

Lesson 2:
Design of Visualizations

SEARCH

RESOURCES

CONCEPTS

✓ 1. Introduction

✓ 2. What Makes a Bad Visual?

✓ 3. Levels of Measurement & Type...

✓ 4. Quiz: Data Types (Quantitative v...

✓ 5. Text + Quiz: Data Types (Ordinal...

✓ 6. Quiz: Data Types (Continuous v...

7. Identifying Data Types

8. What Experts Say About Visual ...

9. Chart Junk

10. Data Ink Ratio

11. Design Integrity

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Mentor Help
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Peer Chat 2
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Levels of Measurement & Types of Data

The Four Levels of Measurement

In order to choose an appropriate plot type or method of analysis for your data, understand the types of data you have. One common method divides the data i measurement:

Qualitative or categorical types (non-numeric types)

- **1. Nominal data:** pure labels without inherent order (no label is intrinsical any other)
- **2. Ordinal data:** labels with an intrinsic order or ranking (comparison oper between values, but the magnitude of differences are not be well-defined)

Quantitative or numeric types

- **3. Interval data:** numeric values where absolute differences are meaningf subtraction operations can be made)
- **4. Ratio data:** numeric values where relative differences are meaningful (r division operations can be made)

All quantitative-type variables also come in one of two varieties: **discrete** and **co**

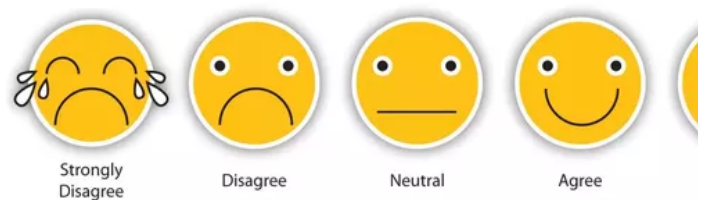
- **Discrete** quantitative variables can only take on a specific set values at sor precision.
- **Continuous** quantitative variables can (hypothetically) take on values to ar

Distinguishing between continuous and discrete can be a little tricky – a rule of t few levels, and values can't be subdivided into further units, then it's discrete. O continuous. If you have a scale that can only take natural number values betwee discrete. A quantity that can be measured to two digits, e.g. 2.72, is best charact since we might hypothetically be able to measure to even more digits, e.g. 2.718 scores measured between 0 and 100 can only be divided down to single integer seem discrete. But since there are so many values, such a feature is usually con:

When exploring your data, the most important thing to consider first is whether or quantitative. In later lessons, you will see how this distinction impacts your cl

Likert Scale

One form of data you might encounter is response data to a **Likert scale** like th



This Likert scale, which happens to be graphical, has five points, allowing for neutral

Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6

EDM Negative

EDM Positive