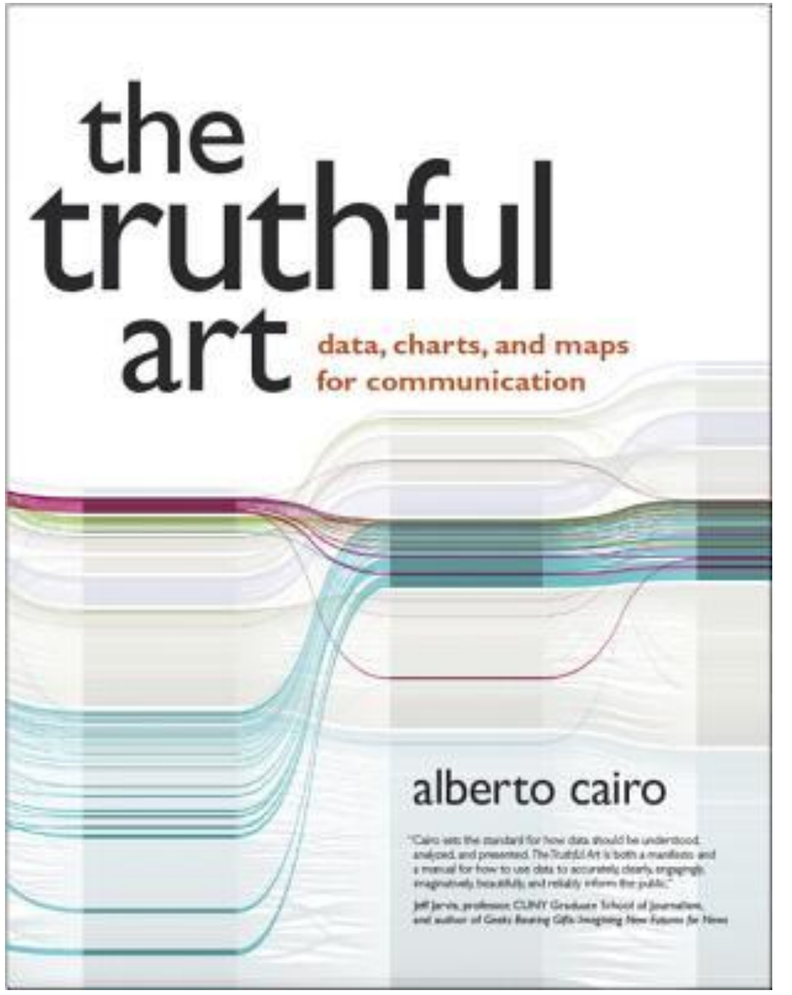
A Primer on Making Informative and Compelling Figures



Claus O. Wilke


How Charts Lie
Getting Smarter about Visual Information
Alberto Cairo


the functional art
an introduction to information graphics and visualization
alberto cairo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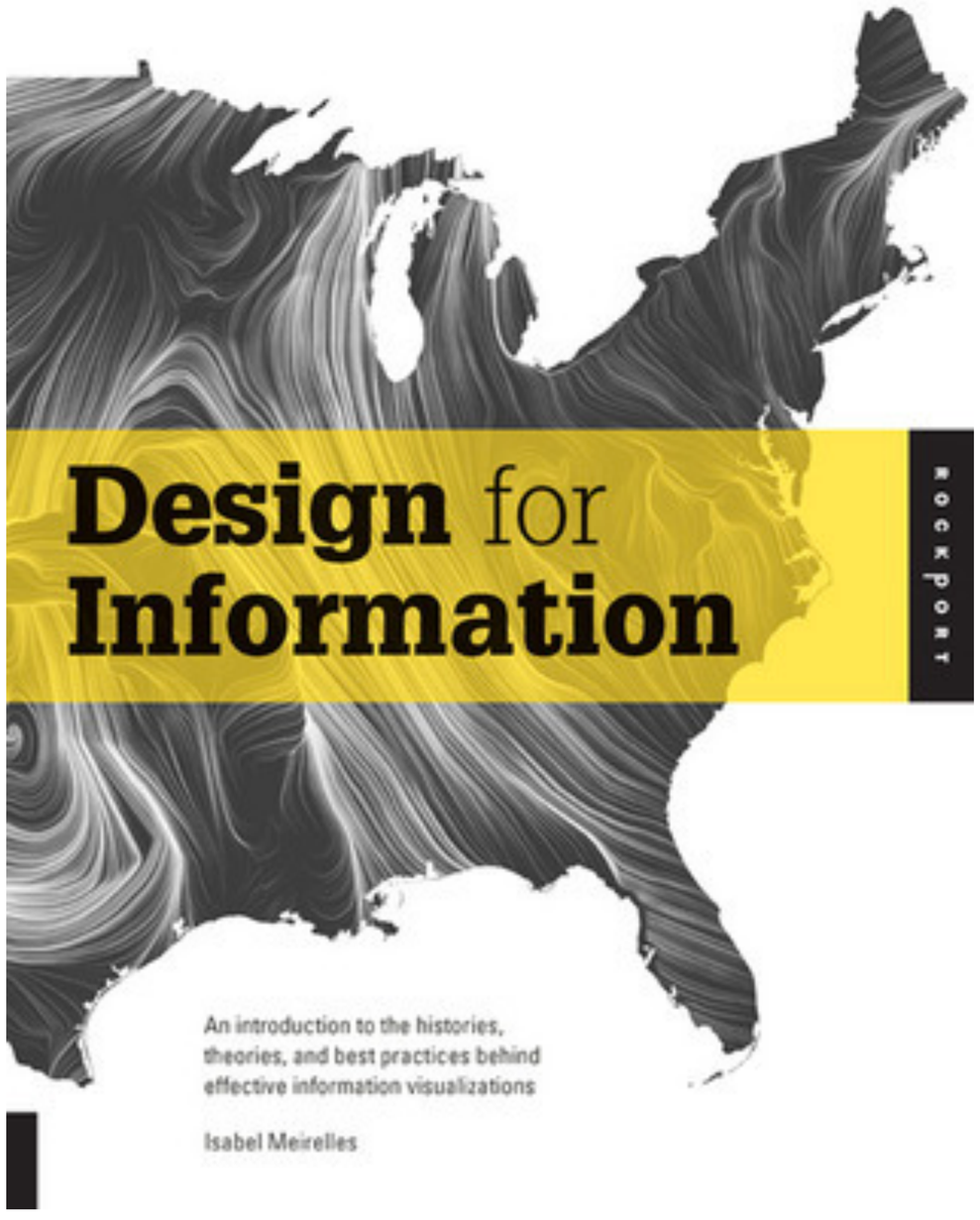
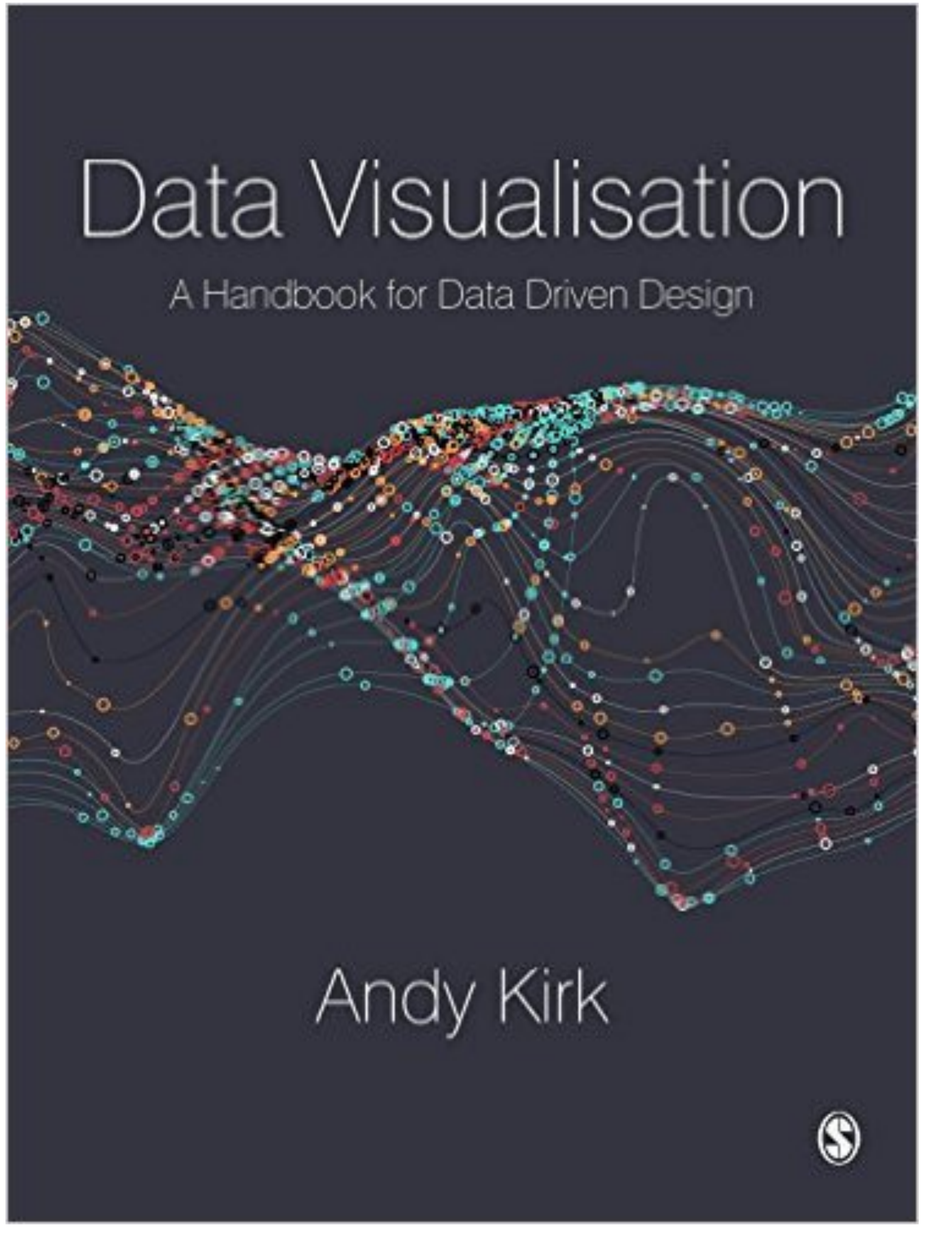
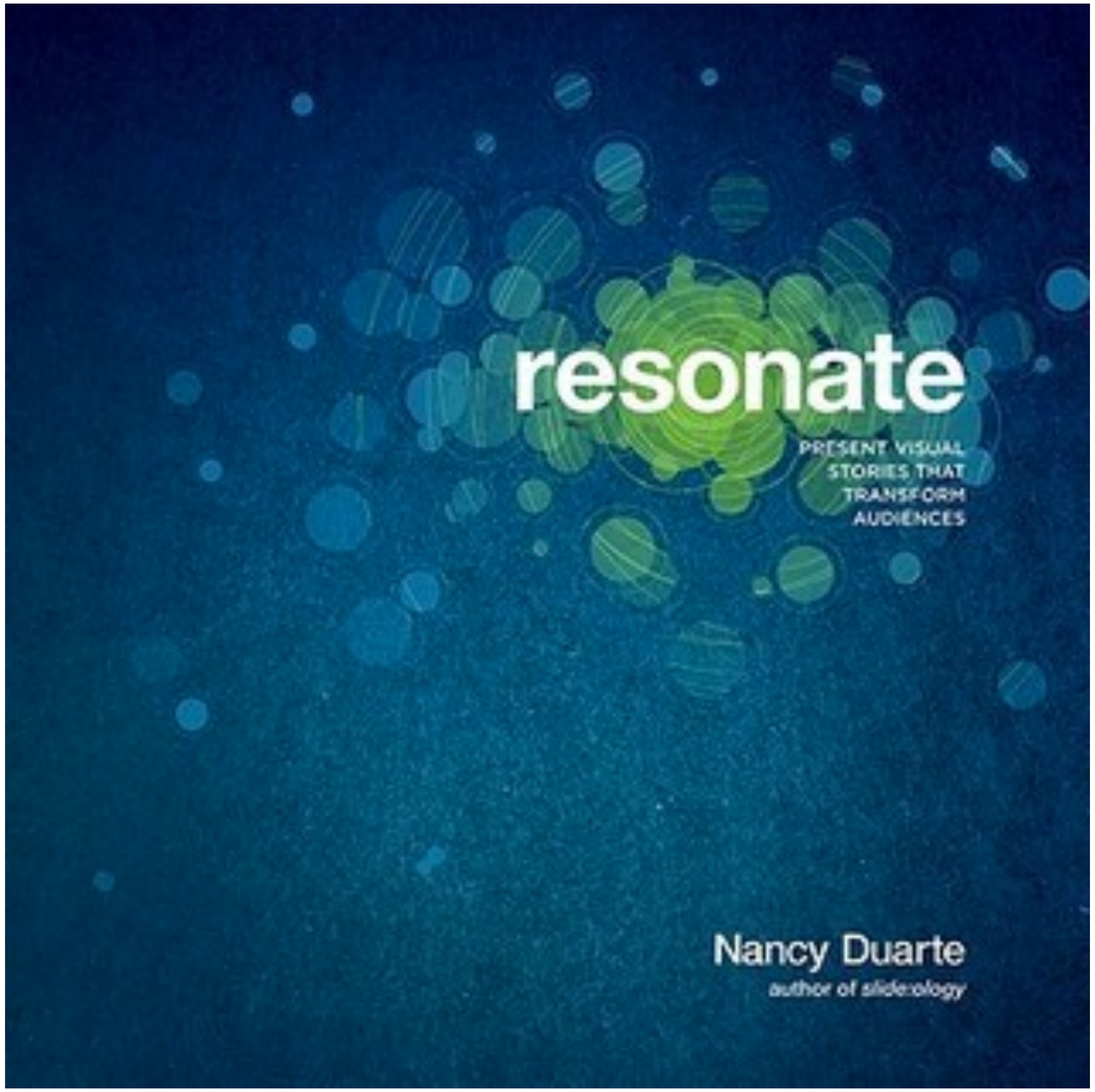
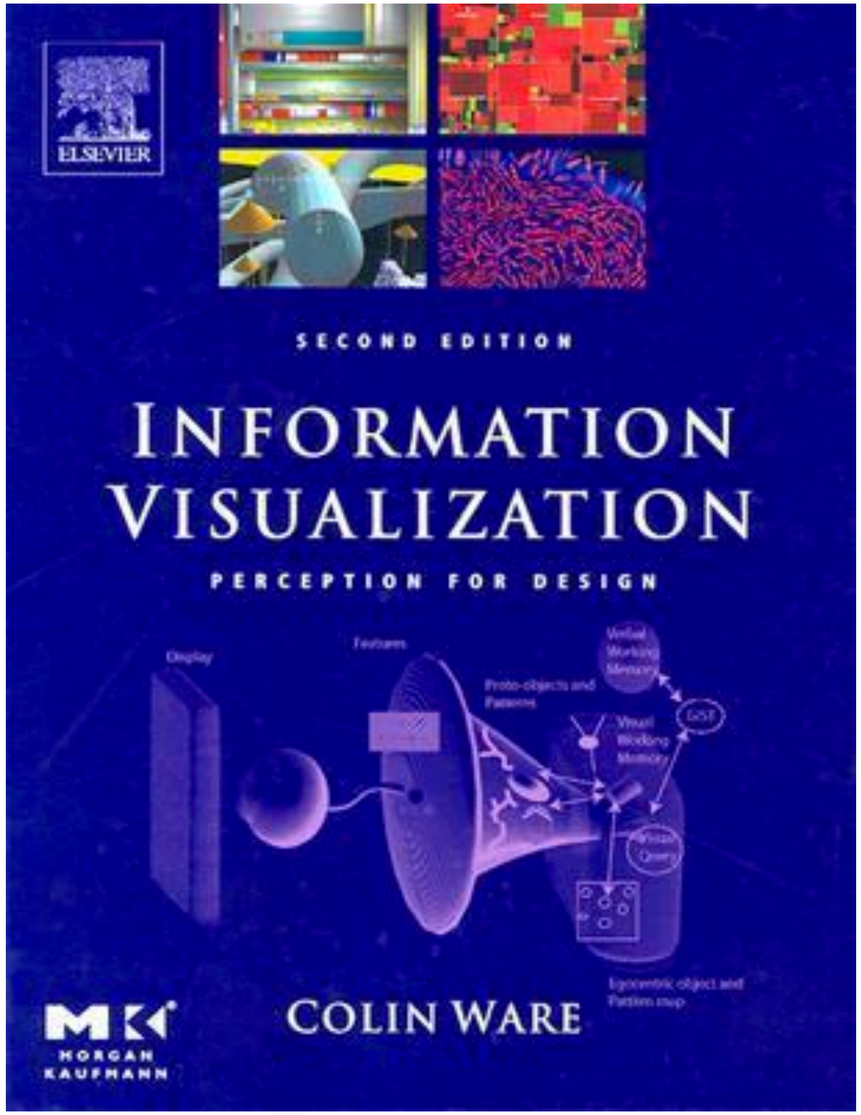

Design for Information
rockport
An introduction to the histories, theories, and best practices behind effective information visualizations
Isabel Meirelles


Data Visualisation
A Handbook for Data Driven Design
Andy Kirk


resonate
PRESENT VISUAL STORIES THAT TRANSFORM AUDIENCES
Nancy Duarte
author of slide:ology


ELSEVIER
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Narrative Visualization: Telling Stories with Data

Edward Segel and Jeffrey Heer

Abstract—Data visualization is regularly promoted for its ability to reveal stories within data, yet these "data stories" differ in important ways from traditional forms of storytelling. Storytellers, especially online journalists, have increasingly been integrating visualizations into their narratives, in some cases allowing the visualization to function in place of a written story. In this paper, we systematically review the design space of this emerging class of visualizations. Drawing on case studies from news media to visualization research, we identify distinct genres of narrative visualization. We characterize these design differences, together with interactivity and messaging, in terms of the balance between the narrative flow intended by the author (imposed by graphical elements and the interface) and story discovery on the part of the reader (often through interactive exploration). Our framework suggests design strategies for narrative visualization, including promising under-explored approaches to journalistic storytelling and educational media.

Index Terms—Narrative visualization, storytelling, design methods, case study, journalism, social data analysis.

1 Introduction

In recent years, many have commented on the storytelling potential of data visualization. News organizations including the New York Times, Washington Post, and the Guardian regularly incorporate dynamic graphics into their journalism. Politicians, activists, and television reporters use interactive visualizations as a backdrop for stories about global health and economics [10] and election results [9]. A recent feature in The Economist [6] explores the proliferation of digital data and notes that visualization designers are *"melding the skills of computer science, statistics, artistic design and storytelling."*

Static visualizations have long been used to support storytelling, usually in the form of diagrams and charts embedded in a larger body of text. In this format, the text conveys the story, and the image typically provides supporting evidence or related details. An emerging class of visualizations attempts to combine narratives with interactive graphics. Storytellers, especially online journalists, are increasingly integrating complex visualizations into their narratives.

Crafting successful "data stories" requires a diverse set of skills. Gershon and Page [12] note that effective story-telling *"require[s] skills like those familiar to movie directors, beyond a technical expert's knowledge of computer engineering and science."* While techniques from oration, prose, comic books, video games, and film production are applicable to narrative visualization, we should also expect this emerging medium to possess unique attributes. Data stories differ in important ways from traditional storytelling. Stories in text and film typically present a set of events in a tightly controlled progression. While tours through visualized data similarly can be organized in a linear sequence, they can also be interactive, inviting verification, new questions, and alternative explanations.

Currently, most sophisticated visualization tools focus on data ex-

In this paper, we investigate the design of narrative visualizations and identify techniques for telling stories with data graphics. We take an empirical approach, analyzing visualizations from online journalism, blogs, instructional videos, and visualization research. After reviewing related work, we share five selected case studies which highlight varied design strategies and illustrate our analytic approach. We then formulate a design space constructed from an analysis of 58 examples. Our analysis identifies salient dimensions of visual storytelling, including how graphical techniques and interactivity can enforce various levels of structure and narrative flow. We describe seven genres of narrative visualization: magazine style, annotated chart, partitioned poster, flow chart, comic strip, slide show, and video. These genres can be combined with interactivity and messaging to produce varying balances of author-driven and reader-driven experiences. Finally, we discuss the implications of our framework, noting recurring design strategies, promising yet under-utilized approaches to integrating visualization with other media, and the potential for improved user interfaces for crafting data stories. By focusing on the graphical and interactive elements of narrative visualization, our approach gives less attention to the cognitive and emotional experience of the reader. We recognize the importance of these elements, however, and describe directions for future reader-centric research in our conclusion.

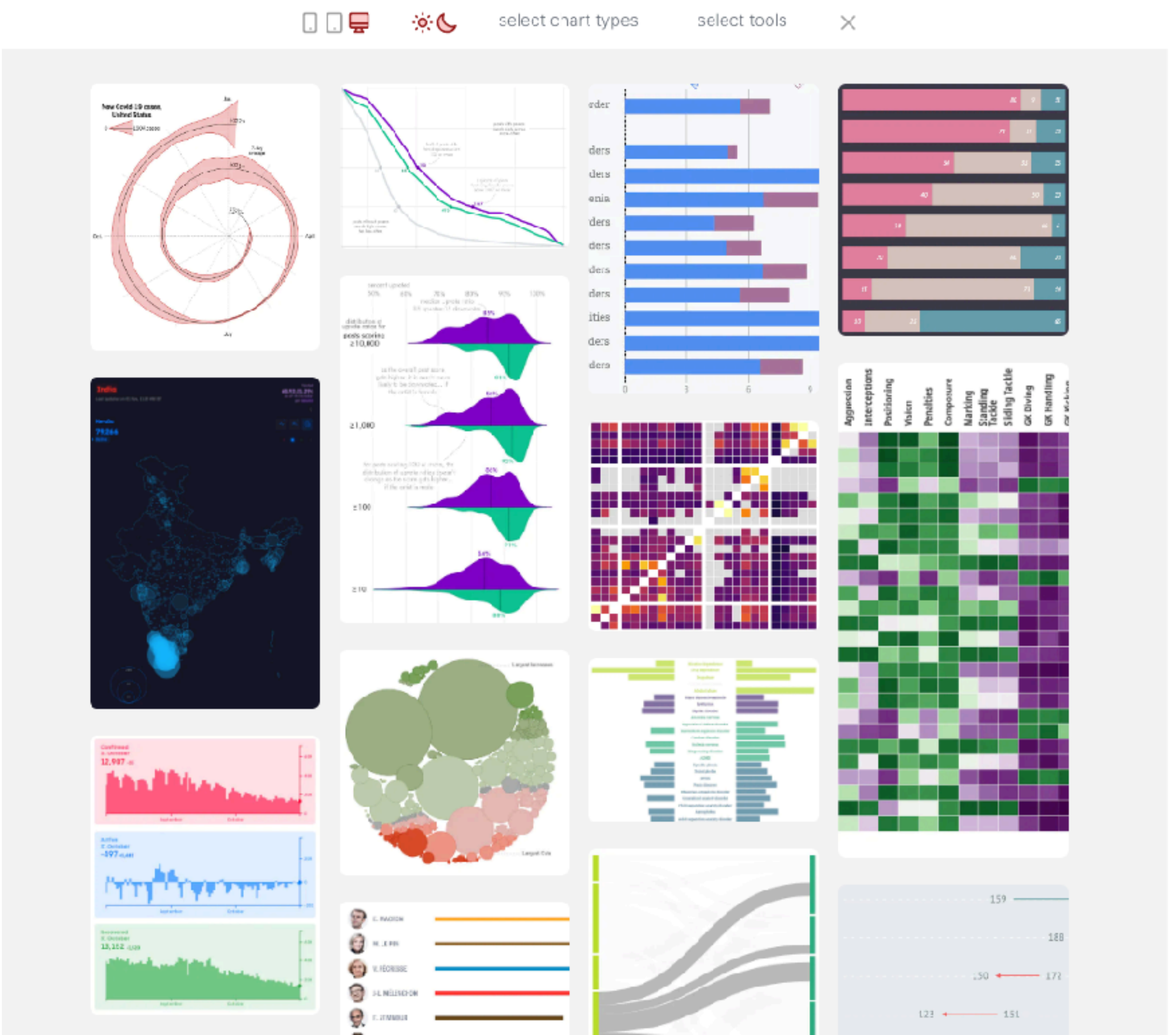
2 Related Work

Storytelling and visual expression are integral parts of human culture; storytelling has even been referred to as *"the world's second-oldest profession"* [12]. Without summarizing millennia of achievement, we describe a few of the key concepts informing narrative visualization.

https://idl.cs.washington.edu/files/2010-Narrative-InfoVis.pdf

Dataviz Inspiration

Dataviz-inspiration.com aims at being the biggest list of chart examples available on the web. It showcases 133 of the most beautiful and impactful dataviz projects I know. The collection is a good place to visit when you're designing a new graph, together with data-to-viz.com that shares dataviz best practices.



https://www.dataviz-inspiration.com

¡Muchas gracias!

becerrafernando@gmail.com