Department Of CREATIVE TECHNOLOGIES

AIR UNIVERSITY
FCAI, ISLAMABAD

Deep Learning

Class:	MS-AI, PHD-AI	**Semester:**	Spring 2024
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Student Name:	_____	**Reg. #:**	_____
Date:	_____		

Quiz # 01:

Task: Given the initial code in the link, design a network for multi-class problem for the given dataset. The Dataset **Obesity Risk** Dataset is already loaded in the given code: where features are already encoded using LabelEncoder and the target is encoded in the following way:

'Insufficient_Weight' : 0,
'Normal_Weight' : 1,
'Overweight_Level_I' : 2,
'Overweight_Level_II' : 3,
'Obesity_Type_I' : 4,
'Obesity_Type_II' : 5,
'Obesity_Type_III' : 6

In this quiz, your task is to classify between above 6 classes by designing a network of your choice where you should mention and justify following:

- activation function,
- loss function,
- Droupout layers (with and without)
- Normalaziation layers (with and without)
- Metric used

In the initial code, I have divided data into train and validation only, but your task is divide the data into train, validation and test data with ratio 70, 15 and 15 respectively. On the test data you will have to plot the confusion matrics, print the accuracy, recall and precision as well.

1. Submission will be in the form of:
   word document explaining what choices you have used (as mentioned above) with results and
2. the link of working code

Note: Similar quizzes will be marked 0.

Hope this will help! Happy Coding ☺