# **ES 2:** Critical thinking with Python

aka, Introduction to Computing for Engineers

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#### Let's talk about arguments

```
def calculate area(base, height):
  area = 0.5 * base * height
  return area
calculate area(5, 3)
width = 12
height = 8
calculate area(12, 8)
```

## What is a "language"?

Any set of signs or symbols, organized according to particular rules in order to convey meaning.

#### Some examples:

Mathematics

Football referee hand motions

Chess notation

## A quick mixer

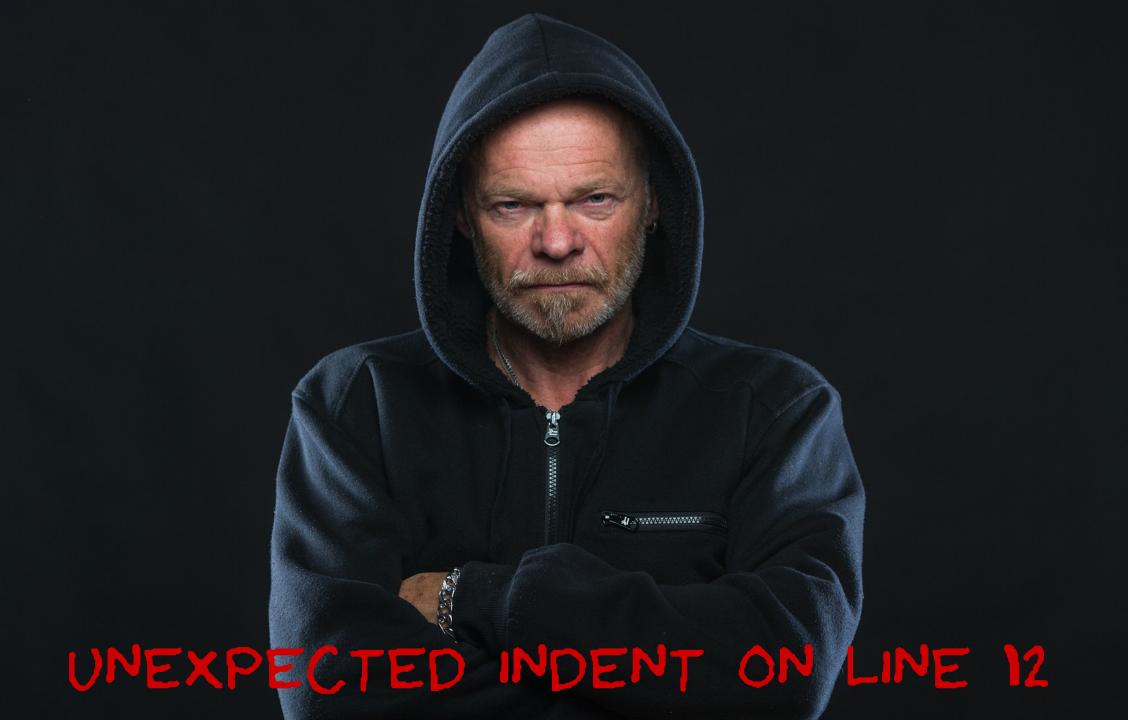
- 1) Meet someone new
- 2) Share with them about a "language" you're familiar with
- 3) After ~2 minutes, I'll call for everyone to find another person

# Grammars are useful(!)

## Python is a language

It has a grammar

It may feel arbitrary and cruel, but it's not trying to be that way.





I'm sorry, I don't understand what you just said. Will you play with me? >>>

#### for loops

```
data = [1, 3, 8, 2, 9, 11, 3]
len(data)
for i in range(len(data)):
  print(i)
for i in data:
  print(i)
```

#### For next time

Week 1 assignment is on Codio

Reflection is on Canvas

See you tomorrow for sociotechnical Friday!