Indian Institute of Technology Madras

ID5055 Foundations of Machine learning

Tutorial IX

Due date: 11:59 pm, October 28, 2023

Instruction

1. Assignment shall be submitted on the due date. Late submissions will not be entertained. If you cannot submit the assignment due to some reasons, please contact the instructor by email.
2. All the assignments must be the student's own work. The students are encouraged to collaborate or consult friends. In the case of collaborative work, please write every student's name on the submitted solution.
3. If you find the solution in the book or article or on the website, please indicate the reference in the solutions.

Problems

Note: Refer to the tutorial notebook for details.

- [Support Vector Machine]
  As part of this tutorial you are supposed to use SVM implementations in `sklearn` library and then carry out model fitting on attached dataset. The dataset has been split into train and test set. Using this dataset, fit svm model on the train set and report classification statistics on the test set using `sklearn.metrics.classification_report`.

  We can load the dataset as follows:

```
import numpy as np

# set appropriate path
datafile_path = "data.npy"
data = np.load(datafile_path, allow_pickle=True).item()

Xtrain, Ytrain = data["train"]["X"], data["train"]["Y"]
Xtest, Ytest = data["test"]["X"], data["test"]["Y"]

```