**Assignment 8, CS2672 - AIML-Lab, Spring 2025**

Lab Assignment Questions:

* + 1. Implement a Multilayer Perceptron (MLP) from scratch using NumPy or using a deep learning library such as TensorFlow/Keras or PyTorch. Train the model on the Derm Dataset for classification.
    2. Modify the MLP to Use ReLU in the Hidden Layer. What happens if you replace Sigmoid with ReLU in the output layer? Compare the loss convergence rate between Sigmoid and ReLU.
    3. Implement MLP with Tanh Activation. Compare the decision boundaries of Tanh vs. ReLU.
    4. Visualize Decision Boundaries for Different Activation functions.
    5. Implement MLP with Softmax Output for Multi-Class Classification. Modify the MLP to classify a 3-class dataset using Softmax activation in the output layer. Train and analyze the results.