

FS Projects-Datasets and Excel File Instructions:

- 1- There exist 13 datasets that are uploaded on Blackboard under the Resources/Datasets and Instructions/Datasets.zip, named 'D1.csv' to 'D13.csv.'
- 2- Datasets include 17.5K, or 35K, or 3541 samples, 354, or 220 features, and one label column. There are 70, or 10 classes, where the class labels are provided in the last column of each dataset.
- 3- An Excel file is also uploaded on Blackboard under Resources/Datasets and Instructions/Excel Files/FS_Projects.xlsx. You need to download and fill it out according to the following instructions:
 - a- You are given 13 datasets and there are 13 tables in the excel file to be filled out accordingly.
 - b- Make sure you enter the project code in the corresponding 'Project Code' cell, e.g., 'FS01.'
 - c- You need to write the abbreviated name of FS techniques used in your project in 'FS Methods.'
 - d- When applying the given FS techniques to the given datasets, you need to write the number of selected features by means of each FS technique w.r.t. each classification model under the '# selected features' section of the table. It is important to note that you should start with one selected feature and increase the number of selected features to the value, for which no significant improvement can be observed in the performance of classification models.
 - e- Furthermore, you need to return the set of selected features by means of each FS method w.r.t. each classification model under 'Selected Features.' As each dataset includes 354, or 220 features (or columns), you need to write down the column number of the selected features by means of the given FS techniques in this section of tables.
 - f- The assigned classification models to your projects must be cross-validated through the 10-fold cross-validation method. You should then return the validated F-Measure and Accuracy values in order to fill out the sections of the table under 'Baseline' and 'With Feature Selection.' Please note that under the 'Baseline' section, you should return the attained classification F-Measure and Accuracy values when no FS technique is employed.
 - g- In order to fill out the section under 'With Feature Selection,' you should take into account the given note in item 'd', and, then, return the attained F-Measure and Accuracy values by means of each classification model for each fold.
 - h- You should repeat this procedure for all the given datasets in order to fill out the provided excel file.
- 4- The given excel file shows the FS techniques and classification models assigned to the project 'FS01,' however, you can modify the tables according to your own project by replacing the FS techniques and classification models with those of your own project.