

Data Science for Everyone

Section, Week 3: Causality & Programming Preliminaries

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- Course info
- Causality concept review
- Programming preliminaries
- Code demo

- Homework 1 due at 8 p.m. on Tues., Feb. 18
- Lab 1 out, due at 8 p.m. on Weds., Feb. 19

Identify all samples that are a random sample of DS-UA 111 students.

- (a) All DS-UA 111 students who attended lab the first week
- (b) Every 10th person starting with the first person in the lecture hall on a random day of lecture
- (c) 50 students picked randomly from the DS-UA 111 course roster
- (d) All sophomores in DS-UA 111
- (e) None of the above

A study followed 369 people with cardiovascular disease, randomly selected from hospital patients. A year later, those who owned a dog were four times more likely to be alive than those who didn't.

- True or False: This study is a randomized controlled experiment.
- True or False: This study shows that dog owners live longer than cat owners on average.
- True or False: This study shows that for someone with cardiovascular disease, adopting a dog will probably cause them to live longer.

Independent variable X: a treatment/control that may explain Y

Dependent variable Y: an outcome we want to explain

Confounder Z:

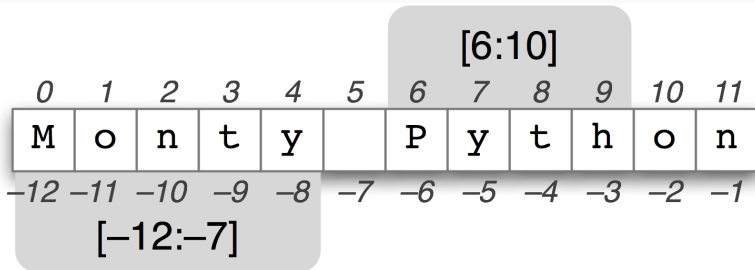
Independent variable X: a treatment/control that may explain Y

Dependent variable Y: an outcome we want to explain

Confounder Z: causes/affects **both X and Y**

Which of the following is correct?

1. `x = 'a'` and `'a' = x` are equivalent statements.
2. `x == 'a'` and `'a' == x` are equivalent statements.
3. `x = 'a'` and `x == 'a'` are equivalent statements.



Official Python documentation/tutorial

Interactive way to learn Python basics

A programmer's best friends are documentation and Stack Overflow!

Coding demo and time to work on lab/homework

Causality questions adapted from UC Berkeley's Data 8 course materials