Intro to Software Engineering with Python

Schedule: July 11–18: 9am to 12pm
Location: JSCBB B115
Instructor: Jacob Stanley (he/him) jacob.stanley@colorado.edu

Coding environment: We will be using the CS department's Computer Science Education Lab (CSEL) for our coding activities. Please make sure you can log on to it at https://coding.csel.io/. We will be using the "Default" coding environment. Bring your computers.

GitHub: All materials will be managed through GitHub. Please make an account if you do not already have one (https://github.com/). Please provide your user ID to the instructor.

Tentative schedule (topics subject to change)

Dates	Hour	Topic
Thursday 7/11	1	Software engineering motivation/overview, CSEL, JupyterLab
	2	Version control, Git, GitHub intro
	3	Git, GitHub
Friday 7/12	1	Primer (variables, data types, whitespace, operations)
	2	Primer (functions, import, iterables, loops)
	3	Primer (if/then, str-parse, read files/stdin, cmd line variables)
Monday 7/15	1	Python best practices (PEP8/pycodestyle, modular coding, commenting/documentation)
	2	Python best practices (arg/configparser, exception handling, error logging)
	3	Python best practices (exception handling)
Tuesday 7/16	1	Common packages: numpy, scipy, pandas
	2	Unit testing
	3	Test driven development
Wednesday 7/17	1	Optimization (timeit, getsizeof)
	2	Optimization (cProfile)
	3	GitHub revisited