

DNN Lab Assessment

1. Implement back propagation neural network using different activation functions and analysis the performance
2. Implement dropout and early stopping concept using any suitable dataset
3. Implement different optimization techniques using any suitable dataset and analysis their performance
4. Implement Convolutional Neural Network using any suitable dataset
5. Apply different parameter running methodologies on CNN and analysis their performance
6. Implement the main steps of a Shallow Neural Network
 - Understand the dataset
 - Implement your first Forward and Backward propagation
 - Implement activation function, gradient descent
 - Build Neural Network Model
 - Test and optimize the model
 - Make Predictions
7. Plot following graphs using Python
 - i. Plotting Sigmoid 2D
 - ii. Plotting Sigmoid 3D
 - iii. Contour Plot
8. Plot following graphs using Python
 - i. Plotting Loss
 - ii. Standardization
 - iii. Test/Train split
9. Implement a Multi-class neural network with a multiple hidden layer for MNSIT Dataset using keras library

10. Implement a Multi-class neural network with a multiple hidden layer for MNSIT Dataset using keras library. Apply Dropout Regularization

11. Implement a Multi-class neural network with a multiple hidden layer for MNSIT Dataset using keras library. Apply L1 and L2 Regularization