

Statistical Machine Learning Winter 2022

Assignment - 4 Deadline : 14th May, 11 : 59PM

April 2022

1 Instructions

- You are free to use either python or MATLAB for this assignment.
 - You can use inbuilt libraries for Math, plotting, and handling the data (eg. NumPy, Pandas, Matplotlib).
 - Usage instructions for other libraries can be found in the question.
 - Only (*.py) and (*.m) files should be submitted for code.
 - Create a (*.pdf) report explaining your assumptions, approach, results, and any further detail asked in the question.
 - You should be able to replicate your results if required.
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2 Question : [4 Marks]

Use MNIST dataset and below instructions to solve this question. **NOTE:** Use of any bagging libraries are not allowed.

- Create a Bagging or Bootstrap model where the **bag size = 3** and the **base model = DecisionTreeClassifier**.
- Use **Majority voting** techniques for final prediction.
- Report accuracy and classwise accuracy on the testing dataset.