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Prof. Aaron Coté

[aaroncot@usc.edu](mailto:aaroncot@usc.edu)

OH: Mon 12:45-1:45; Tue 10:30-11:30; Wed 3:30-4:15; Thu 2-3:15 (SAL 210)

CS103 foundations:

* Basic programming
* Functions
* Pointers
* Linked lists
* Recursion
* Classes/structs
* Dynamic memory allocation
* Big-O notation
* Selection sort
* Files/streams

4 things needed to code anything:

* While-loops
* If-tests
* Integers
* Arithmetic

**Look at data first, not the algorithm**

* Unsorted array list is easier to insert often (add/remove) if will be looked up rarely
  + E.g. a backup system

Operations on data structures

* Insert
* Lookup
* Remove
* Update

Heap – a data structure good at everything except lookup

Abstract Data Types (ADTs)

* a map ADT = a dictionary ADT