Assignment 1.

1. **Pands:**

Pandas is a Python library used for working with data sets.It has functions for analyzing, cleaning, exploring, and manipulating data. Pandas is a powerful data manipulation and analysis library for Python. It provides data structures like Data Frames and Series to handle and analyze structured data effectively. With Pandas, you can easily clean, transform and visualize datasets. It's commonly used for tasks such as data wrangling, statistical analysis, and time series analysis.

**2.Numpy**

NumPy is a Python library used for working with arrays.It also has functions for working in domain of linear algebra, fourier transform, and matrices.NumPy was created in 2005 by Travis Antiphonal. It is an open source project and you can use it freely.

### **3**.TensorFlow:****

### TensorFlow is an open-source machine learning framework developed by Google. It allows developers to build and deploy machine learning models, especially deep learning models, with ease. TensorFlow is highly flexible, supporting various platforms like mobile devices, servers, and even edge devices. It is widely used for tasks such as image recognition, natural language processing, and neural network training.

### ****Keras:****

Keras is a high-level neural networks API that runs on top of TensorFlow, making it simpler to create deep learning models. It provides an intuitive interface for building and training neural networks, allowing users to prototype quickly. Keras supports both convolutional and recurrent networks and can run on CPUs and GPUs. Its user-friendly nature makes it a

1. **Sklearn**

Scikit-learn (Sklearn) is the most useful and robust library for machine learning in Python. It provides a selection of efficient tools for machine learning and statistical modeling including classification, regression, clustering and dimensionality reduction via a consistence interface in Python.

### ****PyTorch:****

PyTorch is an open-source machine learning library developed by Facebook's AI Research lab. It is widely used for deep learning applications, providing a flexible and dynamic computational graph. PyTorch allows for easy experimentation with deep learning models due to its imperative nature, making it a favorite among researchers. It is known for its strong support for GPU acceleration and seamless integration with Python libraries.