

## **HW #3**

### **CPS 584**

1. Use TensorFlow with three layers of neural network, similar to HW#2, to classify the data set in HW#2. The first layer (input layer) has four neurons, the second layer has five neurons, and the third layer (output layer) has only one neuron. Try the same experience with the same number of neurons you used in each layer. You should use at least two different activation function and two different optimization functions. Plot your cost function.

Explain your experience with this network in compare with the ones you did in HW#2 and also the effect of different activation and optimization functions.

2. Use Linear Regression to predict Auto MPG Data Set given at:  
<https://archive.ics.uci.edu/ml/datasets/Auto+MPG>