Python beyond CMSC201

December 5, 2019

Administrative notes

Project 3 due tomorrow night!!!

Final Exam is next Friday, 6 - 8 pm.

    We have class next Tuesday (December 10).

    No class on December 12, but I will be in my office from probably around 5:30 until 7 or so if you have questions about the Final.

And now it's time to fill out the SEEQ evaluation.

Review from Tuesday lecture

What is big O notation? What does big Omega mean?

How fast does binary search run in the best case?

What about the worst case?

How can we express "the amount of times I have to divide n by 2 to get to one" in the sweet language of Math

How much faster is quicksort than bubble sort?

pip - The Package Installer for Python

Included with your Python3 installation

Used from the command line to install python packages

- Like those from pypi.org
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The Python Package Index - PyPi

http://pypi.org

An index of available python packages you can download and use

Over 200,000 projects covering pretty much everything you want to do in Python

Warning: okay, some of these may be malicious

https://www.zdnet.com/article/two-malicious-python-libraries-removed-from-pypi/

Example: the "requests" package

First, download and install the requests package on your computer

pip install requests

Now, in your python code, just import requests and use it:

import requests

print(requests.get("http://umbc.edu/").text)

- Will get you in text form all the information on the UMBC.edu front page

ggplot

Neat set of routines to make a variety of graphs to represent data

ggplotyhathq.com

NumPy

A set of mathematical routines for doing array computations

- Turn Python lists into honest-go-goodness arrays

Do linear algebra

- Important for data science & machine learning