**Git Hub Link:** [**https://github.com/Upender12/Assignment6\_Neural/tree/main**](https://github.com/Upender12/Assignment6_Neural/tree/main)

**Spring 2024: CS5720**

**Neural Networks & Deep Learning - ICP-6**

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**1. Use the use case in the class:**

**a. Add more Dense layers to the existing code and check how the accuracy changes.**

**2. Change the data source to Breast Cancer dataset \* available in the source code folder and make required changes. Report accuracy of the model.**

**3. Normalize the data before feeding the data to the model and check how the normalization change your accuracy (code given below).**

**from sklearn.preprocessing import StandardScaler**

**sc = StandardScaler()**

**Breast Cancer dataset is designated to predict if a patient has Malignant (M) or Benign = B cancer**

**Use Image Classification on the hand written digits data set (mnist)**

**1. Plot the loss and accuracy for both training data and validation data using the history object in the source code.**

**2. Plot one of the images in the test data, and then do inferencing to check what is the prediction of the model on that single image.**

**3. We had used 2 hidden layers and Relu activation. Try to change the number of hidden layer and the activation to tanh or sigmoid and see what happens.**

**4. Run the same code without scaling the images and check the performance?**

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