

ISA 401: Business Intelligence & Data Visualization

19: Charts Used for Spatial and Spatiotemporal Data

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 Automated Scheduler for Office Hours

Spring 2024

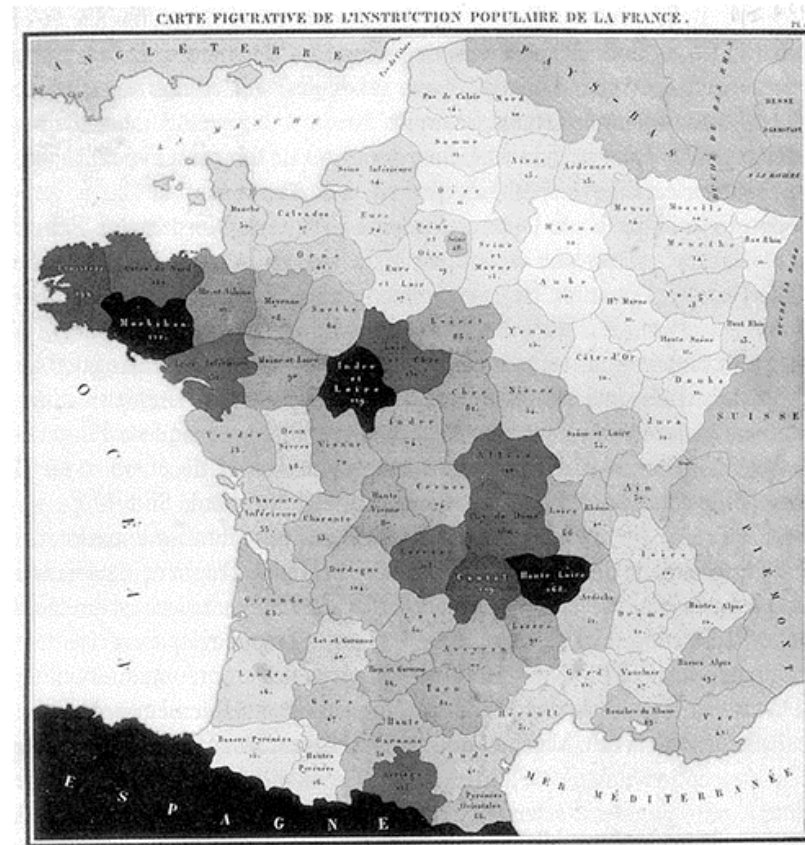
Learning Objectives for Today's Class

- Explain the different types of spatial plots
- Select suitable spatial graphs for different scenarios
- Understand how spatiotemporal plots can help in storytelling (what makes BI special)

Spatial Plots

Choropleth Maps

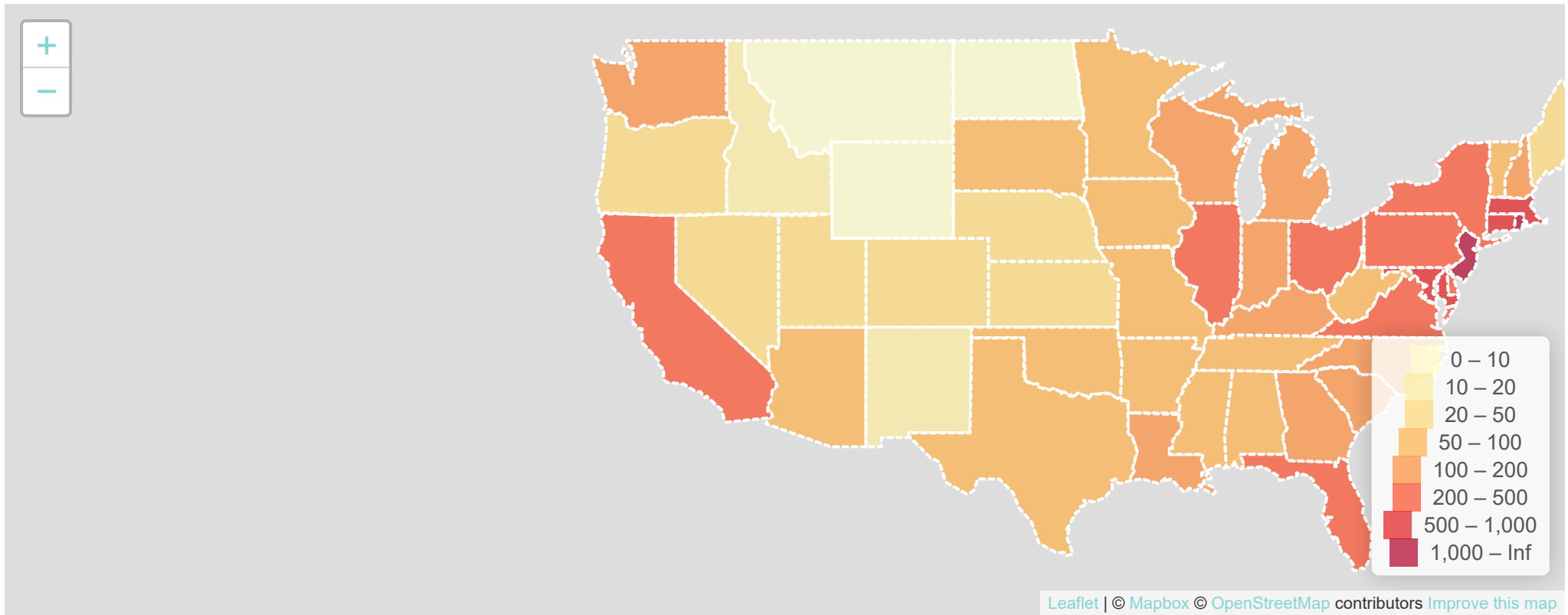
Maps where areas are **shaded, colored, or patterned** relative to a data attribute value.



Charles Dupin's Illiteracy in France Choropleth, created in 1826

Choropleth Maps

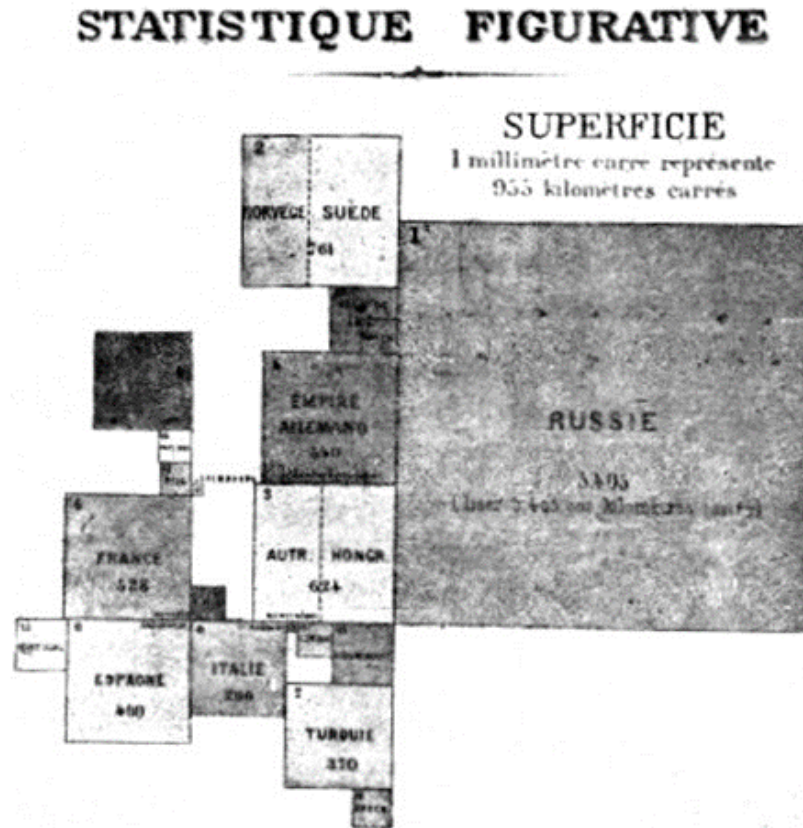
Maps where areas are **shaded, colored, or patterned** relative to a data attribute value.



Population Density in U.S.

Cartograms

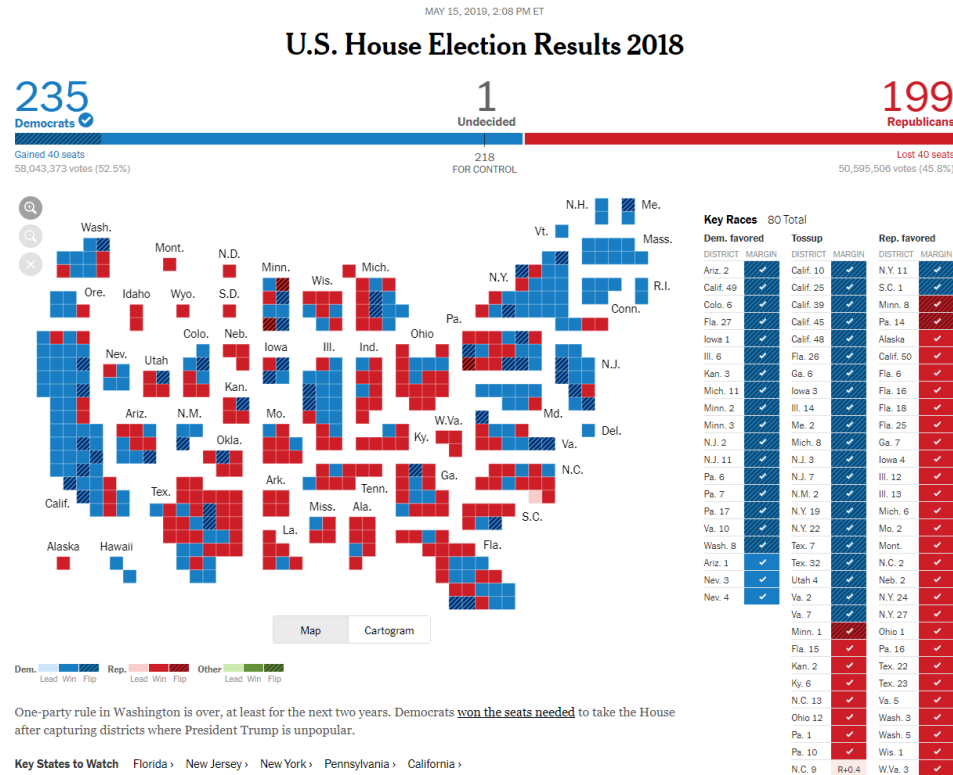
A cartogram is a map in which **areas are scaled and distorted relative to a data attribute value**



The First Cartogram – Emile Levasseur, 1868

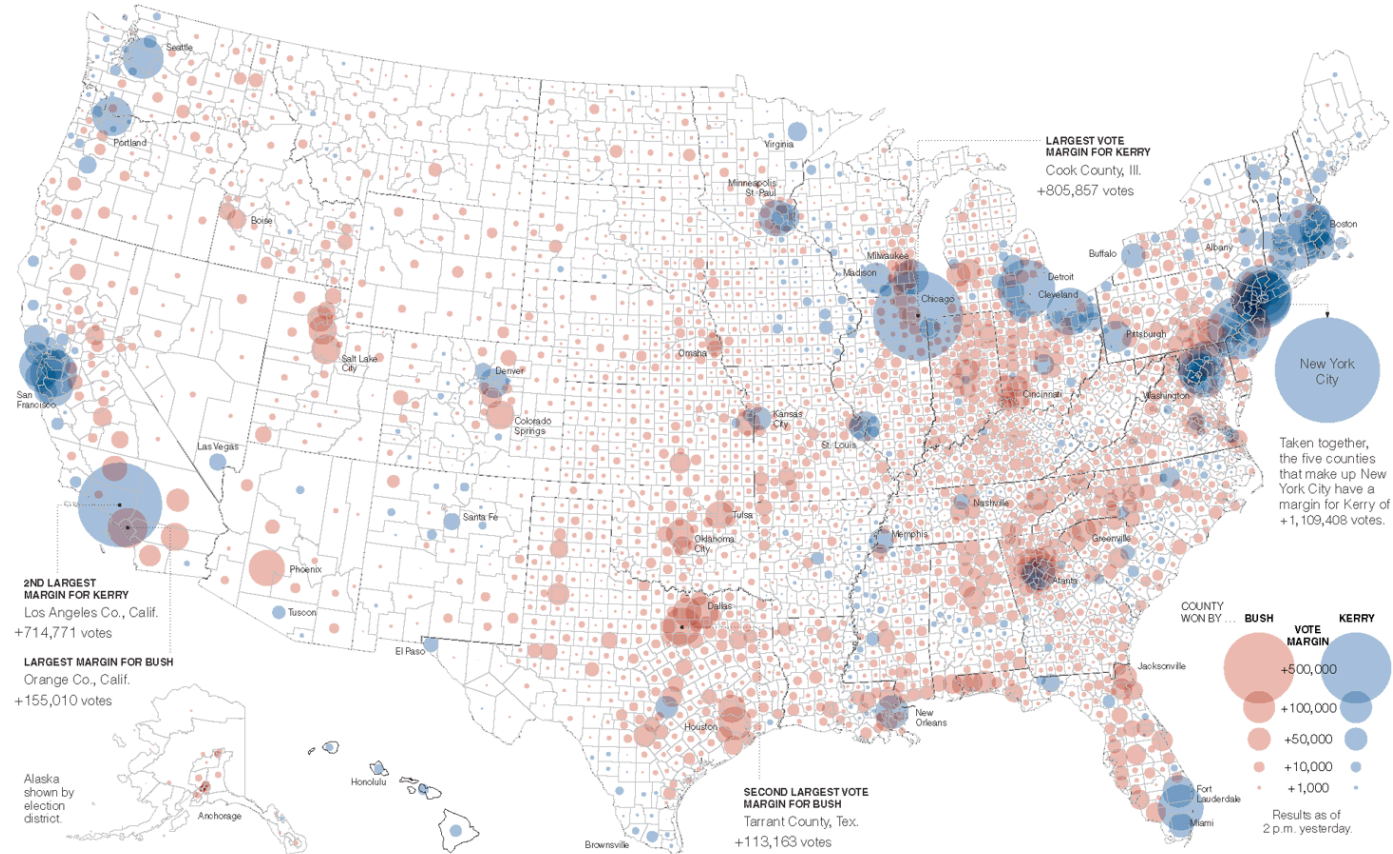
Cartograms

A cartogram is a map in which **areas are scaled and distorted relative to a data attribute value**



The NYT's U.S. House Election Results 2018

Proportional Symbols Map



The NYT's U.S. Coverage of the Bush Vs Kerry Presidential Elections

Proportional Symbols Map

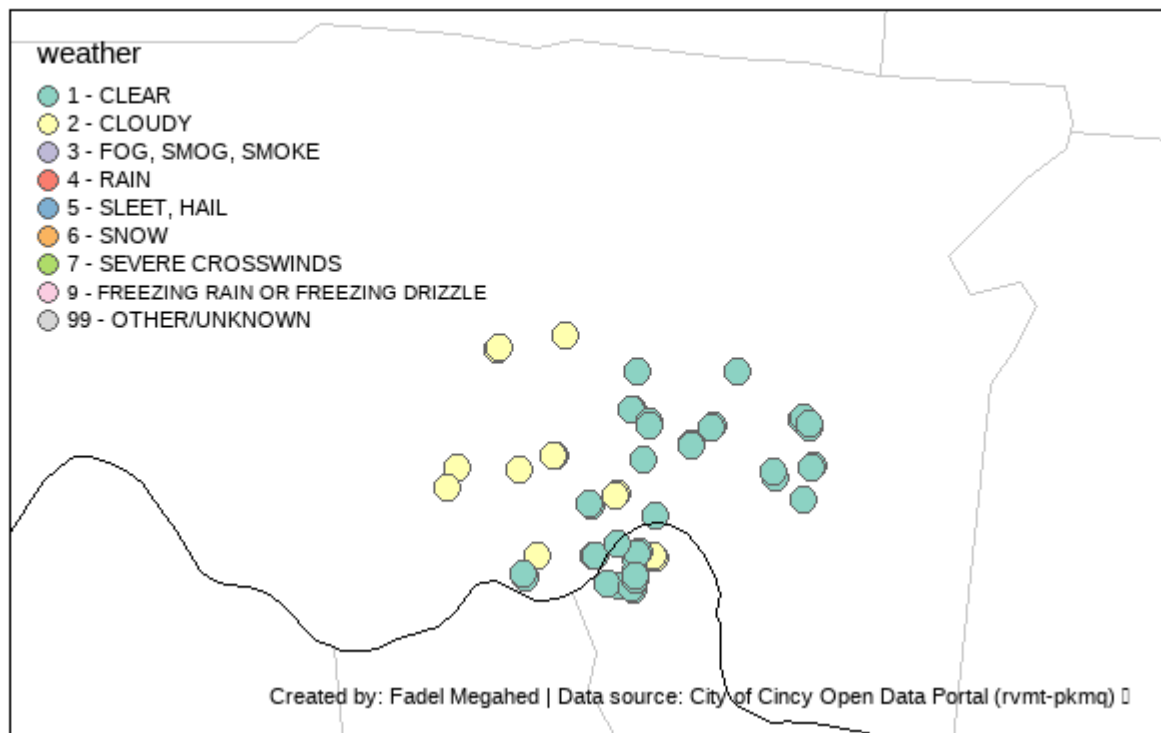


The NYT's U.S. Coverage of 2009 Super Bowl

Spatiotemporal Maps

Spatiotemporal Maps

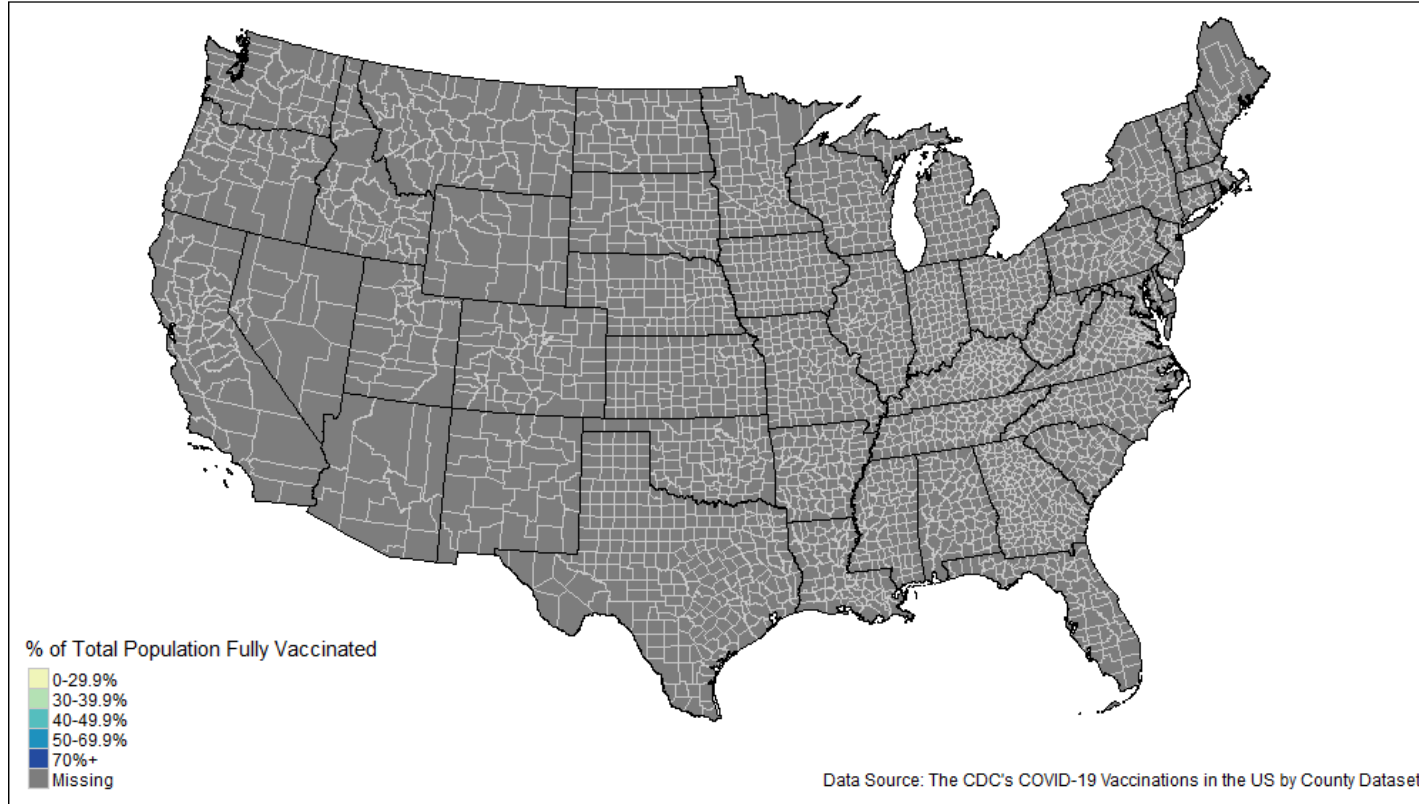
2023-01-01



A visualization of car crashes in the Cincinnati metro area

Spatiotemporal Maps

2020-12-13



Software Demo

Exploring the Cincy Crashes Dataset

Let us use Tableau to explore the [cincy_2021_crashes.csv](#), where we will create the following:

- A calculated field titled `unique_count`
- A plot of the total number of unique crashes per day
- A table of number of unique crashes by week day
- A table of number of unique crashes by week day
- An animated symbols map

Recap

Summary of Main Points

- Explain the different types of spatial plots
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