**Day 14**

**What to do?**

Learn about bias – variance tradeoff.

(My favorite topic of all!) When the network does not run as hoped, one of the reasons could be either high bias or high variance. In simpler words, high bias = underfitting; high variance = overfitting.

A network is underfit if the training set cost is high and dev set cost is approximately same as training set cost. A network is overfit if the training set cost is low and dev set cost is extremely greater than training set cost.

The overall goal is to choose the optimal epoch as shown in the graph below (optimal capacity). The graph like shown is called a learning curve. It is a graph of error versus training set size (in this case epochs).

When the model has high bias (underfitting):

1. Try getting additional features
2. Try adding polynomial features
3. Try decreasing regularization parameter

When the model has high variance (overfitting):

1. Get more training examples
2. Try smaller sets of features
3. Try increasing regularization parameter

