1st UCAmI Cup

mamilab.eu/ucami2018/UCAmICup.html

1st UCAmI Cup - Analysing the UJAEN Human Activity Recognition Dataset

Context

Many real-world applications that focus on addressing the needs of a human, require information pertaining to the underlying activities that are being performed. The UCAmI Cup has been launched as an annual event within the context of the UCAmI Conference. Delegates are provided with the opportunity to use their tools and techniques to analyse an openly available human activity recognition dataset and to compare their results with others working in the same domain, with the same dataset.

Aim

For the first year of the UCAmI Cup, the competition is focused on the recognition of a range of human activities, performed by a single participant, in a single manner. Data was collected in the UJAmI SmartLab in the University of Jaén (UJAEN), Spain over a period of 10 days. Data was collected each day at three differing periods of time: morning, afternoon and evening.

Dataset

The selected dataset represents 246 instances of 24 activity class that were carried out by a single male inhabitant in the SmartLab of the University of Jaen. The dataset contains a README file that describes in detail the UJAmI SmartLab of the UJAEN, the information related with the dataset as well as the following four data sources:

- 1. Event streams of binary sensor.

- 2. Spatial data from an intelligent floor.
- 3. Proximity data between a smart watch worn by the inhabitant and Bluetooth beacons.
- 4. Acceleration data from the same smart watch worn by the inhabitant.

All four data sources are available. Participants can use one source, several sources or all four data sources.

Competition

In order to evaluate the approaches developed by the participants and to compare results, the dataset is divided into two:

1. - Part 1: Labelled training dataset with seven days of recordings that contains 169 instances.
2. - Part 2: Unlabelled test dataset with three days of recordings that contains 77 instances.

Participants should submit their results following the processing of the test dataset with their approach in a unique file (results.csv) through EasyChair (UCAmI Cup track) by no later than **May 1, 2018**. In this file, participants should indicate the predicted activities in timeslots of 30 seconds.

Following the submission of their results, participants will receive an email from the organisers within four days containing evaluation measures and a confusion matrix.

Registration

To register in this UCAmI Cup 2018, please:

> Send an email to mestevez@ujaen.es with the title "UCAmI Cup".

An email will be sent to you outlining how you can gain access to the dataset in the competition.
This does not oblige you to participate or submit results, it is an expression of interest.

Important dates

- **March 28, 2018** – Publication of the dataset.
- ~~**May 1, 2018**~~ **May 10, 2018 (extended)** – Deadline to submit results to EasyChair.
- ~~**May 15, 2018**~~ **June 1, 2018 (extended)** – Deadline for short paper submission to EasyChair.

Paper submission

Participation in the UCAmI Cup will be by means of a short paper that should contain at least the following sections: methodology, results and discussion. Articles accepted will be published in the Conference proceedings by **MDPI**.

Award

The approach providing the best level of performance will be announced during the Gala Dinner and will be awarded with the UCAmI Cup.

Organizers

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