CSE574

Programming Assignment #3

Classification and Regression

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Group #32

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1. Logistic Regression

* Training accuracy: 85.43
* Validation accuracy: 85.47
* Testing accuracy: 86.254

1. SVM using Toolbox:
2. Using linear kernel (all other parameters are kept default)
   * + Training accuracy: 97.286
     + Validation accuracy: 93.64
     + Testing accuracy: 93.78
3. Using radial basis function with value of gamma setting to 1 (all other parameters are kept default).
   * + Training accuracy: 100.0
     + Validation accuracy: 15.48
     + Testing accuracy: 17.14
4. Using radial basis function with value of gamma setting to default (all other parameters are kept default).
   * + Training accuracy: 94.294
     + Validation accuracy: 94.02
     + Testing accuracy: 94.42
5. Using radial basis function with value of gamma setting to default and varying value of C (1, 10, 20, 30, 40, 50, 60, 70, 80, 90, and 100).
6. Direct Multi-class Logistic Regression
   * Training accuracy: 92.67
   * Validation accuracy: 92.43
   * Testing accuracy: 93.39

Submissions:

1. script.py
2. report.pdf
3. weights1 (pickle file) – Learned weights (W) of Logistic Regression
4. weights2 (pickle file) – Learned weights (W\_b) of Bonus part