

## 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.