

EE6337: Deep Learning, Spring 2019

Indian Institute of Technology Hyderabad

HW 2, Assigned: Monday 04.03.2019. **Due: Sunday 10.03.2019 at 11:59 pm.**

1. In continuation from the previous programming assignment on training the weights of a multilayer perceptron, implement each of the following gradient descent methods discussed in class. **Do not use built in functions.**

- (a) Stochastic gradient descent. (10)
- (b) Momentum. (10)
- (c) Nesterov Momentum. (5)
- (d) AdaGrad. (10)
- (e) RMSProp. (10)
- (f) Adam. (10)

Clearly illustrate how the optimization proceeds in each case and summarize your observations. Use a dataset of your choice from the UCI data repository: [click here](#).