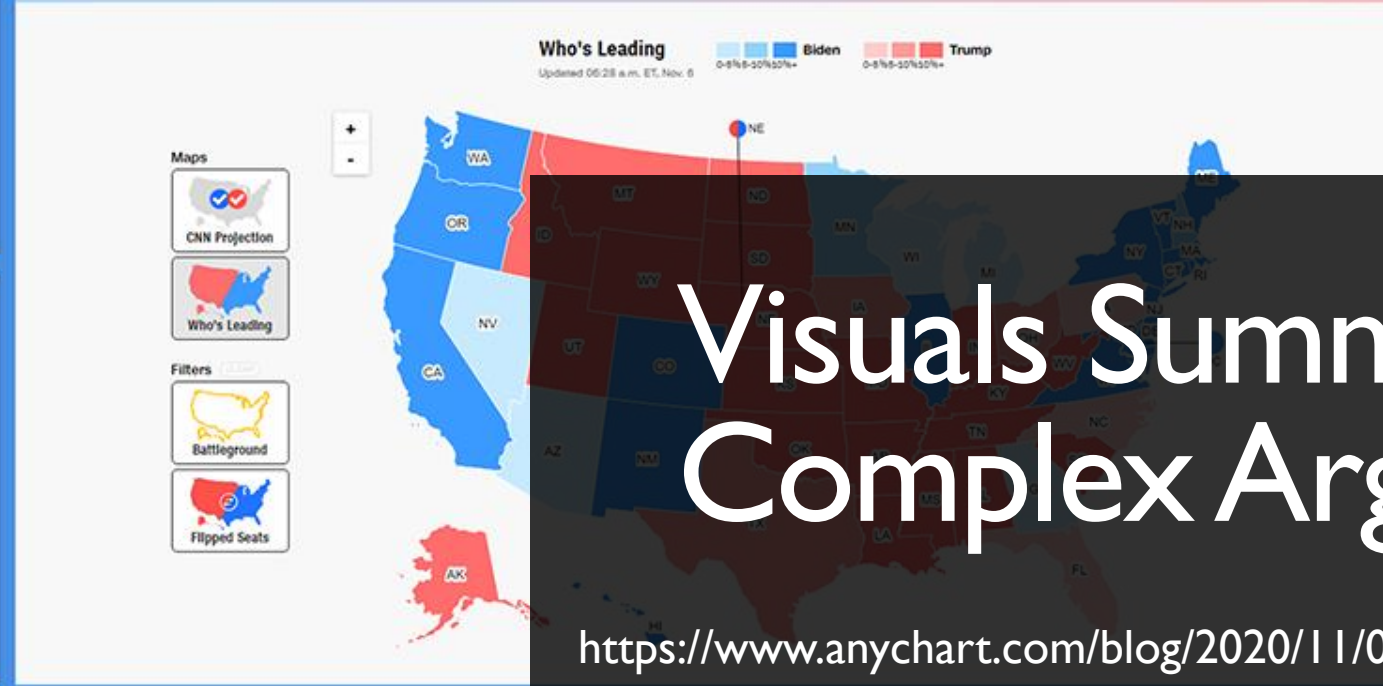
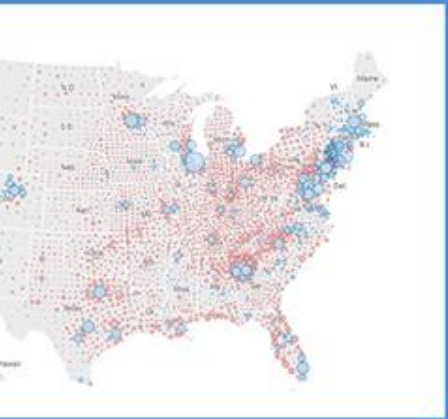
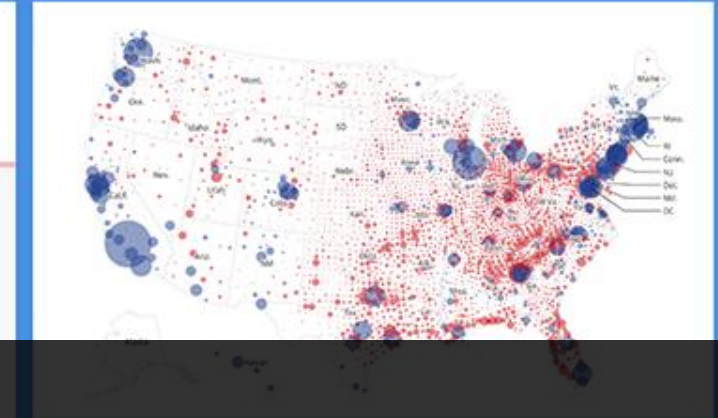
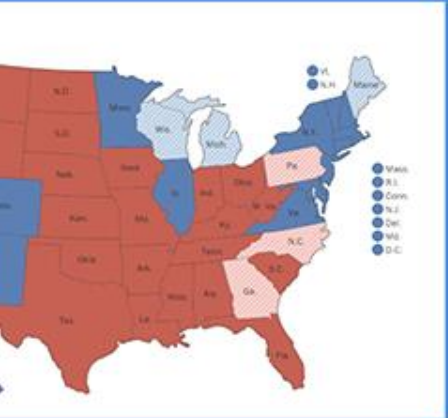


Two Truths and a Lie: Designing Data Visualizations that Mislead

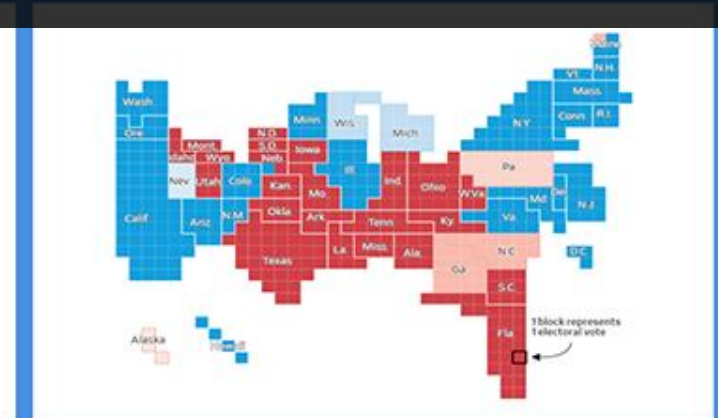
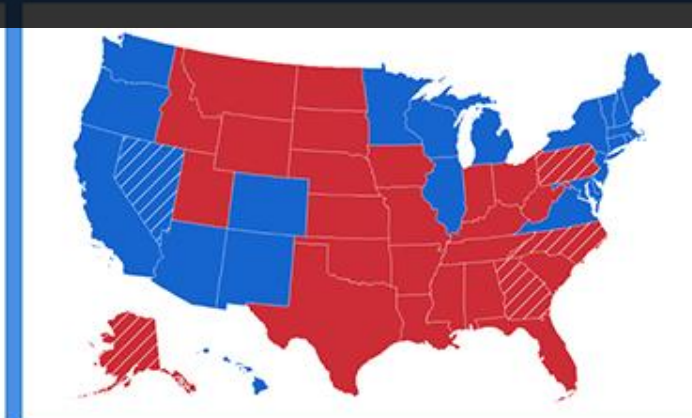
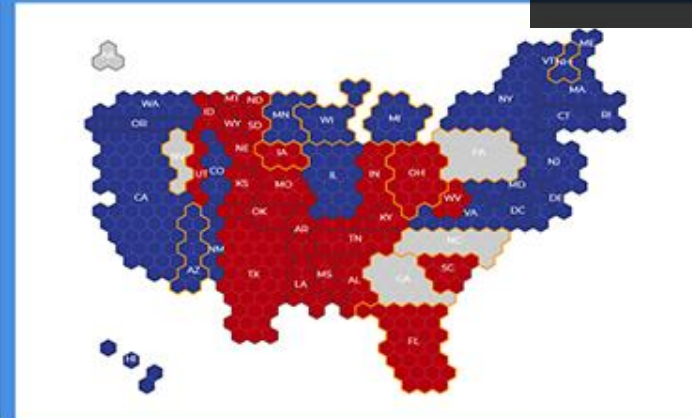
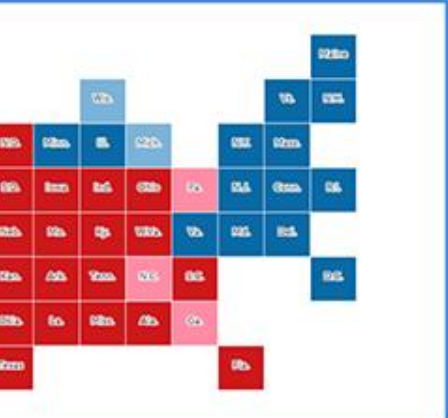
Dr. Sara Doan | sdoan4@kennesaw.edu | [@SDoanut](https://twitter.com/SDoanut) | saracdoan.com

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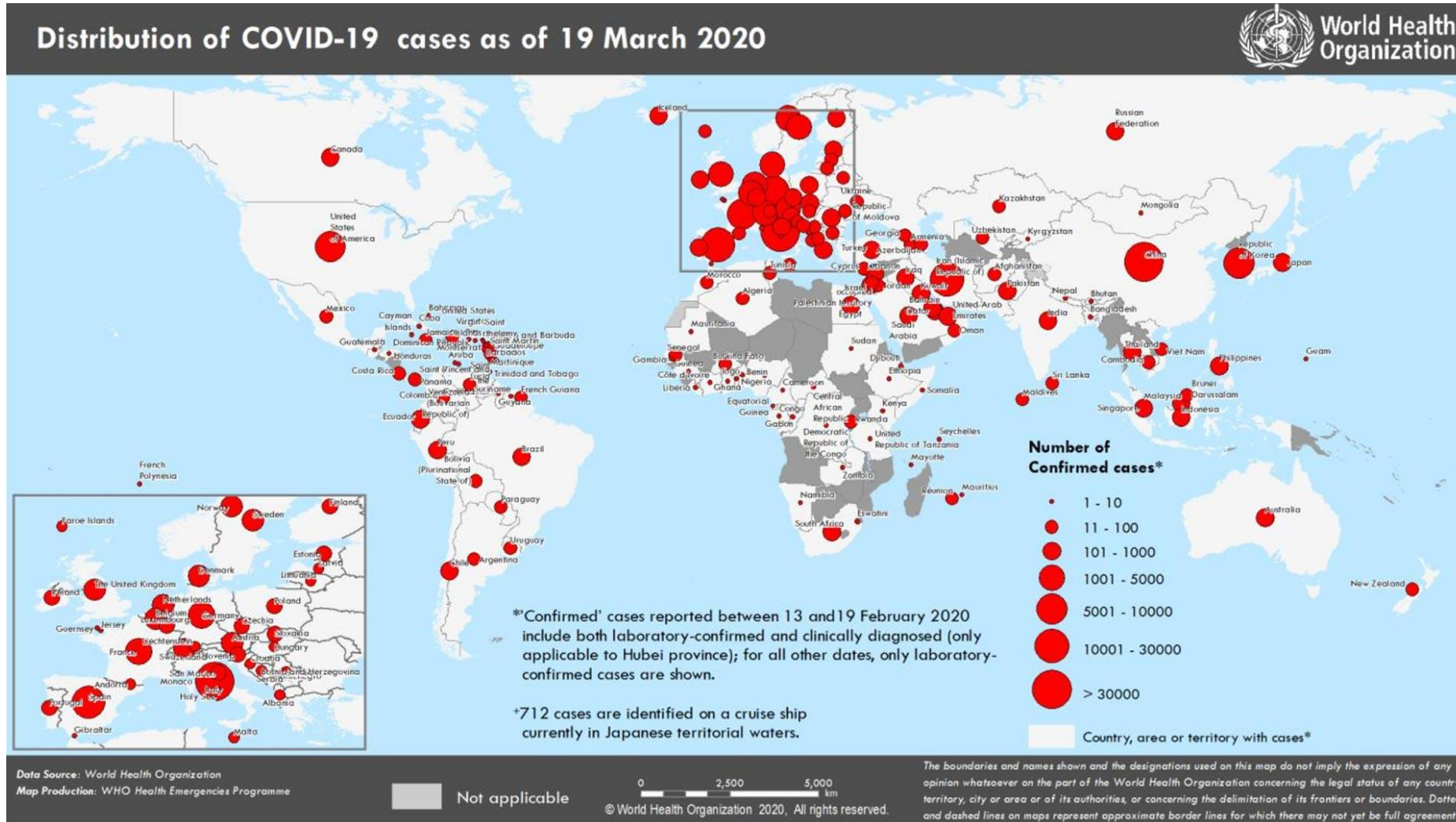


Visuals Summarize Complex Arguments

<https://www.anychart.com/blog/2020/11/06/election-maps-us-vote-live-results/>



Visuals are associated with logical and scientific thinking, ergo trust (Cairo, 2019)



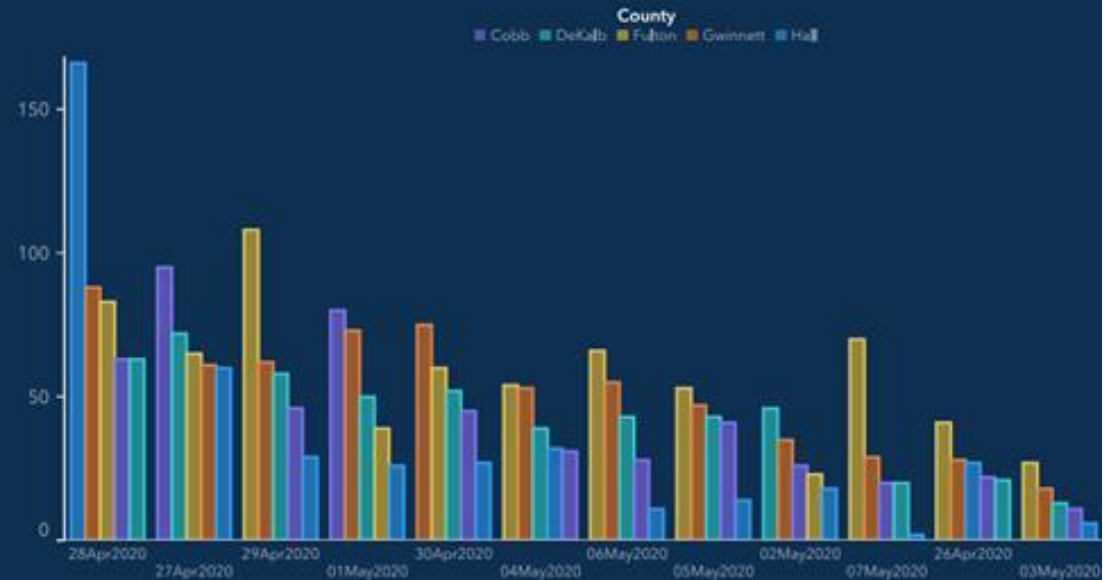
<https://scitechdaily.com/images/COVID-19-Coronavirus-Map-March-19.jpg>

And Circulate Quickly on the Internet

<https://www.dailymail.co.uk/news/article-8336989/Georgia-health-department-accused-manipulating-coronavirus-data-downward-trend-cases.html>

Top 5 Counties with the Greatest Number of Confirmed COVID-19 Cases

The chart below represents the most impacted counties over the past 15 days and the number of cases. The table below also represents the number of deaths and hospitalizations in each of those impacted counties.



County	Confirmed COVID-19 Cases	Confirmed COVID-19 Deaths
Fulton	3,509	144
DeKalb	2,536	69
Gwinnett	2,447	87
Cobb	2,175	117
Hall	2,012	28
Dougherty	1,593	126
Clayton	921	34
Cherokee	609	17
Henry	604	14
Richmond	447	16



1

Designing charts

- X-axis
- Y-axis
- Pie charts
- Trendline

2

Uniting visual and verbal elements to create meaning

3

Understanding and manipulating data to tell a story

4

Collaborating with classmates via technology (Teams, Excel)

Learning Objectives

Article

Journal of Business and Technical Communication 1-7
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 DOI: 10.1177/1050651920958392
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Misrepresenting COVID-19: Lying With Charts During the Second Golden Age of Data Design

Sara Doan¹


Abstract
 In this second golden age of data design, digital affordances enable the news media to share occasionally misleading charts about COVID-19. Examining data visualizations about COVID-19 highlights three ways that charts can mislead viewers: (a) by displaying inadequate data, (b) by manipulating scales and visual distance, and (c) by omitting contextual labels needed to fully understand a chart's message. This article provides takeaways for technical communicators about including and displaying adequate data, representing numbers consistently, and humanizing COVID-19's effects.

Keywords
 visual rhetoric, data visualization, COVID-19, ethics, humanizing visuals

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How Charts Lie




Getting Smarter about Visual Information

Alberto Cairo

AUTHOR **NATHAN YAU**

DATA POINTS

VISUALIZATION THAT MEANS SOMETHING



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Preparing to Create Charts

Two Truths and a (Chart) Lie



1. In pairs, download "Fictional Humane Society Data" from "Datasets" in D2L
(Provide students with a simple dataset)
2. Open the file in Excel
3. Save your Excel file as "yournames.fictionalhumane.charts"
4. Generate three charts based on this data.
5. For one chart, use visual strategies to lie about the data.
6. Upload your charts to "Humane Society Charts" in "Assignments" on D2L
7. As a class, we'll guess which charts are accurate and which misrepresent the data



Thank you!

Instruction about creating and interpreting charts and graphs increases students' data and visual literacies.



References



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Doan, S. (2021). Misrepresenting COVID-19: Lying With Charts During the Second Golden Age of Data Design. *Journal of Business and Technical Communication*, 35(1), 73–79. <https://doi.org/10.1177/1050651920958392>

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