

M05 - Mini project

Human Activity Recognition from Continuous Ambient Sensor Data

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September 21, 2020

Outline

Working hypothesis

It possible to perform human activity recognition from continuous ambient sensor data

Data

Data is available online on the UC Irvine machine learning repository.

Data are downloaded automatically.

The dataset is large. We are looking for a solution to make everything work on jupyter.

There are two evaluation protocols:



Workflow

For different experiments:

1. Load the training data
2. Create and train a random forest classifier
3. Load the test data
4. Make prediction on test data
5. Print the confusion matrix for the model evaluation. Confusion matrices are also available in graphs with `plotly.express`.

The experiments run sequentially.

Version control

On github at https://github.com/sdevenes/M05_MiniProject
The work is organized using github issues to create and assign tasks.

The general approach:

- ▶ Create 1 branch per feature named *feature/feature_name*
- ▶ When the feature is complete, do a pull request with the other as a reviewer

Documentation

Each function is commented with a docstring.
We plan to use the documentation generator Sphinx.