Exercise- 2
Overview of Extensions

Extension	Link	Description	Algorithm
Scipy	https://docs.scipy.org/doc/	Scipy is a python extension used for both scientific and technical computing. It consists of different modules of mathematical algorithms. It connivences functions built on Numpy extension	It contains algorithms for Optimization, Linear algebra, differential equations, interpolation, special functions, FFT, signal and image processing and ODE solvers
Scikit Learn	https://scikit-learn.org/stable/	It is a machine learning library for python. It is a tool for predictive analysis. Scikit learn mainly built on SciPy, NumPy extensions.	It includes all the supervised machine learning techniques such as Linear and Quadratic Analysis, Linear models, Nearest Neighbors, Stochastic Gradient Descent, Naive Bayes, Decision tress, Ensemble models etc.
Pandas	https://pandas.pydata.org/	Pandas is a software library for data manipulation and analysis. It is mainly used for manipulating time series and numeric tables. Pandas is built on top of NumPy package.	Algorithms in Pandas mainly include converting, adding, reshaping, grouping, merging in data frames also in data. It also includes Visualization module and different tools related for normalization of data sets.
NetworkX	https://networkx.org/	NetworkX package is used for the manipulation, creation, and study of the structures. It is used for studying complex graphs and networks.	Algorithms for NetworkX include approximation and Heuristics, centrality, clustering, coloring, connectivity, Distance Measures, Distance Regular Graphs, Efficiency, Eulerian, Link analysis, link Prediction,

			Percolation, Dispersion etc.
Keras	https://keras.io/	Keras provide a python interface for artificial Neural Network. It makes implementation of neural networks easy also supporting backend neural networking easy. The main goal of keras is to make application of libraries	It includes image, time series and test data processing. It contains metrics, losses, and hyper parameter modules. It also contains models, layers and callback API
Gplearn	https://gplearn.readthedocs.io/en/stable/	Gplearn is a genetic programming library. It is designed to solve symbolic regression problems and to find the mathematical relations between independent and dependent variables and predict new data. Gplearn is inspired by scikit-learn.	It contains symbolic regressors, symbolic transformer, symbolic classifier, fitness measures algorithms.
NumPy	NumPy is a python library for scientific computations.	NumPy is a library used for scientific computations. It provides multi-dimensional arrays and matrices, with a large group of high-level mathematical functions to operate on these arrays. It's main functionality is its "ndarray", for n-dimensional array.	It includes sorting, selecting, shape manipulation algorithms along with discrete fourier transforms, basic linear algebra, mathematical and statistical operations and random simulation.
Matplotlib	https://matplotlib.org/	Matplotlib is a library for creating static, animated and interactive visualization in python. It is a numerical mathematics extension of NumPy	It doesn't have algorithms but includes plots such as static plots, Unstructured coordinates, Plots of arrays and fields also basic plots.
PM4Py	https://pm4py.fit.fraunhofer.de/	It is a process mining library for python	It includes process mining algorithms such as alpha miners, Inductive miner frequent and inductive miner

			directly follows, heuristic miners.