Subject: 21DS602

Lab Session: 11

Lab Session Date: 28/12/2022

Notes:

1. Please read the assignment notes carefully and comply to the guidelines provided.
2. Report should be submitted to TurnItIn. Once done, please submit your assignments in Teams.

Main Section (Mandatory):

Please use the data associated with your own project.

Refer:

- **https://scikit-learn.org/stable/modules/feature_selection.html**
- **https://scikit-learn.org/stable/modules/generated/sklearn.feature_selection.SequentialFeatureSelector.html**
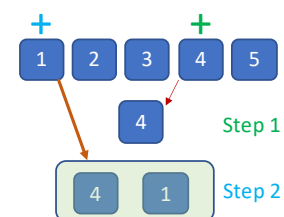
Main Section (Mandatory):

A1. Implement the forward feature selection algorithm on your feature list. Find out the optimal set where maximum accuracy is achieved.
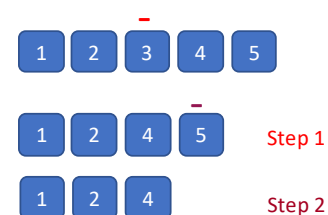
Sequential forward / backward search

A2. Implement the backward feature removal algorithm. Identify the optimal set with accuracy maximization as the target. Compare the results obtained with the results from A1.

Optional Section

O1. Study the other feature selection techniques available in sklearn package. Understanding their advantages & disadvantages.

Report Assignment:

1. Compare the results of forward and backward feature selection / removal algorithms as observed by your experiment.   [2]
2. Explain the drawbacks of forward feature selection & backward feature removal algorithms. [2]