Introduction to Python

Thomas Donoghue

Logistics

- Who:

  - Instructor: Tom Donoghue
  - TAs: Daril Brown, Paolo Gabriel, Rob Loughnan
  - IAs: Peilin, Luis, Brandon & Luke

- Where:

  - Lectures MWF @ 9 am & Coding Lab Sections
  - Course Website: https://cogs18.github.io (https://cogs18.github.io)
  - Piazza Page: https://piazza.com/ucsd/fall2018/cogs18 (https://piazza.com/ucsd/fall2018/cogs18)

Expectations & Approach

- Goal: to learn practical programming in Python
- How: hands-on, community driven, skills based course, assignment & project driven
- Lectures & Lab Sections will be used for interactive activities
- Assignments, coding labs & a final project will be designed to get you coding

Course Requirements

- Participation in peer instruction (clicker) questions, in lecture (8%)
- Pass/Fail coding labs, in section (12%)
- Assignments (40%)
- Midterm (15%)
- Final project (25%)

Why Learn Computation?

- Computation is how things are done

- Computation is the foundation of much of the modern world

What is Python

- Python is a programming language
    - It is a way to do computation

- Python is an ecosystem
    - It is a culture of practice for computation

What does Python look like

```
In [1]:  variable_name = "Variable value."
         print(variable_name)
```

Variable value.

```
In [2]:  a = 1
         b = 2

         c = a + b

         print(c)
```

3

Why Choose Python?

- Python is a powerful, well developed and well supported tool

- Python is general purpose, with an immense, multi-purpose ecosystem

- Python is human focused, with a strong user & developer community

- Python is open-source and accessible

- Python is fun

Okay... But What Can You Actually Do With It?

Let's have a look!