

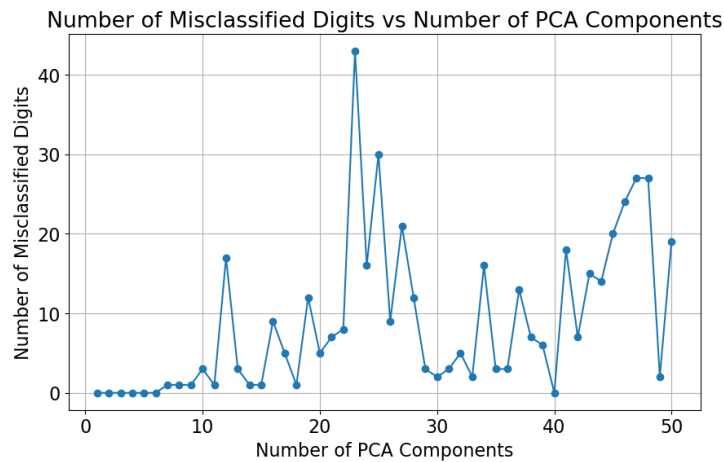
AMSC660 Homework #12

Kecai Xuan

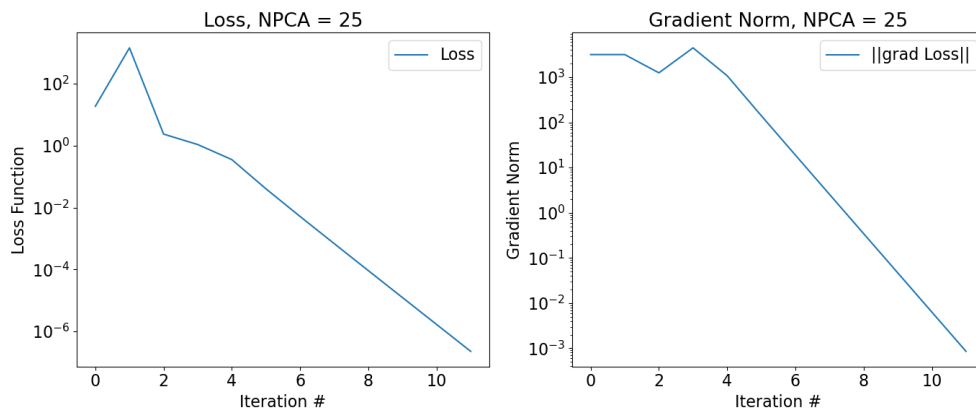
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Task 1

The number of misclassified digits first rises up when PCA components increases, and then decreases. The optimal number of PCA components is around 30, which gives the lowest number of misclassified digits.



This is the learning curves when number of PCA components equals to 25:



Task 2

Task 3