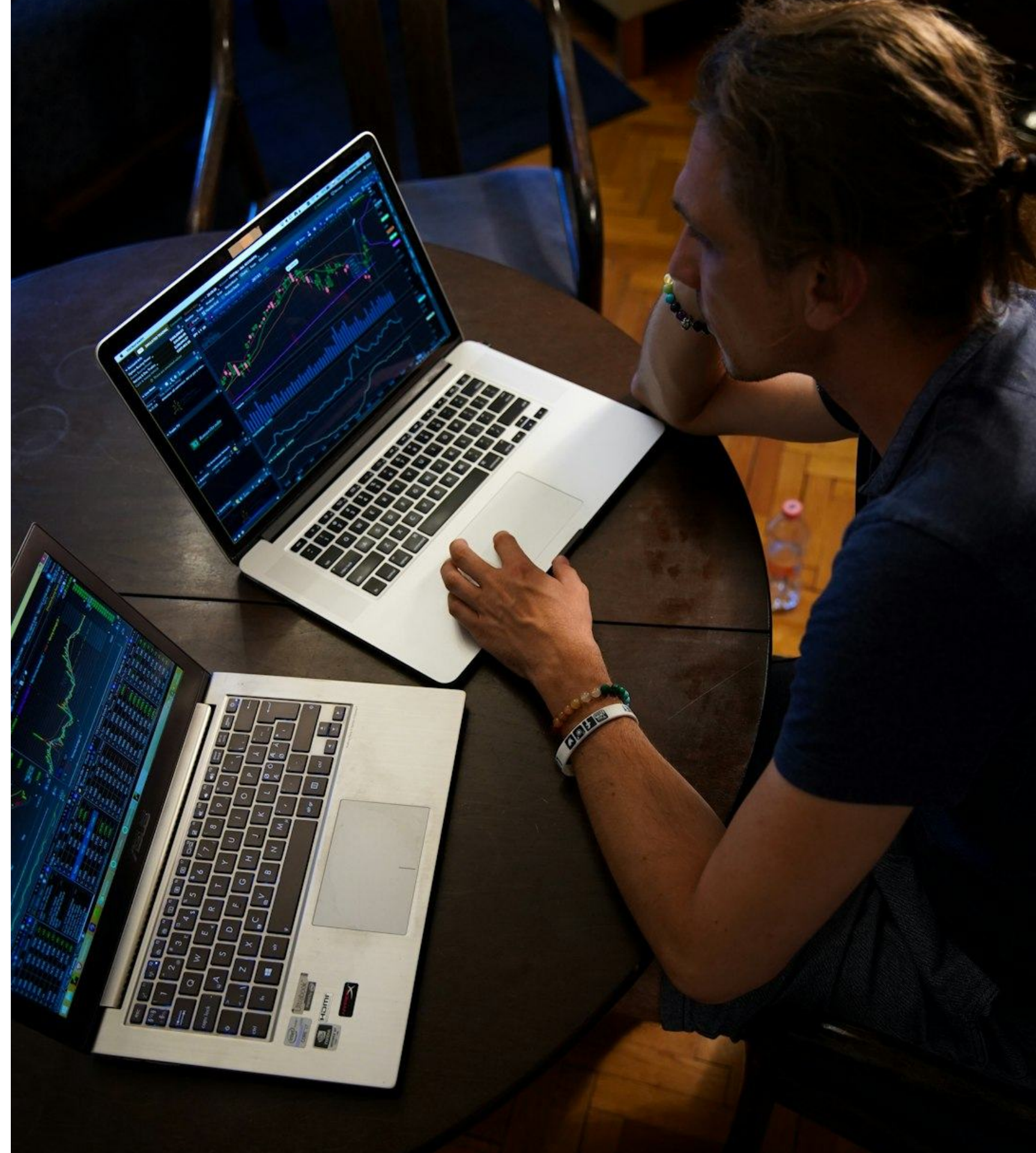


Assignment 2

Bad Data Visualizations

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Example 1

Bubble Chart Pro

Background

This bubble chart compares U.S. states' violent crime rates (y-axis) and property crime rates (x-axis), with bubble size representing the poverty rate.

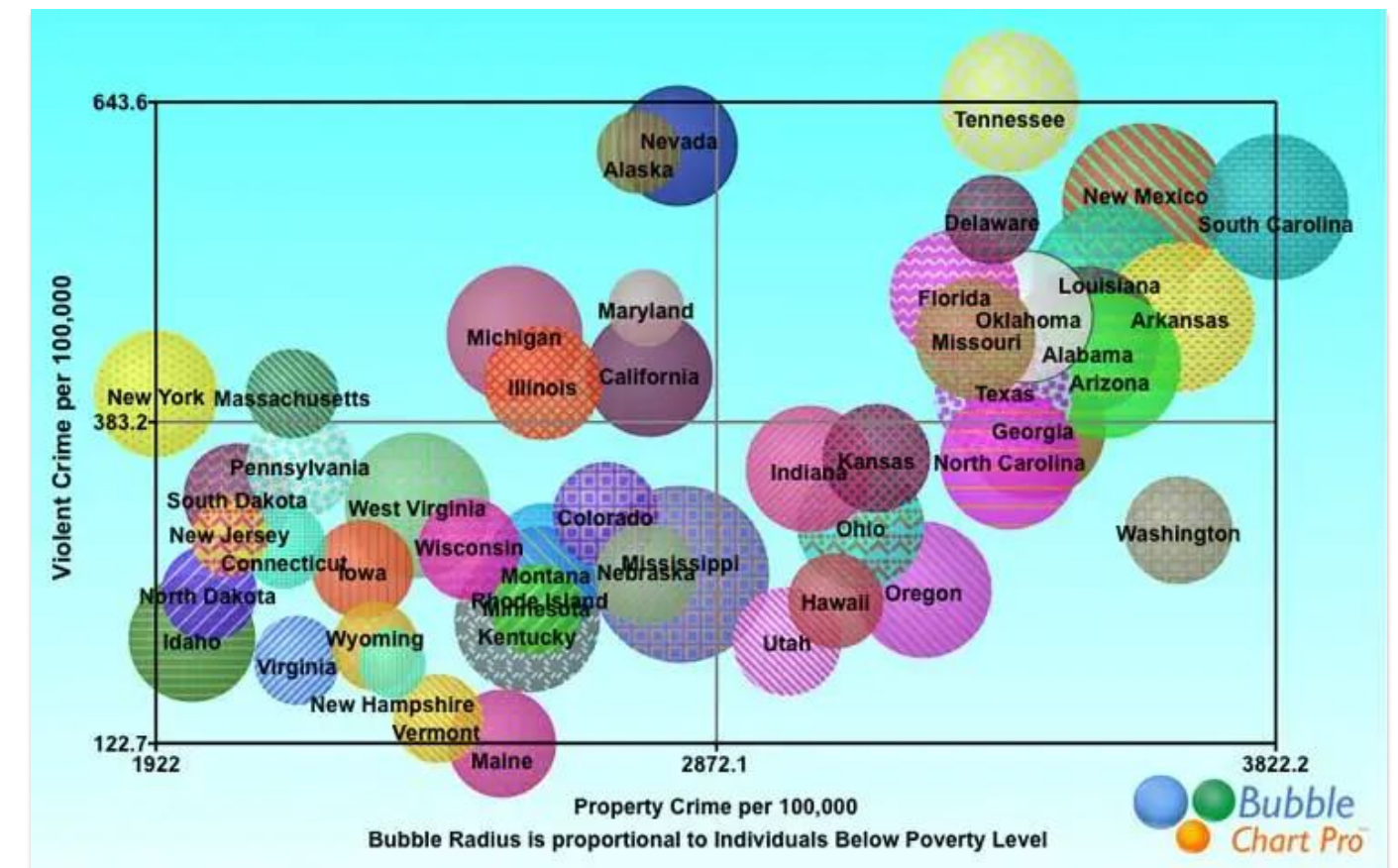
Pros

- Multiple Data Points : Shows violent crime rate, property crime rate, and poverty level using position and bubble size.

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Cons

- Overlapping Bubbles: States cluster together, causing overlap that obscures data.
- Excessive Colors: Numerous colors add clutter, and similar hues make patterns hard to distinguish.
- Unnecessary Patterns: Patterns add visual noise without providing useful information.
- Inconsistent Bubble Sizes: Bubble size represents poverty, but without a legend, it's hard to interpret.
- Lack of Context: No clear reference for poverty levels, making it difficult to assess poverty data accurately.

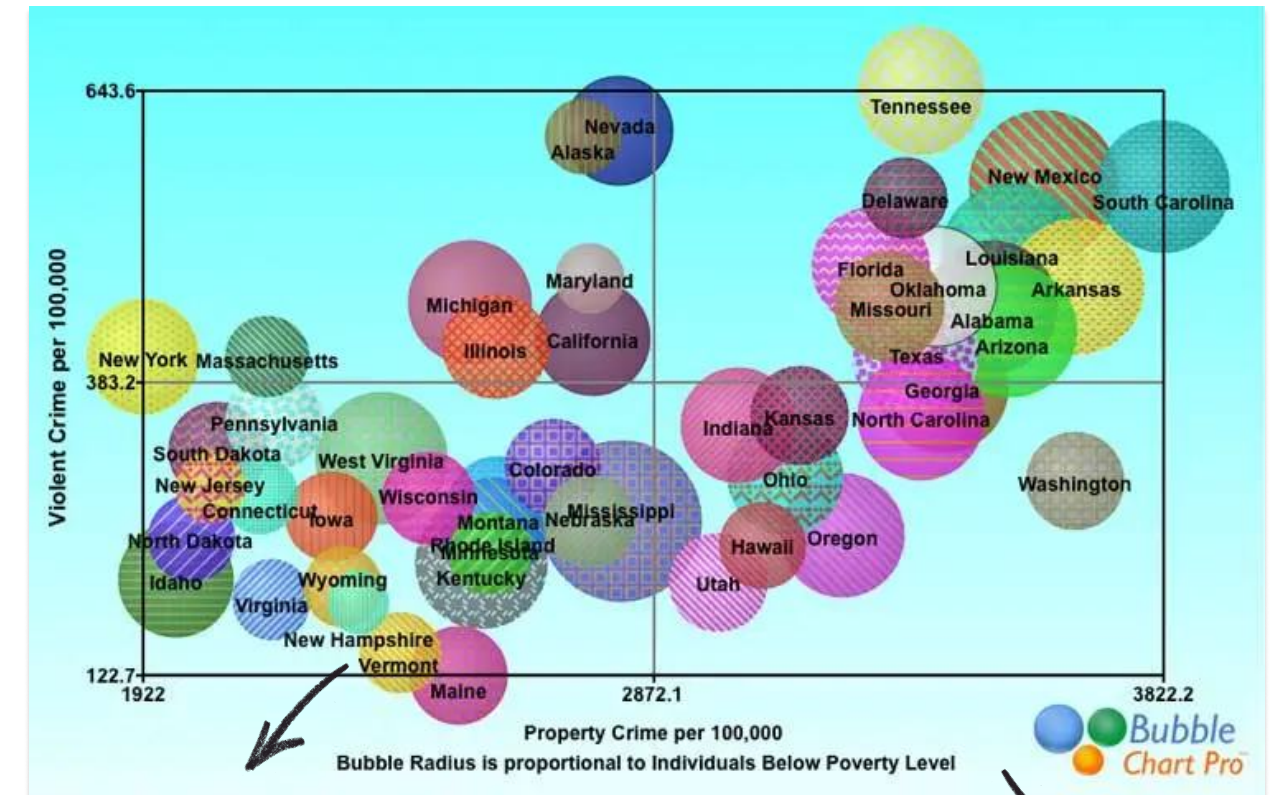


Example 1

Bubble Chart Pro

Improvements

- Separate Variables: Using a scatter plot without bubble sizes to focus on violent and property crime rates. Represent poverty levels with a color gradient to reduce overlap and simplify interpretation.
- Limit Colors and Patterns: Grouping states by region (e.g., Northeast, South) with similar color shades, and remove patterns to reduce visual clutter.
- Add a Legend: If using bubble sizes for poverty, including a clear legend for scale. Alternatively, use a color gradient for poverty to make regional trends easier to spot.
- Add Annotations or Groupings: Labelling clusters or group states by crime rate ranges to highlight patterns and guide viewers through the data.



SEPARATE
VARIABLES

ADDING
LEGEND

Example 2

The New York Times

Background

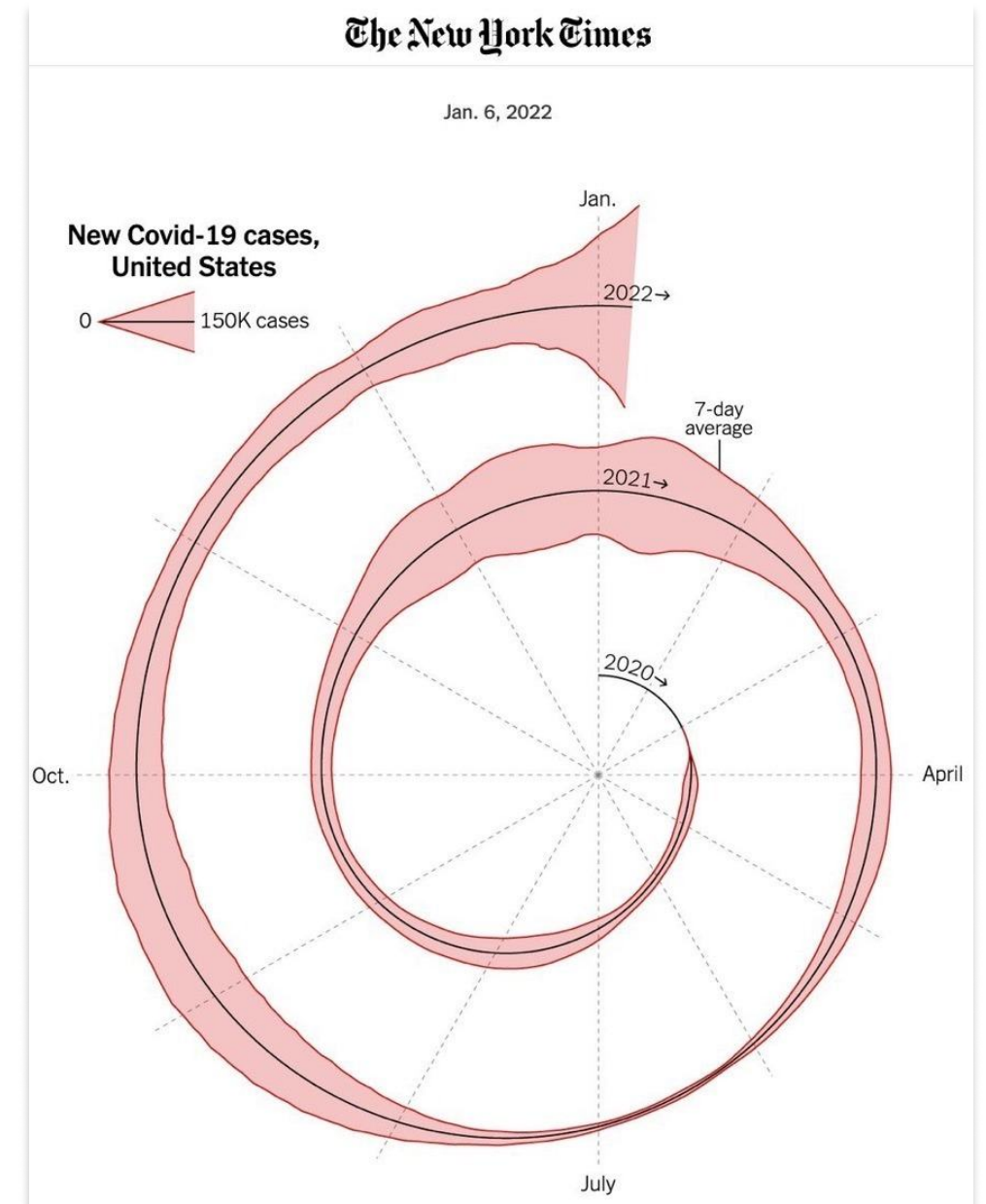
This New York Times spiral chart shows U.S. COVID-19 cases with each loop representing a year and case numbers increasing outward.

Pros

- Visually Engaging: The spiral format is unique and memorable, capturing attention.
- Cyclical Time Representation: The spiral aligns with recurring COVID-19 waves.

Cons

- Hard to Compare Across Years: The spiral layout makes year-to-year comparisons difficult.
- High Cognitive Load: The non-linear shape is harder to interpret than a standard graph.
- Limited Case Markings: Lack of detailed labels makes exact case counts unclear.
- Misleading Cyclical Implication: The spiral may wrongly suggest seasonal regularity.



Example 2

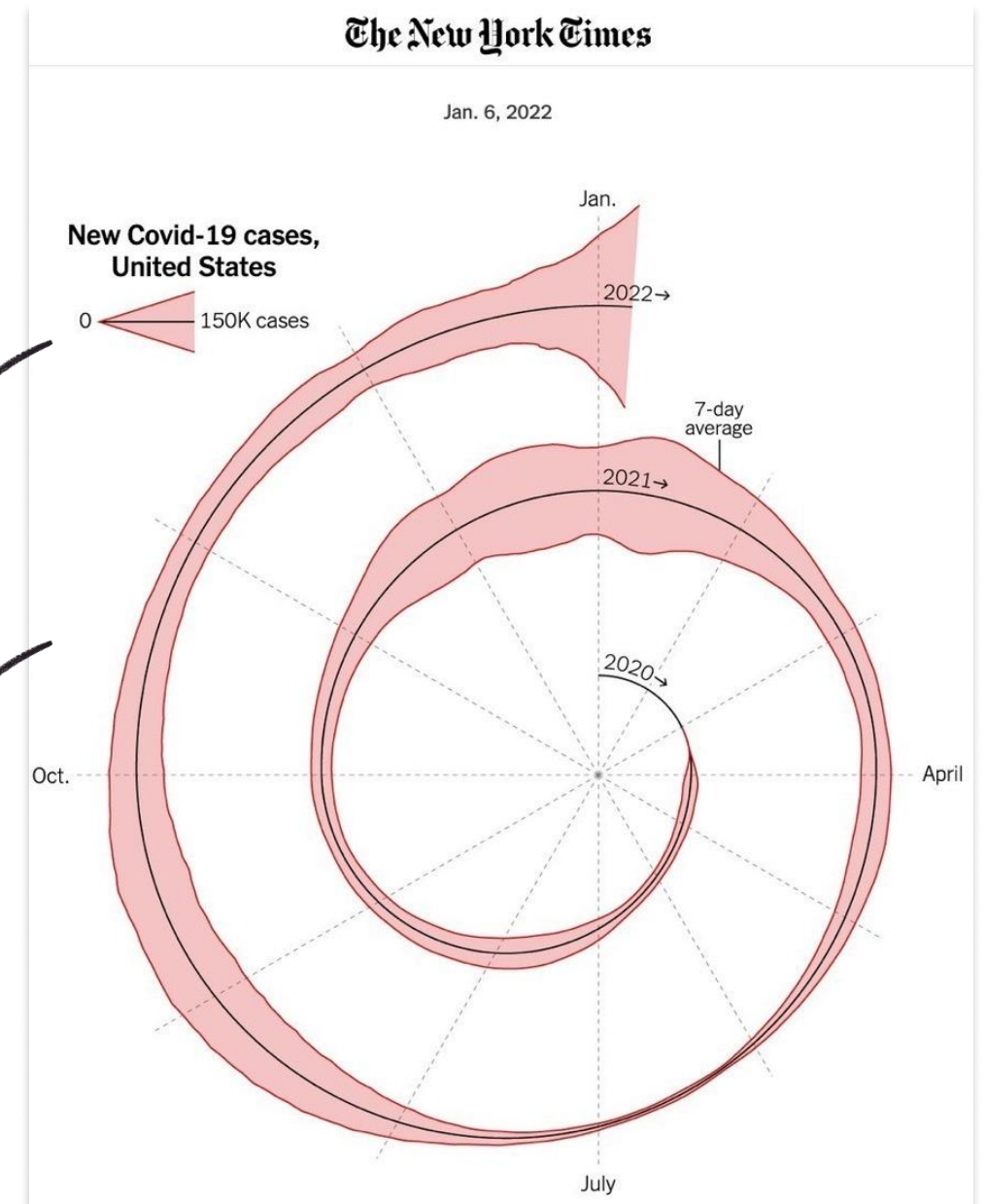
The New York Times

Improvements

- Using a line graph for clearer year-to-year comparison.
- Adding gridlines or labels to show case counts.
- Considering a straight timeline to ease interpretation.
- Adding annotations for key events (e.g., variant surges).

CHANGING IT TO A
LINE GRAPH

ADDING ANNOTATIONS



Assignment 2

Thank You

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