CS331 Data Structures and Algorithms

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- Syllabus and Calendar
- Online Resources
- Development Environment
Data Structures

- How do we store, organize, and retrieve data on a computer?

& Algorithms

- How can we efficiently (in space/time) carry out some typical data processing operations?
- How do we analyze and describe their performance?
Prerequisites

I assume you are ...

▸ fluent in some programming language
▸ familiar with procedural & OO paradigms
▸ comfortable with development processes: compilation, debugging, testing
Python

- We’ll use the Python programming language to explore data structures & algorithms
- Easy-to-learn, clean (“one obvious way to do” things), and popular language
- Ton of useful, powerful libraries
Jupyter Notebooks

In-browser Python development platform

- “Cells” can contain plain text, code, output (and more)
- All lecture notes, demos, and assignments will be distributed as notebook files
- You should install a notebook server locally for convenience and in-class work. Install via Anaconda (with Python3) — see [http://jupyter.org/install.html](http://jupyter.org/install.html)
- But all work must be tested and submitted on the class server! (Lab 1 will go over this)