School of Computer Science and Engineering, VIT Chennai.

BCSE209P Machine Learning

Lab-6 **Perceptron and MLP**

Faculty : Dr. R. Jothi

**Due Date : 11/02/2025**

Submit your python code (Jupyter notebook): with output for all the questions.

Q1. Logic Gates

1. Implement (your own code) a perceptron model to realize AND and XOR gates. Start with the weights as [0.5, 0.5]. Update the weights using perceptron learning algorithm. Print the model parameters after every epoch. Use suitable learning rate.
2. Use Sklearn library (MLP classifier) to realize XOR gate.

Q2. Build a MLP classifier to predict the risk of having heart disease (with Sklearn library ). Fine tune the hyper parameters to get maximum accuracy. Show results after every hyper-parameter change.