Today we will write the **forward pass** of a very simple convolutional neural network (one convolutional layer and then one fully connected layer) from scratch using only NumPy.

1. Load MNIST data using scikit-learn: http://scikit-learn.org/stable/datasets/index.html
2. Write a loop over M the number of epochs and in it build a loop over n the number of samples in every mini-batch.
3. Build the first forward pass. The first convolutional layer will have six layers in its output. The convolution layer is comprised of four for loops, multiplications and additions.
4. Flatten the output of the previous convolutional network to a one dimentional vector
5. Write the forward pass of a fully-connected layer. The input should be the size of the previous flatted layer. The output should have 10 neurons in order to predict the one-hot probability of the 10 possible digit classes.
6. Use a softmax in order to convert the numbers to probabilities. Write the softmax function as a separte function using exponent, multiplication and division.
7. Thats it for now. Begin thinking about how would you implement the backward pass in the next class.

Good Luck!