

DSO101 Lesson 3 Variable Types Study Guide:

Variable Types:

Categorical Variable Types Examples: Someone has to choose a category into which their response best fits. When this happens, it is referred to as a categorical variable or in the case of some data analysis programs like R, a factor.

- Types of precious stones
- City you live in
- Color of a dog
- Animal Type

Quantitative Variable Types Examples: Quantitative data means numbers, but not just any numbers - numbers that are scaled. This means that as the number gets bigger, that actually means there is more of something, and if the number gets smaller, then there is less of something. This is often called a continuous variable as well.

- Age
- Speed of boat
- Person's weight
- Building weight

Ordinal Variable Type Examples: There is a very special case of categorical data in which the order matters.

- Economic status: such as upper, middle class or lower (it has an order)
- Dress sizes
- Salsa heat: mild, medium and hot
- Survey results:
 - Very satisfied
 - Satisfied
 - Very unsatisfied

Qualitative to categorical Data Conversion Example:

Using a stopwatch, a coach measures the time it takes for each player to reach the finish line. After recording 100 times, the coach reports the results in the following groups: "slow as molasses," "got lucky because of an updraft," and "lightning speed."

Ordinarily you wouldn't convert a categorical variable to a qualitative variable. Even though you assign a numeric value to a category, it is still a categorical variable.