IIIT−S

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ML Assignment 2

Viswanath P <viswanath.p@iiits.in> Sat, Feb 23, 2019 at 6:25 PM
To: Machine Learning <ml@iiits.in>
Cc: BHAVI CHAWLA <bhavi.c16@iiits.in>, JADHAV AJIT JAYWANT <jadhavajit.j16@iiits.in>, SHABBEER BASHA S H <shabbeer.sh@iiits.in>, SRINIVAS P Y K L <srinivas.p@iiits.in>, viswanath P <viswanath.p@iiits.in>

2(a) Linear regression:
Choose 200 random patterns from the
Yacht Hydrodynamics Data Set
https://archive.ics.uci.edu/ml/datasets/Yacht+Hydrodynamics
for training, remaining for testing.

Apply linear regression (using gradient descent), report training and test errors.

2(b) Perceptron (with linearly not seperable data; using sum of squared error minimization as discussed in the class):

use the Iris data set at
https://archive.ics.uci.edu/ml/datasets/iris
that belongs to the two classes, viz., Versicolor and Virginica classes (which are known to be not linearly separable).

Use 70 randomly chosen patterns for training and 30 randomly chosen patterns for testing.
Apply perceptron (linear discriminant, using gradient descent over the criterion that is sum of squared errors (as discussed in the class)), and report training and test errors.

Two students can work together. Groups should be different from that of assignment 1. **Mr Shabbeer will share a google sheet to collect the groups data. He can also share any other relevant information.**

Language: Plain Python. Do not use any tool-box. Plagiarism checking will be done.

Deadline: 2nd March (Sat) 5pm.
Submit through email to Mr. Shabbeer.

Thanks and Best regards
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Viswanath P
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