

Averages by Subject and Activity

File Name: AveragesBySubjectActivity.txt

Introduction

These data are compiled from the Human Activity Recognition Using Smartphones Dataset, also known as the UCI HAR Dataset¹. The data in UCI HAR were gathered in experiments conducted by Jorge L. Reyes-Ortiz, Davide Anguita, Alessandro Ghio, and Luca Oneto at the University of Genoa.

Purpose

The Averages by Subject and Activity (hereafter called Averages) dataset has been created to fulfill the requirements of the course project in the Getting and Cleaning Data course in the Data Science specialization offered by Johns Hopkins University through Coursera. The potential purpose of such a dataset has not been made clear by the authors of the exercise.

Description of the Data

Thirty volunteer subjects wore smartphones at their waists which generated gyroscope and accelerometer data. Each person performed six activities. More details about how this data was captured can be found in the “read me” file of the UCI HAR dataset (see link below). The Averages dataset contains the average of each mean and standard deviation variable for each subject and activity for the various types of signals evaluated in the experiment.

Field List

- **Subject** - numeric identifier for each subject, ranging from 1 to 30.
- **Activity** - one of six activities
 - WALKING
 - WALKING_UPSTAIRS
 - WALKING_DOWNSTAIRS
 - SITTING
 - STANDING
 - LAYING
- **tBodyAcc-mean()-X** - average value of the mean of the tBodyAcc feature, X-axis
- **tBodyAcc-mean()-Y** - average value of the mean of the tBodyAcc feature, Y-axis
- **tBodyAcc-mean()-Z** - average value of the mean of the tBodyAcc feature, Z-axis
- **tBodyAcc-std()-X** - average value of the standard deviation of the tBodyAcc feature, X-axis
- **tBodyAcc-std()-Y** - average value of the standard deviation of the tBodyAcc feature, Y-axis
- **tBodyAcc-std()-Z** - average value of the standard deviation of the tBodyAcc feature, Z-axis

- **tGravityAcc-mean()-X** - average value of the mean of the tGravityAcc feature, X-axis
- **tGravityAcc-mean()-Y** - average value of the mean of the tGravityAcc feature, Y-axis
- **tGravityAcc-mean()-Z** - average value of the mean of the tGravityAcc feature, Z-axis
- **tGravityAcc-std()-X** - average value of the standard deviation of the tGravityAcc feature, X-axis
- **tGravityAcc-std()-Y** - average value of the standard deviation of the tGravityAcc feature, Y-axis
- **tGravityAcc-std()-Z** - average value of the standard deviation of the tGravityAcc feature, Z-axis
- **tBodyAccJerk-mean()-X** - average value of the mean of the tBodyAccJerk feature, X-axis
- **tBodyAccJerk-mean()-Y** - average value of the mean of the tBodyAccJerk feature, Y-axis
- **tBodyAccJerk-mean()-Z** - average value of the mean of the tBodyAccJerk feature, Z-axis
- **tBodyAccJerk-std()-X** - average value of the standard deviation of the tBodyAccJerk feature, X-axis
- **tBodyAccJerk-std()-Y** - average value of the standard deviation of the tBodyAccJerk feature, Y-axis
- **tBodyAccJerk-std()-Z** - average value of the standard deviation of the tBodyAccJerk feature, Z-axis
- **tBodyGyro-mean()-X** - average value of the mean of the tBodyGyro feature, X-axis
- **tBodyGyro-mean()-Y** - average value of the mean of the tBodyGyro feature, Y-axis
- **tBodyGyro-mean()-Z** - average value of the mean of the tBodyGyro feature, Z-axis
- **tBodyGyro-std()-X** - average value of the standard deviation of the tBodyGyro feature, X-axis
- **tBodyGyro-std()-Y** - average value of the standard deviation of the tBodyGyro feature, Y-axis
- **tBodyGyro-std()-Z** - average value of the standard deviation of the tBodyGyro feature, Z-axis
- **tBodyGyroJerk-mean()-X** - average value of the mean of the tBodyGyroJerk feature, X-axis
- **tBodyGyroJerk-mean()-Y** - average value of the mean of the tBodyGyroJerk feature, Y-axis
- **tBodyGyroJerk-mean()-Z** - average value of the mean of the tBodyGyroJerk feature, Z-axis
- **tBodyGyroJerk-std()-X** - average value of the standard deviation of the tBodyGyroJerk feature, X-axis
- **tBodyGyroJerk-std()-Y** - average value of the standard deviation of the tBodyGyroJerk feature, Y-axis

- **tBodyGyroJerk-std()-Z** - average value of the standard deviation of the tBodyGyroJerk feature, Z-axis
- **tBodyAccMag-mean()** - average value of the mean of the tBodyAccMag feature
- **tBodyAccMag-std()** - average value of the standard deviation of the tBodyAccMag feature
- **tGravityAccMag-mean()** - average value of the mean of the tGravityAccMag feature
- **tGravityAccMag-std()** - average value of the standard deviation of the tGravityAccMag feature
- **tBodyAccJerkMag-mean()** - average value of the mean of the tBodyAccJerkMag feature,)-axis
- **tBodyAccJerkMag-std()** - average value of the standard deviation of the tBodyAccJerkMag feature
- **tBodyGyroMag-mean()** - average value of the mean of the tBodyGyroMag feature,)-axis
- **tBodyGyroMag-std()** - average value of the standard deviation of the tBodyGyroMag feature
- **tBodyGyroJerkMag-mean()** - average value of the mean of the tBodyGyroJerkMag feature,)-axis
- **tBodyGyroJerkMag-std()** - average value of the standard deviation of the tBodyGyroJerkMag feature
- **fBodyAcc-mean()-X** - average value of the mean of the fBodyAcc feature, X-axis
- **fBodyAcc-mean()-Y** - average value of the mean of the fBodyAcc feature, Y-axis
- **fBodyAcc-mean()-Z** - average value of the mean of the fBodyAcc feature, Z-axis
- **fBodyAcc-std()-X** - average value of the standard deviation of the fBodyAcc feature, X-axis
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- **fBodyAccJerk-mean()-X** - average value of the mean of the fBodyAccJerk feature, X-axis
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- **fBodyAccJerk-std()-Z** - average value of the standard deviation of the fBodyAccJerk feature, Z-axis
- **fBodyGyro-mean()-X** - average value of the mean of the fBodyGyro feature, X-axis
- **fBodyGyro-mean()-Y** - average value of the mean of the fBodyGyro feature, Y-axis

- **fBodyGyro-mean()-Z** - average value of the mean of the fBodyGyro feature, Z-axis
- **fBodyGyro-std()-X** - average value of the standard deviation of the fBodyGyro feature, X-axis
- **fBodyGyro-std()-Y** - average value of the standard deviation of the fBodyGyro feature, Y-axis
- **fBodyGyro-std()-Z** - average value of the standard deviation of the fBodyGyro feature, Z-axis
- **fBodyAccMag-mean()** - average value of the mean of the fBodyAccMag feature
- **fBodyAccMag-std()** - average value of the standard deviation of the fBodyAccMag feature
- **fBodyBodyAccJerkMag-mean()** - average value of the mean of the fBodyBodyAccJerkMag feature
- **fBodyBodyAccJerkMag-std()** - average value of the standard deviation of the fBodyBodyAccJerkMag feature
- **fBodyBodyGyroMag-mean()** - average value of the mean of the fBodyBodyGyroMag feature
- **fBodyBodyGyroMag-std()** - average value of the standard deviation of the fBodyBodyGyroMag feature
- **fBodyBodyGyroJerkMag-mean()** - average value of the mean of the fBodyBodyGyroJerkMag feature
- **fBodyBodyGyroJerkMag-std()** - average value of the standard deviation of the fBodyBodyGyroJerkMag feature

References

[1] Davide Anguita, Alessandro Ghio, Luca Oneto, Xavier Parra and Jorge L. Reyes-Ortiz. Human Activity Recognition on Smartphones using a Multiclass Hardware-Friendly Support Vector Machine. International Workshop of Ambient Assisted Living (IWAAL 2012). Vitoria-Gasteiz, Spain. Dec 2012

Link to UCI HAR Dataset:

<https://d396qusza40orc.cloudfront.net/getdata%2Fprojectfiles%2FUCI%20HAR%20Dataset.zip>