

Data Science for Everyone

Section, Week 2: Causality, Jupyter Hub, and Gradescope

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Outline

- Course info
- Quick causality concept review
- Assignment demo and info

Course Info

When are homework 1 and lab 0 due?

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- Homework 1 is due at 8 p.m. on Tuesday, Feb. 18
- Lab 0 is due at 8 p.m. on Wednesday, Feb. 12

Causality Review

Evaluate the following true/false statements in the context of this class.

1. A theory can be proven correct.
2. We can observe the counterfactual.
3. All theories are wrong.

Causality Review

"All models are wrong." —George P. Box

Causality Review

Theory: Eating tuna makes tortoiseshell cats change color.

Observable implication: Tortoiseshell cats who eat tuna are more likely to change color than those who don't.

Causality Review



Causality Review



Causality Review



Did I falsify my theory?

Causality Review

Another example: it's widely accepted that smoking causes lung cancer.

But not everyone who smokes will get lung cancer. Does that falsify that theory?

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Causality Review

What if I compare nonsmokers and smokers and find that fewer smokers get lung cancer than nonsmokers?

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That would falsify our theory. We care about the differences between the two groups, not so much absolute things like one smoker not getting lung cancer.

Demo

Jupyter Hub, Gradescope, and coding demo! You can find the associated Jupyter notebook in Will's class materials on Jupyter Hub.

Tips

- On Gradescope, you can assign multiple questions to a page at once.
- If you want to fetch an assignment again, you can either rename or delete the folder of your old assignment version.
- Remember to stop your server when you're done working on Jupyter Hub.