

Data Representation Analysis, Creation, and Evaluation Tool

The purpose of data visualization is to enhance the clarity or understanding of data/information and its patterns, trends, and relationships. Data representations organize information to facilitate the formation of insights through guided deep and thoughtful examination.

Use the following list of considerations as a tool to: (a) analyze the representations you explore, (b) create your own representations, and (c) evaluate the representations of your peers.

Mechanisms to Support Data Interpretation

The following mechanisms help the audience to accurately interpret data to gain insights into its patterns, trends, and relationships.

Title: A title is included and is appropriate given the data presented.	<input type="checkbox"/>
Labels: The representation is properly labeled (e.g., axes labels, data labels) with clear labels that properly represent the data.	<input type="checkbox"/>
Units of measurement: The units of measurement (i.e., meters, days, decibels, etc.) are clear and are used uniformly/consistently.	<input type="checkbox"/>
Data presentation: The visual representation conveys information in a way that can be easily understood by the viewer.	<input type="checkbox"/>
Legend: If legends are used, they are properly labeled and help improve understanding of the representation.	<input type="checkbox"/>
Accuracy: The representation conveys information accurately and includes all relevant data.	<input type="checkbox"/>

Questions to Support Critical Data Analysis

Is the data set credible/believable? What components of the representation make you trust what is being shared?

What elements included may indicate cultural bias?

What new questions do you have about the representation?

What clarity do you still need? What else would you add to the checklist?

What's the Story?

What story is being told through this visualization? What patterns, relationships, and instant insights does it convey?

How does the visualization aid our cognition of the data?

How does it connect to the viewer? How does it align with who we are . . . our identities, emotions, interests, and values?

What other questions does this lead you to ask?