Ahsanullah University of Science and Technology

Department of Computer Science and Engineering

Course No.   :   CSE4238

Course Name   :   Soft Computing Lab

Assignment No.   :   02

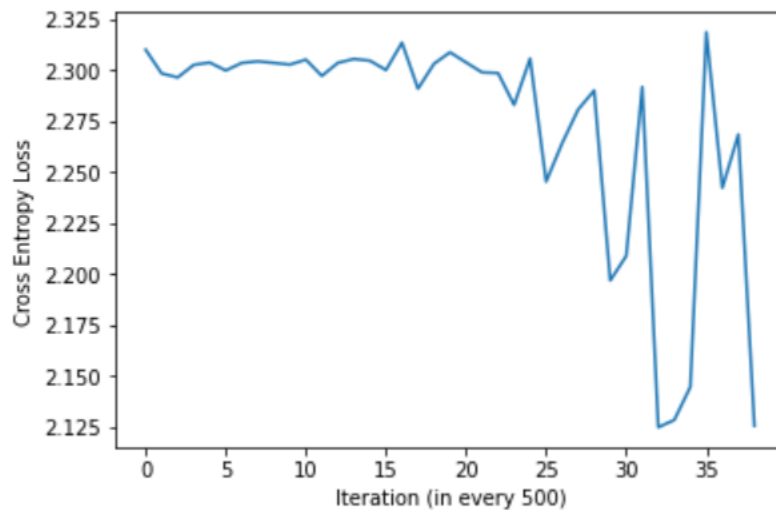## Submitted By:

Name   :   Saiful islam

ID No.   :   17.01.04.146

Session   :   Fall - 2020

Section   :   C (C2)

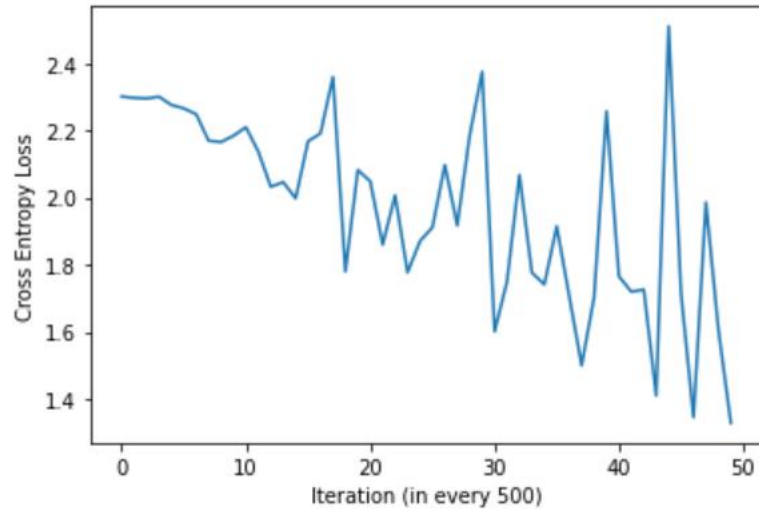**The comparison between Experiment1 and Experiment 2 for the first dataset is given below –**

	Batch size	No of hidden layer	Input dimension	Iteration	Highest Accuracy
Experiment 1	200	6	28*28	20000	19.89
Experiment 2	200	4	28*28	20000	74.8730964467005

After following all the instructions and doing experiment 1, I got the highest accuracy 19.89. To increase accuracy, I applied experiment 2 in various ways. They are shown in the above table. In each case the layer was 4 and the batch size was 200. The iteration numbers were 20,000. I got good accuracy from Experiment 2 and the highest accuracy was 77.64526769855367.

Loss vs Iteration graph for experiment 1 is given below-

Loss vs Iteration graph for Experiment2 is given below-

The comparison between Experiment1 and Experiment 2 for the first dataset and Second dataset is given below-

	Dataset 1					Dataset 2				
Experiment1	Batch size	No of hidden layer	Input dimension	Iteration	Highest Accuracy	Batch size	No of hidden layer	Input dimension	Iteration	Highest Accuracy
	200	6	28*80	20000	19.89	200	6	28*28	20000	83.028571 42857142

| Experiment2 | 200 | 4 | 28*28 | 20000 | 74.8730964467005 | 200 | 4 | 28*28 | 20000 | 86.25714285714285 |

I got maximum accuracy of experiment 1 for 1st dataset 19.89 and got maximum accuracy of 2nd dataset 83.0285714285. And I got maximum accuracy of experiment 2 for 1st dataset 74.8730964467005 and got maximum accuracy of 2nd dataset 86.25714285714285.