1.

This question trains a one-vs-rest polynomial kernel perceptron on polynomials of degrees such that over 20 iterations. From the training and testing functions, the program derives the training and testing errors and standard deviations for each polynomial degree .

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|  | 0.00281 |
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Test Standard Deviation

0.02659702741412829

0.010390784703391056

0.008583438990556934

0.006946259446015748

0.02664805704712137

0.006103038635577457

0.00465131449785794

Test Errors

0.10959677419354838

0.06631720430107527

0.05900537634408602

0.05169354838709676

0.056370967741935486

0.047419354838709675

0.04491935483870968