Machine Learning : Lecture -1

Introduction

Topics (Part -1)

1. Linear modelling:

Least square (LS)
Non-linear response from linear models
Generalization versus overfitting
Regularized LS: L2, L1 regularization (LASSO)

2. Maximum likelihood (ML) approach

3. Classifiers:
Probabilistic Classifier: Bayes classifier, Logistic regression
Non-Probabilistic classifier: K-nearest neighbours

4. Decision Trees

5. Random Forests

6. Gradient Boosting

Tutorials: (Mon 5.00 -6.30 PM)

R-102 – Batch 1
R-104 – Batch 2
R-105 – Batch 3
R-110 – Batch 4

Text Books:
1 , 2, 3: A first Course on Machine Learning by Simon Rogers
4,5, 6: To be decided later

Reference:
Machine Learning: Foundations, Methodologies, and Applications by Alexander Jung