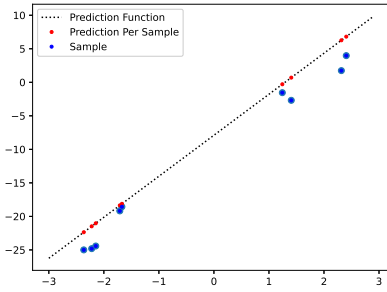


CMSC510 - Assignment 1

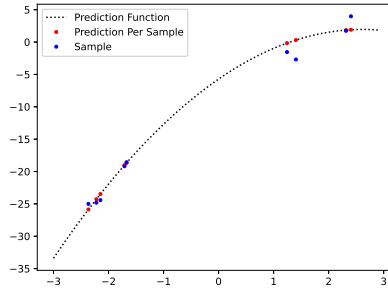
Steven M. Hernandez, V00528395

September 2020

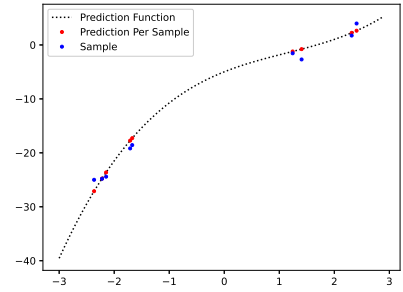
1 Part A: Redo HW#1 in PyTorch



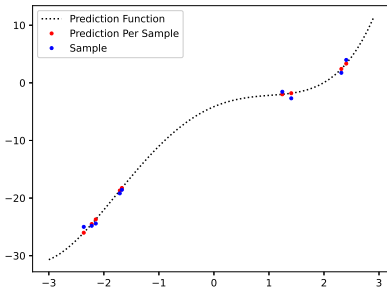
(a) $n = 1$



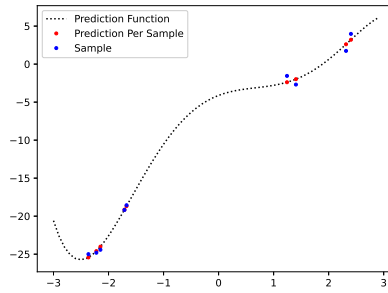
(b) $n = 2$



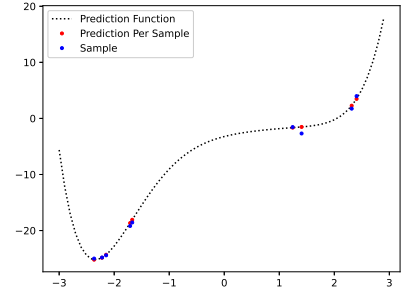
(c) $n = 3$



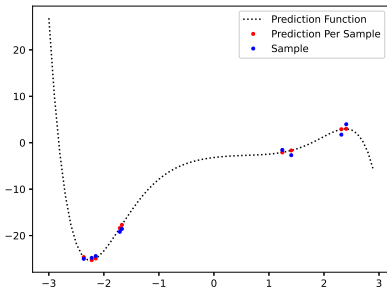
(d) $n = 4$



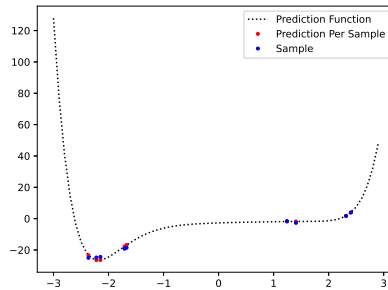
(e) $n = 5$



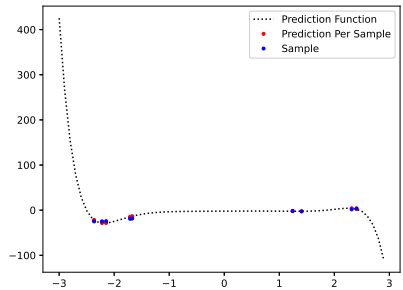
(f) $n = 6$



(g) $n = 7$



(h) $n = 8$



(i) $n = 9$

Figure 1: Predictions per Sample versus actual Sample values

2 Part B: MNIST with two class linear model

Classes used: 9 and 5. Training size: 11,370 samples, testing size: 1,901 samples. See results on next page.

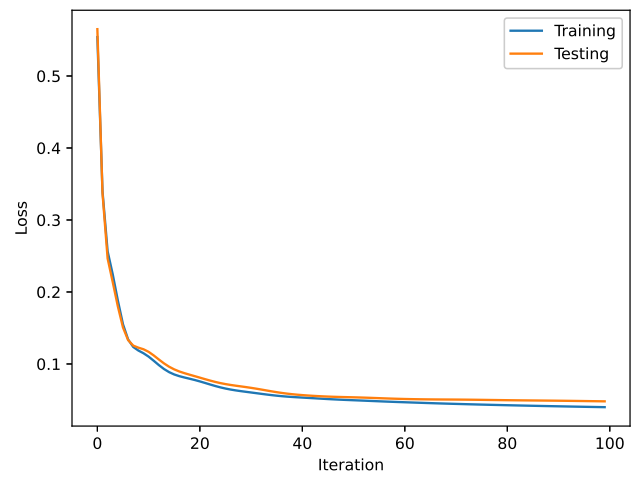


Figure 2: MNIST Loss

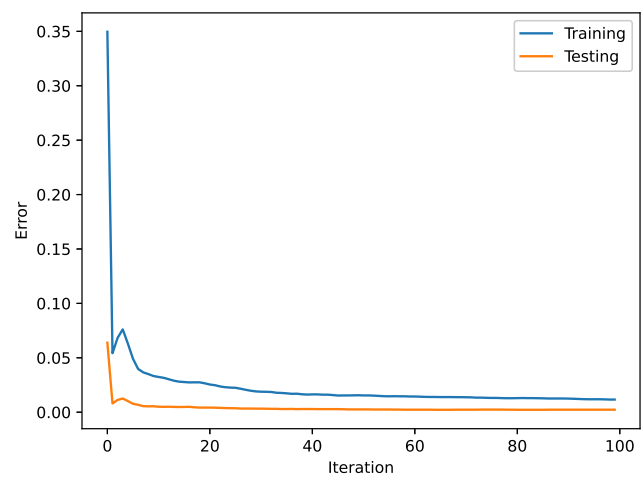


Figure 3: MNIST Error