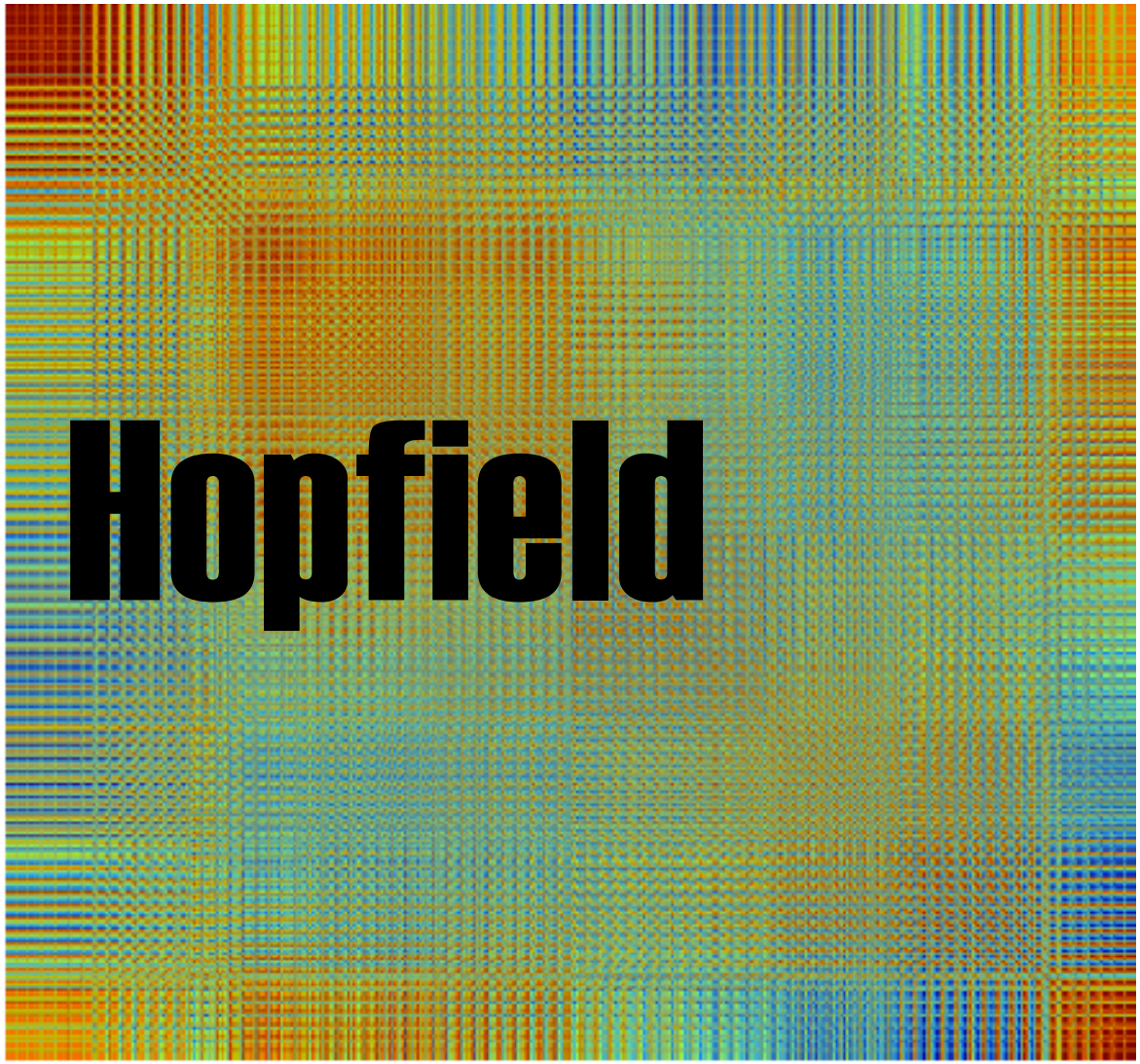
Hopfield

How many different “sets” of figures do you need?

Does the weight matrix change during “training”?

How is the weight matrix created?

Your turn!

Outline

1. Load and display each of your four images
   (use this image data to create your input matrix)
2. Create W from input matrix, view W
3. Add noise to each of your images
4. Apply hopfield to the noisy images
5. Display each image extracted from its noise

Loading images

```
a = imread('obama.jpg');              % read the jpg
abw = im2bw(a);                  % convert to black and white
abwc = abw(25:435,60:end-60);         % crop it
abwcc = abwc(1:4:end,1:4:end);        % coarsen it
imshow(abwcc)                         % show it
```

From these images you need to create your input matrix. How is this done?

Adding noise

…we visit the first 3 questions of the quiz

Applying Hopfield to the noisy images

…we visit our sample code hop.m