Assignment 6

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Lab Assignment 6

Human activity monitoring is a growing field within data science. It has practical use within the healthcare industry, particular with tracking the elderly to make sure they don't end up doing things which might cause them to hurt themselves. Governments are also very interested in it do that they can detect unusual crowd activities, perimeter breaches, or the identification of specific activities, such as loitering, littering, or fighting. Fitness apps also make use of activity monitoring to better estimate the amount of calories used by the body during a period of time.

In this lab, you will be training a random forest against a public domain Human Activity Dataset titled Wearable Computing: Accelerometers' Data Classification of Body Postures and Movements, containing 165,633, one of which is invalid. Within the dataset, there are five target activities:

- Sitting
- Sitting Down
- Standing
- Standing Up
- Walking

These activities were captured from four people wearing accelerometers mounted on their waist, left thigh, right arm, and right ankle. To get started:

1. Acquire the DLA HAR Dataset from their webpage. Be sure to get the **dataset-har-PUC-Rio-ugulino.zip** file and not the weight lifting one. That's a bonus dataset you can try fitting afterwards!
2. Open up the sample code located in Module6/**assignment6.py** and read through it.
3. Complete out all the requisite ToDo's as usual.
4. Finally, answer the following questions:

Lab Question

1 point possible (graded)

Please enter a numeric value (e.g. 0, 1, 10.5, etc) which correctly answers the question(s) below:

Whichever score ended up being the lesser value, either the OOB score or the model's accuracy score, enter that figure below:

Submit You have used 0 of 2 attempts