Scientific Computing

Monday, April 13

Announcements

* Friday, April 17: pre-recorded lecture
  no office hours

* Homework 6 assigned,
  due Monday, April 27, 11:59pm

Office Hours:

Mon, 9:30-10:30
Fri, 2:00-3:00

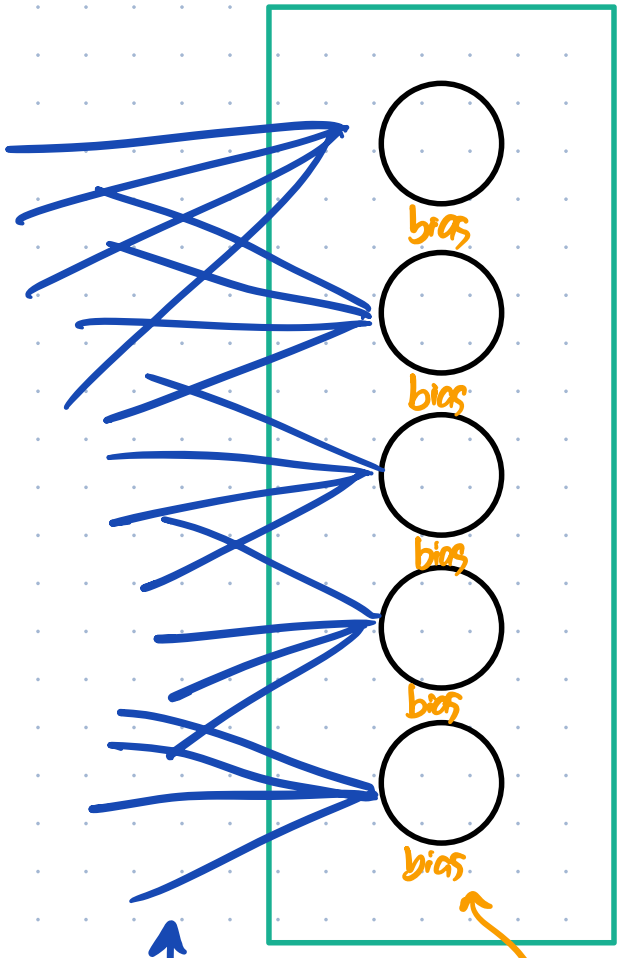
Cudahy 307

Coding time:

First: the "numpy" Python library

* Jupyter notebook demo

Layer:



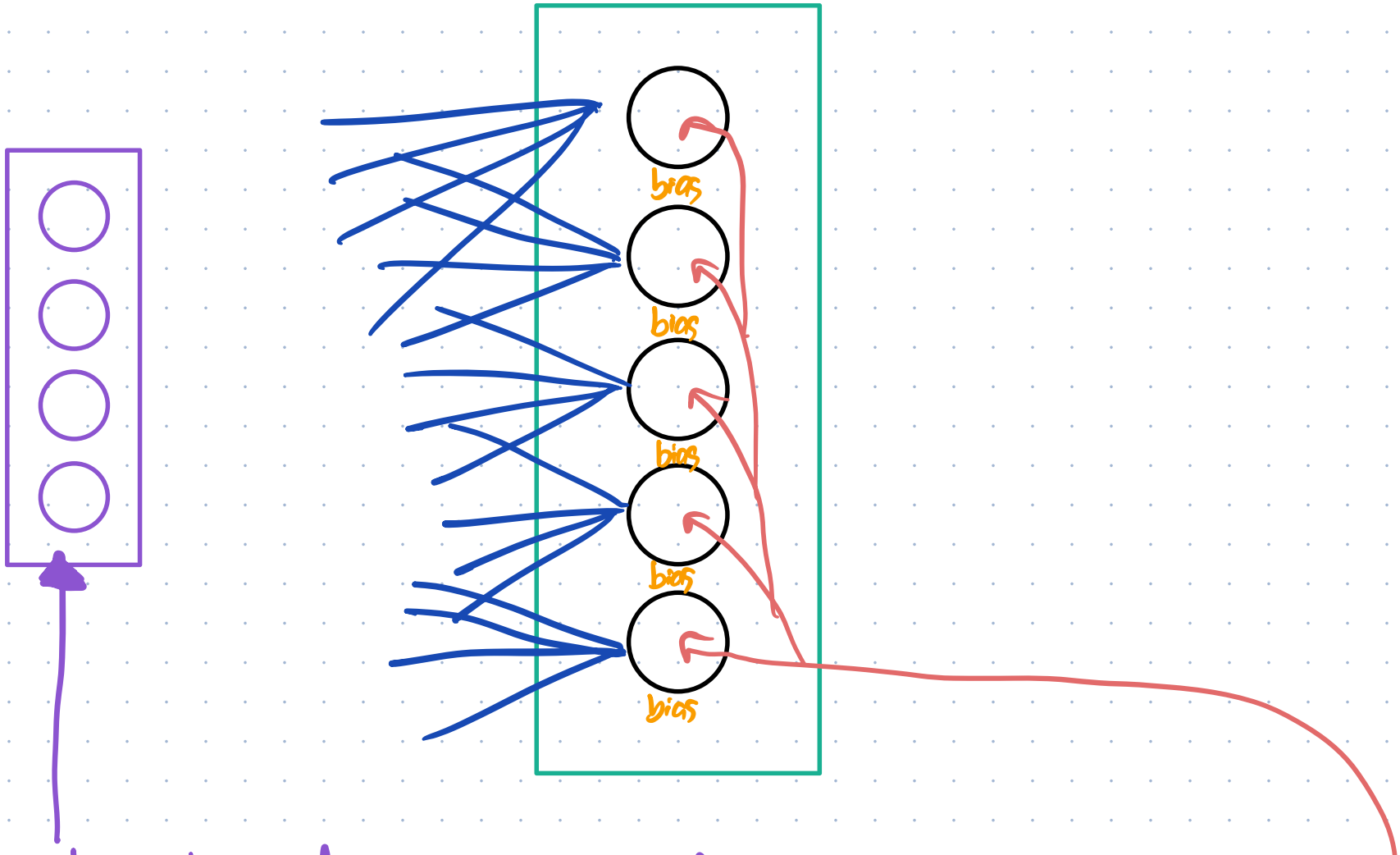
matrix for the weights

vector for the biases

knows the biases

knows the weights on these edges

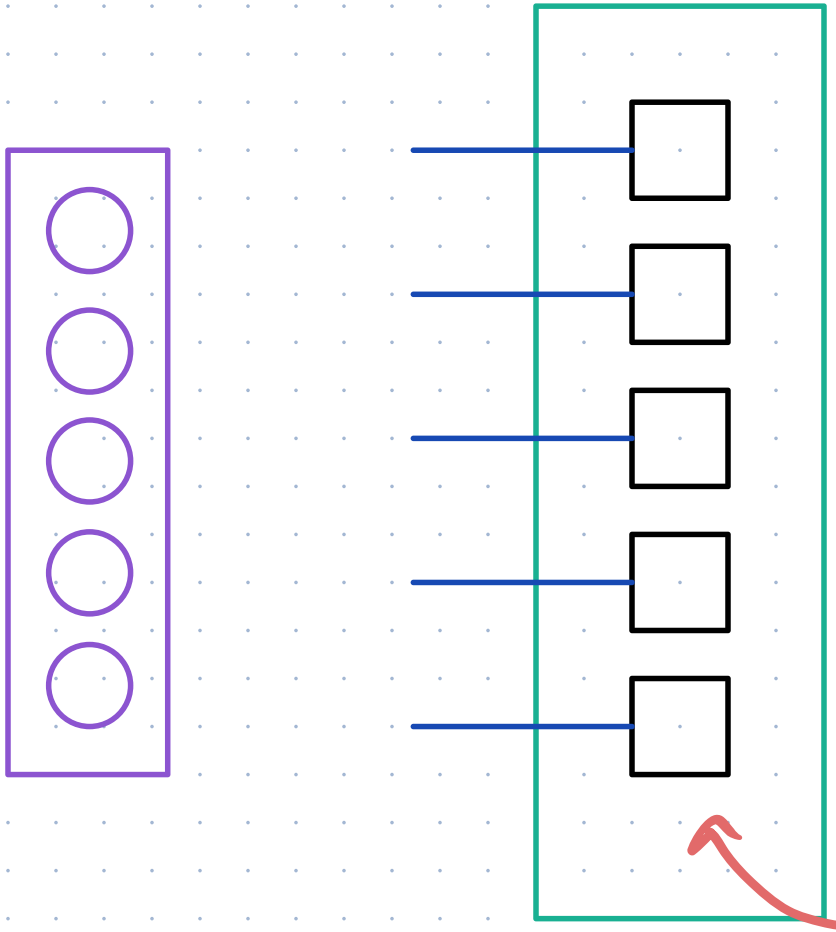
Layer:



input: value of previous layer's neurons
(actually, the activation function of those neurons)

output: value of this layer's neurons (pre-activation)

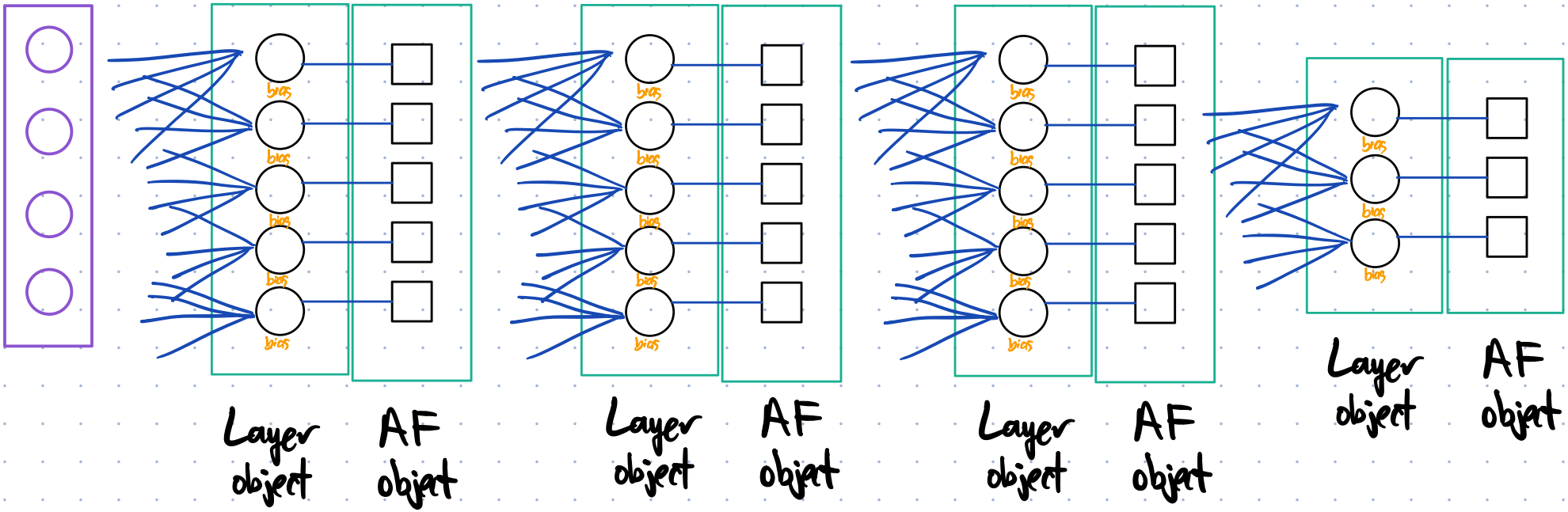
Activation Function classes (one for each activation function)



inputs: values of neurons we're activating

outputs: activated values

Then we can chain instances of these objects together to make a full NN.



Coding time:

First: the "numpy" Python library

* Jupyter notebook demo

Next: Coding our first layers together from scratch.

(very heavy inspiration from the "Neural Networks from Scratch" book!)