

# Python in Education

Presentation by Austin Fontaine





# Python

- ❖ Interpreted programming language
- ❖ Formatting dependent on whitespace
- ❖ Popular for use in OOP and data science
- ❖ Frequently used for teaching beginners

```
t.py - /run/media/s...topics/t.py (3.5.4)
File Edit Format Run Options Window Help

import turtle as t
import time

t.color("blue")
t.begin_fill()

counter=0

while counter < 4:
    t.forward(100)
    t.left(90)
    counter = counter+1

t.end_fill()
time.sleep(5)
|

Ln: 16 Col: 0
```



# Pros of Using Python for Education

- ❖ Simple syntax, easy to understand
- ❖ Whitespace reinforces good formatting practices
- ❖ High level, don't need to learn low-level concepts like memory
- ❖ Interpreted, so no need to compile
- ❖ Very portable



# Cons of Python in Education

- ❖ Teaches the “how” but not the “why”
- ❖ Connection between functionality less intuitive
- ❖ Can get confusing and frustrating if you go too fast
- ❖ Data types not obvious
- ❖ Too much abstraction
- ❖ Whitespace can get hard to track



# Middle Ground

- ❖ Hybrid approach may be best
- ❖ Start in C for the basics, move to Python once pointers needed



[https://www.google.com/url?sa=i&url=https%3A%2F%2Fopensource.com%2Farticle%2F17%2F10%2Fpython-101&psig=AOvVaw2aDNuyqLaSQsj-bni1KeVf&ust=1646175531479000&source=images&cd=vfe&ved=0CAwQjhxqFwoTCMD30\\_K\\_o\\_YCFQAAAAAdAAAAABAq](https://www.google.com/url?sa=i&url=https%3A%2F%2Fopensource.com%2Farticle%2F17%2F10%2Fpython-101&psig=AOvVaw2aDNuyqLaSQsj-bni1KeVf&ust=1646175531479000&source=images&cd=vfe&ved=0CAwQjhxqFwoTCMD30_K_o_YCFQAAAAAdAAAAABAq)

[https://www.google.com/url?sa=i&url=https%3A%2F%2Fen.wikipedia.org%2Fwiki%2FPython\\_\(programming\\_language\)&psig=AOvVaw1lO6ZecR5Jogf9HqiAdX8m&ust=1646175801828000&source=images&cd=vfe&ved=0CAwQjhxqFwoTCljpyvHAo\\_YCFQAAAAAdAAAAABAD](https://www.google.com/url?sa=i&url=https%3A%2F%2Fen.wikipedia.org%2Fwiki%2FPython_(programming_language)&psig=AOvVaw1lO6ZecR5Jogf9HqiAdX8m&ust=1646175801828000&source=images&cd=vfe&ved=0CAwQjhxqFwoTCljpyvHAo_YCFQAAAAAdAAAAABAD)

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