Lab-4 (MLP)
CSL7670 - Fundamentals of Machine Learning

NOTE:

1. This assignment contains 2 problems. Please go through the references carefully before starting the lab assignment.

2. Objective of this assignment is to gain familiarity with neural networks (multi-layer perception).

3. Submit a brief report in the lab report template that is already shared.

4. **Deadline:** Sep 5, 2023, 10:30 PM.

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1. (**Simple MLP**) Please go through this blog on developing your first neural network: [Blog] and understand the code. (A) Draw the model architecture by showing each perceptron, input/output/hidden layers. (B) Change the code to use only 60%, 70%, and 80% data as training, and report test-set performance for all these three training data set sizes. (C) Compare BCE loss with MSE loss. (D) Change the number of hidden layers from 2 to 4 and compare the performance.

2. Develop a neural network that works for MNIST handwritten digit classification. (A) Draw the model architecture. (B) Compare its performance with KNN classification.

End of Paper