24th Aug 2018

**Attendance: 10%, Continuous evaluation: 70%, Viva-20%**

**Assignment No. 3**

1. Download and install tensorflow from <https://www.tensorflow.org/install/install_sources> or using command **sudo pip install tensorflow.**
2. Train a linear classifier using tensorflow package using MNIST dataset (contains class labels for digits 0-9). For MNIST data use command:

*data = tf.contrib.learn.datasets.mnist.load\_mnist()*

1. Use Radial Basis Fuction (RBF) as a Explicit Kernel Method to

map the input data. Now apply it to classify MNIST dataset.

1. Compare the performance for RBF Kernel Classifier on hyperparameters like Standard Deviation Value, Time Taken(epoch), Output Dimension.
2. Plot the graph for each performance measure.
3. Create five image(size 28\*28) of your won containing a digit and test whether your trained classifier is able to predict it or not.

Submit a report with result.