## PyBrain

Open source python library meant for deep learning that uses neural networks that works like a human brain

Very flexible and easy to use framework for machine learning and neural networks

Features

1. A good introduction to machine learning and neural networks
2. It supports modularity- easily creates different components and makes neural network architecture
3. Supports supervised, unsupervised and reinforcement learning tools
4. Provides algorithms for training the NN like backprops, reinforcement learning algorithms
5. Supports creation of different types of NN like feed-forward, convolution NN, Recurrent NN
6. Easily integrate with scientific libraries like numpy, visualizations, pandas etc
7. But not as popular as other deep learning frameworks like Tensorflow, pytorch etc

Applications

- Used pattern recognition and classification
- Recurrent neural networks for time series data, natural language
- processing
- Reinforcement learning, where the agent learns in an environment using awards & punishments

Pylearn2

- Python library for ML & DL
- It has flexible and extensible framework for building and training NN
- Modular in nature where you can create components and integrate
- Create FFNN, CNN, RNN
- Easy to configure the network
- Integrates Thiano
- Comes with extensive documentation composed of code examples to understand the use of library
- Designed with researchers in mind and suitable for experimentation with novel NN architectures
- Strong community base of researchers & practitioners in ML & DL

Applications

- Used for object detection and recognition
- Used in natural language processing for sentiment analysis, language modelling
- Generative AI like restricted Boltzmann machine for generating data