

# Homework 2

MTH 994 – Machine Learning

Due date: November 2, 2018

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## 1 Programming Homework

**Note:** Please write your codes in Azure notebook or similar kinds and submit your codes to the dropbox in D2L. **Machine learning libraries in Python packages should NOT be used.**

**Problem 1 (100pts).** The MNIST datasets are given. Specifically, the training data sets are `MNIST_X_train.csv` (features) and `MNIST_y_train.csv` (labels) and test data sets are `MNIST_X_test.csv` (features) and `MNIST_y_test.csv` (labels). File `MNIST_description.csv` gives a brief introduction to these data sets. Program a regularized SVM model (nonlinear kernel approach is not required) to predict the labels of the test data. What is the accuracy of your model?