**Pandas**

Pandas is the most popular software library for data manipulation and data analysis for the [Python](https://www.python.org/) programming language. As an open-source software library built on top of Python specifically for data manipulation and analysis, Pandas offers data structure and operations for powerful, flexible, and easy-to-use data analysis and manipulation. Pandas strengthens Python by giving the popular programming language the capability to work with spreadsheet-like data enabling fast loading, aligning, manipulating, and merging, in addition to other key functions. Pandas is prized for providing highly optimized performance when back-end source code is written in Python.

**Numpy**

NumPy is used for working with arrays. NumPy is short for "Numerical Python". NumPy also includes a wide range of mathematical functions, such as linear algebra, Fourier transforms, and random number generation, which can be applied to arrays. With the revolution of data science, data analysis libraries like NumPy have seen a lot of growth. With a much easier syntax than other programming languages, python is the first choice language for the data scientist. NumPy provides a convenient and efficient way to handle the vast amount of data. NumPy is also very convenient with Matrix multiplication and data reshaping. NumPy is fast which makes it reasonable to work with a large set of data.

**Tensorflow**

TensorFlow can be used to develop models for various tasks, including natural language processing, image recognition, handwriting recognition, and different computational-based simulations such as partial differential equations. Heavily used by data scientists, software developers, and educators, TensorFlow is an open-source platform for machine learning using data flow graphs. Nodes in the graph represent mathematical operations, while the graph edges represent the multidimensional data arrays (tensors) that flow between them. This flexible architecture allows machine learning algorithms to be described as a graph of connected operations.

**Keras**

Keras is an open-source deep-learning framework that gained attention due to its user-friendly interface. Keras offers ease of use, flexibility, and the ability to run seamlessly on top of TensorFlow. In this article, we are going to provide a comprehensive overview of Keras. The Keras toolbox is used in the majority of the studies due to its simplicity. Keras offers a consistent high-level application programming interface (APIs) to build the models more straightforward, and by using powerful backbends such as TensorFlow, its performance is sound.

**Pytorch**

PyTorch is a fully featured framework for building deep learning models, which is a type of machine learning that’s commonly used in applications like image recognition and language processing. Written in Python, it’s relatively easy for most machine learning developers to learn and use. PyTorch is distinctive for its excellent support for GPUs and its use of reverse-mode auto-differentiation, which enables computation graphs to be modified on the fly. This makes it a popular choice for fast experimentation and prototyping. PyTorch is especially popular with Python developers because it’s written in Python and uses that language’s imperative, define-by-run eager execution mode in which operations are executed as they are called from Python.

**Sklearn**

Scikit-learn, also known as sklearn, is an open-source, machine learning and data modeling library for Python. Scikit-learn is largely written in Python, and uses NumPy extensively for high-performance linear algebra and array operations. The sklearn library contains a lot of efficient tools for machine learning and statistical modeling including classification, regression, and clustering and dimensionality reduction.