Python Libraries

1. Numpy

Installation - a) Conda - conda install numpy

b) Pip - pip install numpy

Numpy Functions-

i) The N-dimensional array - An ndarray is a multidimensional container of items of the

same type and size.

x = np.array([[1, 2, 3], [4, 5, 6]])

ii) Indexing - x = np.array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])

x[1:7:2]

array([1, 3, 5])

1. Pathlib

Installation - It is now part of the standard library.

Functions-

i) Importing the main class -from pathlib import Path

ii) Listing subdirectories - p = Path('.')

[x for x in p.iterdir() if x.is\_dir()]

1. Keras

Installation- pip install keras --upgrade

Functions-

Backend utilities

tf.keras.backend.clear\_session() # Resets all states generated by Keras.

1. Pandas

Installation - pip install pandas

Functions- i) data manipulation unique(values)

ii) missing data isna(obj)

1. Scipy

Installation - Python3 -m pip install --user numpy scipy

Functions - scipy.special package contains numerous functions of mathematical physics. SciPy special functions include Cubic Root, Exponential, Log sum Exponential, Lambert, Permutation and Combinations, Gamma, Bessel, hypergeometric, Kelvin, beta, parabolic cylinder, Relative Error Exponential, etc..

1. Tensorflow

Installation- Create a virtual env

pip install --upgrade tensorflow

Functions- tf.pad - Adds specified padding around a tensor with a constant value resulting in increased dimension of the tensor.