Subject: 23CSE301

Lab Session: 08

Notes:

1. Please read the assignment notes carefully and comply to the guidelines provided.
2. Code should be checked into the GitHub. These details shall be provided in the Lab.
3. If you have not completed the prerequisite assignments, please complete them before the next lab session.

Coding Instructions:

1. The code should be modularized; The asked functionality should be available as a function. Please create multiple functions if needed. However, all functions should be present within a single code block, if you are using Jupyter or Colab notebooks.
2. There should be no print statement within the function. All print statements should be in the main program.
3. Please use proper naming of variables.
4. For lists, strings and matrices, you may use your input values as appropriate.
5. Please make inline documentation / comments as needed within the code blocks.

Main Section (Mandatory):

Please use the data associated with your own project.

Ref:

https://scikit-learn.org/stable/modules/generated/sklearn.ensemble.StackingClassifier.html
https://scikit-learn.org/stable/modules/generated/sklearn.ensemble.StackingRegressor.html
https://scikit-learn.org/stable/modules/generated/sklearn.pipeline.Pipeline.html

A1. Implement stacking classifier or regressor (depending on your project problem). The base models should be the list of classifiers / regressors already implemented. Experiment with various metamodels (final_estimator). Use above references 1 & 2.

A2. Implement pipeline to allow multiple steps of data processing and classification to be executed simultaneously. Use reference 3 above for pipeline construction and execution.

A3. Using LIME explainer, explain the outcomes of pipeline.

Report Assignment:

Please update your last week's report in IEEE format. Expand the methodology and results sections with outcomes of this experiments & results obtained. Please discuss your observations, inferences in results & discussion section. Please conclude the report appropriately with these experiments. Consider following points for observation analysis & inferences. Follow the following instructions:

1. Please tabulate the results (don't take screenshots and add to report)
2. Each table and figure should be captioned and cited in text
3. Refer to the "WritingPaper.pptx" file for more instructions and guidelines