

Module1

Objectives:

The basic objective of this module is to make students familiar with the basic concepts of Machine Learning and its application. In this module students will also learn to create python 3.7 environment in their systems and execute basic machine learning algorithms.

Topics to be covered:

- Setting up Python 3.7 Environment.
- Concepts of “Classification” in Machine learning
- Execution of various “classifiers” using benchmark datasets.

Note: To understand the concepts of classifiers we will follow the standard documentation of python package- “**Scikit Learn**”. The classifiers decided for each group have been listed in the bellow table with links which they need to follow-

| GROUPS | CLASSIFIERS | LINKS |
|--------|--------------------------------|--|
| G1 | Support Vector Machine | https://scikit-learn.org/stable/modules/svm.html |
| G2 | Naive Bayes/ Nearest Neighbors | https://scikit-learn.org/stable/modules/naive_bayes.html https://scikit-learn.org/stable/modules/neighbors.html |
| G3 | Support Vector Machine | https://scikit-learn.org/stable/modules/svm.html |
| G4 | Decision Tree | https://scikit-learn.org/stable/modules/tree.html |

All the projects that have been allocated consist of two main parts-

- i) Designing a classification framework using a specific dataset.
- ii) Advancing the framework using various other techniques such as IWD, PSO etc.

Our first few modules will cover only the aspects of classification. After completing these modules we will go for the second part that is advancement of the framework,