**Numpy**

NumPy is a library for Python that is used for scientific computing. This is Python's core library for scientific computing. It has fast multidimensional array objects, tools for working with those arrays, and many math functions. It also has a random number generator, linear algebra, and Fourier transform which are useful.

**Pandas**

The open-source tool Pandas can be used to look at and change data. It gives you a lot of different data formats and tools for working with data. It's made to make working with and cleaning data easy, and you can use it for many things, like cleaning data, analyzing data, visualizing data, and more. Pandas can be used to look at data in Python as well as languages like R and Julia.

**Skilearn**

Sklearn is a library of Python modules for machine learning and data mining. It is built on NumPy, SciPy, and matplotlib and provides a range of supervised and unsupervised learning algorithms. It is designed to interoperate with the Python numerical and scientific libraries NumPy and SciPy. There are various classification, regression, and clustering algorithms, such as support vector machines, random forests, gradient boosting, k-means, and DBSCAN. It also provides a way to reduce data's dimensionality and tools for preprocessing data. Sklearn also features built-in cross-validation and scoring methods.

**TensorFlow**

TensorFlow is an open-source machine learning library developed by Google Brain, designed to support a wide range of machine learning tasks, particularly deep learning. It provides a comprehensive ecosystem that includes tools for building, training, and deploying machine learning models, making it suitable for both research and large-scale production. TensorFlow is highly scalable and supports distributed computing, enabling efficient handling of large datasets and complex models. Its ecosystem includes components like TensorBoard for visualization, TensorFlow Lite for mobile deployment, and TensorFlow Serving for serving models in production environments, making it a versatile choice for machine learning practitioners.

**Keras**

Keras is a high-level neural networks API originally developed by François Chollet and now integrated into TensorFlow. It is designed to make deep learning accessible and user-friendly, offering a simple and consistent interface for building and prototyping models with minimal code. Keras operates as a modular library, allowing users to combine different building blocks like layers, optimizers, and activation functions to create models. While it can be used with different backends, it is most commonly used with TensorFlow today. Keras is favored for its ease of use and flexibility, making it an ideal tool for both beginners and experienced deep learning practitioners who need to quickly iterate on their models.

**PyTorch**

PyTorch is an open-source deep learning framework developed by Facebook's AI Research lab (FAIR), known for its dynamic computation graph, which allows for more flexibility and ease of use in model development. Unlike traditional static graphs, PyTorch's dynamic graph, or eager execution, makes debugging and experimentation more intuitive, which is particularly beneficial in research settings. PyTorch has gained widespread popularity in academia due to its simplicity and its strong integration with Python, as well as its support for GPU acceleration through CUDA. It is widely used for both developing new deep learning models and implementing state-of-the-art research, making it a go-to choice for researchers and developers alike.