Automated ML-based tool for classification problems

Aim: Development of a comprehensive python script that will run (binary or multi-class) classification problems on any given input data matrix

Input matrix Format: *Standard Feature(F) x Instance(I)* matrix (.csv) file.

	F1	F2	F3	F4	...	...	Fm	Class
I1								Class1
I2								Class2
I3								Class3
I4								
I5								
....								
In								Class x, y, z

The options for the following functions or subroutines will be asked from the user as standard input.

Rules:

1. Every script(s) will contain elements of an ideal machine learning pipeline –
    a. Normalization / standardization
    b. Feature selection
    c. Cross validation
    d. Machine learning modeling (classification)
    e. Predictive capability (accuracy) of the model will be validated using a blind dataset that can be 10% of the data which will be kept aside and will never be used for training or testing of the models.
    f. All performance metrics will be reported for overall cross-validated sets.

2. Every step of the ML model will be in a separate python script which will be called through a main python script. Only this main python script will be used for execution.

3. Output of the scripts (plots, tables, printing) will be generated in the form of a *.pdf* file.