

Algorithms

Each folder contains an algorithm:

1. OvA -> One vs All code using RLS
2. Tree Bagger -> Random Forest using MATLAB TreeBagger
3. Tree Bagging -> Code for Tree Bagging
4. Random Forest
5. OOB_TreeBagger -> OOB error using MATLAB TreeBagger
6. OOB_Random_Forest -> Code for OOB error

Dataset

I used the wine dataset and an indoor localization through wifi dataset that you can find here:

<https://archive.ics.uci.edu/ml/datasets/Wireless+Indoor+Localization>

Since I modified both the datasets to import them quickly, I add also the .mat files.

Execute

To execute the codes you have to import the dataset and then you have to change the size of the splits for training. For OvA it is necessary to change the classes for the 'for' cycle (1:4 for wifi dataset, 3:9 for wine dataset). You can also choose the number of trees and the number of iterations.

Parameters:

1. Bootstrap size in build_RandomF()
2. Number of trees in the Forest: nTrees
3. Split size when randomSplitDataset() is called (function RF())
4. For cycle in yPredict() and OneVsAll()
 - a. k = 1:4 for wifi dataset
 - b. k = 3:9 for wine dataset

Each folder contains a 'main' script. To execute it you have to add the folder to MATLAB in order to call the other functions.