

FAMILIARIZATION OF BASIC PYTHON LIBRARIES

AIM

Familiarization of basic Python Libraries such as Sklearn, Numpy, Pandas and Matplotlib.

PYTHON LIBRARY

A Python library is a collection of modules that contains lines of code that can be reused in other programs. Libraries in Python play an important role in areas of data science, machine learning, data manipulation applications, etc.

NumPy

The name “NumPy” stands for “Numerical Python”. NumPy is the most used open-source packages offered by Python. It supports large matrices and multidimensional data and has inbuilt mathematical functions for easy computation. It can be used in linear algebra, random number capability, etc., and can act as a multi-dimensional container for generic data. Python NumPy Array is an object defining N-dimensional array in the form of rows and columns.

PANDAS

Pandas is an open-source library that is widely used in the data science area. They are mostly used for the analysis, manipulation, and cleaning of data. Pandas introduces a data structure called DataFrame which is a two-dimensional, tabular data structure with labelled rows and columns. Pandas provides functions to read data from various file formats, including CSV, Excel, SQL databases and more. It also provides wide range of functions for cleaning and transforming data.

MATPLOTLIB

Matplotlib is a low-level graph plotting library in python that serves as a visualization utility. Matplotlib is mostly written in Python, a few segments are written in C, Objective-C and Javascript for platform compatibility. It supports various plot types, including line plots, scatter plots, bar charts, histograms, and more. It is often used in conjunction with other libraries like NumPy and Pandas for data visualization and analysis tasks.

SCIKIT LEARN

Scikit-learn, often abbreviated as sklearn is an open-source library under the Python programming environment used for machine learning approaches. It supports supervised and unsupervised machine learning providing diverse algorithms for classification, regression, clustering and dimensionality reduction. It supports various plot types, including line plots, scatter plots, bar charts, histograms, and more. It is often used in conjunction with other libraries like NumPy and Pandas for data visualization and analysis tasks.

RESULT

Familiarized with basic Python libraries.