Knowledge and solutions for a changing world

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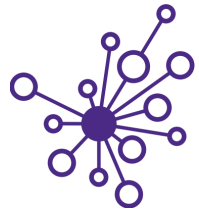
Advancing data-intensive discovery in all fields



HYPOTHESIS TESTING

UW DIRECT

(Data Intensive Research Enabling Cutting-edge Tech)

https://uwdirect.github.io

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What is Hypothesis testing?

Main idea of a statistical hypothesis test is to decide if a data sample is **typical** or **atypical** compared to a population assuming a **hypothesis** we formulated about the population is true

Why we need hypothesis testing

Imagine the following scenarios:

- When we get a **sample mean**, how likely is it to **represent the population**?
- When we got **two or more samples with different means**, how do we decide whether these samples are the same?

How do we **make decisions**? What is the **criterion/cutting point**?

This is when we need hypothesis testing!

Today all on Jupyter!

```
curl –O
https://raw.githubusercontent.com/UWDIRECT/UWDIRECT.github.io/master/Wi21_content/DSMCER/L5_Hypothesis_testing.ipynb

curl -O
https://raw.githubusercontent.com/UWDIRECT/UWDIRECT.github.io/master/Wi21_content/DSMCER/datasets/puppy_data.zip

unzip puppy_data.zip
jupyter notebook L5_Hypothesis_testing.ipynb
```