AIML Online

Frequently Asked Questions in Problem Statement

Course: Neural Network

PART - A [30 Marks]

** Direct or Self-explanatory questions are not covered in this FAQ.*

1. Import and Understand the data:

A. Read the 'Signals.csv' as DataFrame and import required libraries. [2 Marks]

→ *Read the given file named 'Signals.csv' as dataframe after installing and importing the required libraries and packages.*

B. Check for missing values and print percentage for each attribute. [2 Marks]

→ *Print percentage of missing values for each attribute.*

2. Data pre-processing

A. Split the data into X & Y. [1 Marks]

→ *Split the dataset into features and target variable separately.*

B. Split the data into train & test with 70:30 proportion.[1 Marks]

→ *Split the dataset into train & test set in 70:30 ratio using train_test_split.*

3. Model Training & Evaluation using Neural Network pre-processing

A. Design a Neural Network to train a classifier. [3 Marks]

→ *Implement a neural network model to train as a classifier.*

E. Plot visuals as in Q3.C and share insights about difference observed in both the models. [3 Marks]

→ *Share the insights regarding both the models using plot visuals.*

PART - B [30 Marks]

1. Data Import and Exploration

A. Read the .h5 file and assign to a variable. [2 Marks]

→ *Use h5py file to read the dataset.*

Reference : *https://www.christopherlovell.co.uk/blog/2016/04/27/h5py-intro.html#:~:text=Reading%20HDF5%20files,method%20in%20read%20mode%2C%20r.&text=To%20see%20what%20data%20is,method%20on%20the%20file%20object.&text=We%20can%20then%20grab%20each,get%20method%2C%20specifying%20the%20name.&text=This%20returns%20a%20HDF5%20dataset%20object.*

B. Print all the keys from the .h5 file. [1 Marks]

→ *Print all the folders stored in .h5 file.*

2. Data Visualisation and pre-processing

A. Print shape of all the 4 data split into x, y, train, test to verify if x & y is in sync. [1 Marks]

→ *Print the shape of all the splitted datasets to verify the sync between x & y.*