Algorithms and Data Structures for Data Science

lab_fundamentals

CS 277
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Department of Computer Science
Learning Objectives

Discuss lab structure and acceptable groupwork policies

Review the basics of variable type, conditionals and loops

Review the Jupyter notebook format for autograded assessments
Course Plagiarism Policy

Unless stated otherwise, all assignments are solo assignments.

You can discuss ideas with your peers but must write your own code.

https://courses.grainger.illinois.edu/cs277/sp2023/policy/integrity/

Never show or share your code to other students!
Is it plagiarism?

Brad discovers that his lab function is consistently failing the random tests. He identifies the edge case he was failing and shares it with all of his friends.

Drshika’s good friend is struggling to complete the assignment by the deadline and she decides to help them debug their code. To help her explain a particular bug, she pulls up her code to explain the right way to do the lab.
Setting up your own machine

Lab assignments will (hopefully) all be runnable on Prairielearn.

Mini-projects may involve larger datasets or runtimes than PL can handle.

You must have **Python3** with **Numpy** and **Matplotlib** installed:

https://courses.grainger.illinois.edu/cs277/sp2023/resources/own-machine/
Step 1: Installing Python

Use the official site to download: https://www.python.org/downloads/

Download the latest version for macOS

Looking for Python with a different OS? Python for Windows, Linux/UNIX, macOS, Other

Want to help test development versions of Python? Prereleases, Docker images
Step 2: Installing Packages

Pip3 comes standard with Python now so installing packages is easy!
Step 3: Install VSCode

You can use your own code editor but this is recommended:

https://code.visualstudio.com/download
Lab Tips

This lab *should* mostly be a review of fundamental concepts.

Give feedback (anonymously or not) about whether this is true!