

AIML Online

Frequently Asked Questions in Problem Statement

Course: Neural Network

PART - A [30 Marks]

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]
- \rightarrow Share the insights regarding both the models using plot visuals.

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



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]

 \rightarrow 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]

 \rightarrow Print the shape of all the splitted datasets to verify the sync between x & y.