

CS 4824 / ECE 4424 HW 3 Rubric (Programming Portion) [Total Points: 15]

Rubric for tests (in order of appearance in the execution of tests_mlp_and_svm.py):

For MLP [8 points]

On dataset 0, 3-layer MLP had test accuracy 0.993 (should be greater than 0.950)

On dataset 1, 3-layer MLP had test accuracy 0.969 (should be greater than 0.900)

On dataset 2, 3-layer MLP had test accuracy 0.919 (should be greater than 0.850)

On dataset 3, 3-layer MLP had test accuracy 0.969 (should be greater than 0.900)

On dataset 4, 3-layer MLP had test accuracy 0.967 (should be greater than 0.900)

On dataset 5, 3-layer MLP had test accuracy 0.931 (should be greater than 0.875)

On dataset 6, 3-layer MLP had test accuracy 0.987 (should be greater than 0.900)

On dataset 7, 3-layer MLP had test accuracy 0.915 (should be greater than 0.875)

On dataset 8, 3-layer MLP had test accuracy 0.899 (should be greater than 0.850)

On dataset 9, 3-layer MLP had test accuracy 0.938 (should be greater than 0.850)

For Polynomial SVM [3 points]

On dataset 0, Polynomial SVM had test accuracy 0.978 (should be greater than 0.950)

On dataset 1, Polynomial SVM had test accuracy 0.939 (should be greater than 0.900)

On dataset 2, Polynomial SVM had test accuracy 0.878 (should be greater than 0.850)

On dataset 3, Polynomial SVM had test accuracy 0.970 (should be greater than 0.900)

On dataset 4, Polynomial SVM had test accuracy 0.948 (should be greater than 0.900)

On dataset 5, Polynomial SVM had test accuracy 0.934 (should be greater than 0.875)

On dataset 6, Polynomial SVM had test accuracy 0.940 (should be greater than 0.900)

On dataset 7, Polynomial SVM had test accuracy 0.888 (should be greater than 0.850)

On dataset 8, Polynomial SVM had test accuracy 0.872 (should be greater than 0.850)

On dataset 9, Polynomial SVM had test accuracy 0.908 (should be greater than 0.850)

For RBF SVM [4 points]

On dataset 0, Kernel SVM had test accuracy 0.981 (should be greater than 0.950)

On dataset 1, Kernel SVM had test accuracy 0.932 (should be greater than 0.900)

On dataset 2, Kernel SVM had test accuracy 0.909 (should be greater than 0.875)

On dataset 3, Kernel SVM had test accuracy 0.962 (should be greater than 0.950)

On dataset 4, Kernel SVM had test accuracy 0.952 (should be greater than 0.900)

On dataset 5, Kernel SVM had test accuracy 0.925 (should be greater than 0.900)

On dataset 6, Kernel SVM had test accuracy 0.962 (should be greater than 0.950)

On dataset 7, Kernel SVM had test accuracy 0.964 (should be greater than 0.900)

On dataset 8, Kernel SVM had test accuracy 0.914 (should be greater than 0.875)

On dataset 9, Kernel SVM had test accuracy 0.917 (should be greater than 0.875)

Bonus Points [4 points]:

1. In mlp.py, 1 point each for implementing Equations 1 and 2 (at lines 121 and 133) in a single line
2. In kernelsvm.py, 1 point each for implementing Equations 4 and 5 (at lines 26 and 48) without loops.