

# **CS4361/5361 Machine Learning**

## **Fall 2020**

### **Linear Regression**

#### **Exercise 2**

1. Using the particles dataset, determine experimentally if linear regression is sensitive to attribute scaling by comparing results obtain with the original dataset and with the attributes scaled by the standard deviation.
2. Expand the particles dataset by using the squares of the original features as additional features and evaluate the performance of linear regression (you should have 10 features in this case).
3. Expand the particles dataset by using the products of the original features as additional features and evaluate the performance of linear regression (you should have 20 features in this case).