Array programming

• Now, we’re able to get around one of the major limitations of python: for loops
  – Very, very slow! Avoid them at all costs!

 numpy instead!
Array programming

• Why is numpy okay to use for performance?
  – It’s written in C++ and you just use python as an interface!
  – Deeply vectorizing the loops in the C++ module!

• So, just make everything look like an array operation!
  – This looks more like excel sheet programming psychologically. Think of it like that.
Array programming

• Nice resource (again):
  – https://www.datacamp.com/community/tutorials/python-numpy-tutorial

• Key concept: Broadcasting.
  – https://jakevdp.github.io/PythonDataScienceHandbook/02.05-computation-on-arrays-broadcasting.html
Array Programming

• Let’s do this in jupyter again:

• “ArrayProgramming/ArrayProgramming.ipynb”