Code Book. Averages of human activity recognition using a Smartphone

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Source data and experiment

The source data was provided via a zip file from the following link "http://archive.ics.uci.edu/ml/datasets/Human+Activity+Recognition+Using+Smartphones". It contains the measures of 30 subjects using a Samsung smartphones in two groups a test and a train group.

Summarized data

Data is summarized using the average values for the means and standard deviation of each observation grouped by subject and activity. The data summarized is provided in a file called result.txt. The R script run_analysis.R could be used to repeat the analysis.

Description of data

In the file every row has the average values of the mean and the standard deviation of the 30 subjects that participated in an study using a Samsung phone with sensors. All subjects executed different activities. Each row has the average for each subject and activity. The data has been combined from

The variables used are listed below.

Order	Variable Name	Description
		The individual identified by numbers 1 to
1	Subject	30
		The activity. Valid values are: Walking,
		Walking Upstairs, Walking Downstairs,
2	Activity	Sitting, Standing and Laying
		The average of the mean of variable
3	tBodyAcc-mean()-X	tBodyAcc for axis X
		The average of the mean of variable
4	tBodyAcc-mean()-Y	tBodyAcc for axis Y
		The average of the mean of variable
5	tBodyAcc-mean()-Z	tBodyAcc for axis Z

Order	Variable Name	Description		
		The average of the standard deviation of		
6	tBodyAcc-std()-X	variable tBodyAcc for axis X		
	· · · · · · · · · · · · · · · · · · ·	The average of the standard deviation of		
7	tBodyAcc-std()-Y	variable tBodyAcc for axis Y		
	· ·	The average of the standard deviation of		
8	tBodyAcc-std()-Z	variable tBodyAcc for axis Z		
		The average of the mean of variable		
9	tGravityAcc-mean()-X	tGravityAcc for axis X		
		The average of the mean of variable		
10	tGravityAcc-mean()-Y	tGravityAcc for axis Y		
		The average of the mean of variable		
11	tGravityAcc-mean()-Z	tGravityAcc for axis Z		
		The average of the standard deviation of		
12	tGravityAcc-std()-X	variable tGravityAcc for axis X		
		The average of the standard deviation of		
13	tGravityAcc-std()-Y	variable tGravityAcc for axis Y		
		The average of the standard deviation of		
14	tGravityAcc-std()-Z	variable tGravityAcc for axis Z		
4.5		The average of the mean of variable		
15	tBodyAccJerk-mean()-X	tBodyAccJerk for axis X		
1.0	tDoduAcalantanaan/\\	The average of the mean of variable		
16	tBodyAccJerk-mean()-Y	tBodyAccJerk for axis Y		
17	tBodyAccJerk-mean()-Z	The average of the mean of variable tBodyAccJerk for axis Z		
	tbodyAccJerk-mean()-2	The average of the standard deviation of		
18	tBodyAccJerk-std()-X	variable tBodyAccJerk for axis X		
	ebody/tesserik sta() //	The average of the standard deviation of		
19	tBodyAccJerk-std()-Y	variable tBodyAccJerk for axis Y		
	, ,	The average of the standard deviation of		
20	tBodyAccJerk-std()-Z	variable tBodyAccJerk for axis Z		
		The average of the mean of variable		
21	tBodyGyro-mean()-X	tBodyGyro for axis X		
		The average of the mean of variable		
22	tBodyGyro-mean()-Y	tBodyGyro for axis Y		
		The average of the mean of variable		
23	tBodyGyro-mean()-Z	tBodyGyro for axis Z		
		The average of the standard deviation of		
24	tBodyGyro-std()-X	variable tBodyGyro for axis X		
25	ID-d CIVV	The average of the standard deviation of		
25	tBodyGyro-std()-Y	variable tBodyGyro for axis Y		
3.0	+DodyCyro ++4/\ 7	The average of the standard deviation of		
26	tBodyGyro-std()-Z	variable tBodyGyro for axis Z		

Order	Variable Name	Description	
- Oraci	- Validate Flattic	The average of the mean of variable	
27	tBodyGyroJerk-mean()-X	tBodyGyroJerk for axis X	
	,.,	The average of the mean of variable	
28	tBodyGyroJerk-mean()-Y	tBodyGyroJerk for axis Y	
	, , , , ,	The average of the mean of variable	
29	tBodyGyroJerk-mean()-Z	tBodyGyroJerk for axis Z	
		The average of the standard deviation of	
30	tBodyGyroJerk-std()-X	variable tBodyGyroJerk for axis X	
		The average of the standard deviation of	
31	tBodyGyroJerk-std()-Y	variable tBodyGyroJerk for axis Y	
		The average of the standard deviation of	
32	tBodyGyroJerk-std()-Z	variable tBodyGyroJerk for axis Z	
22	ID-d A-AA-	The average of the mean of variable	
33	tBodyAccMag-mean()	tBodyAccMag	
24	+DodyAccN42a c+d/\	The average of the standard deviation of	
34	tBodyAccMag-std()	variable tBodyAccMag The average of the mean of variable	
35	tGravityAccMag-mean()	tGravityAccMag	
	toravityAcciving mean()	The average of the standard deviation of	
36	tGravityAccMag-std()	variable tGravityAccMag	
	, , , , , , , , , , , , , , , , , , , ,	The average of the mean of variable	
37	tBodyAccJerkMag-mean()	tBodyAccJerkMag	
		The average of the standard deviation of	
38	tBodyAccJerkMag-std()	variable tBodyAccJerkMag	
		The average of the mean of variable	
39	tBodyGyroMag-mean()	tBodyGyroMag	
		The average of the standard deviation of	
40	tBodyGyroMag-std()	variable tBodyGyroMag	
4.4	+Dody Cymployl Marries - A	The average of the mean of variable	
41	tBodyGyroJerkMag-mean()	tBodyGyroJerkMag The average of the standard deviation of	
42	tBodyGyroJerkMag-std()	variable tBodyGyroJerkMag	
72	tbody dy roser kiviag statt	The average of the mean of variable	
43	fBodyAcc-mean()-X	fBodyAcc for axis X	
		The average of the mean of variable	
44	fBodyAcc-mean()-Y	fBodyAcc for axis Y	
		The average of the mean of variable	
45	fBodyAcc-mean()-Z	fBodyAcc for axis Z	
		The average of the standard deviation of	
46	fBodyAcc-std()-X	variable fBodyAcc for axis X	
		The average of the standard deviation of	
47	fBodyAcc-std()-Y	variable fBodyAcc for axis Y	

Order	Variable Name	Description		
		The average of the standard deviation of		
48	fBodyAcc-std()-Z	variable fBodyAcc for axis Z		
		The average of the mean of variable		
49	fBodyAccJerk-mean()-X	fBodyAccJerk for axis X		
		The average of the mean of variable		
50	fBodyAccJerk-mean()-Y	fBodyAccJerk for axis Y		
		The average of the mean of variable		
51	fBodyAccJerk-mean()-Z	fBodyAccJerk for axis Z		
		The average of the standard deviation of		
52	fBodyAccJerk-std()-X	variable fBodyAccJerk for axis X		
		The average of the standard deviation of		
53	fBodyAccJerk-std()-Y	variable fBodyAccJerk for axis Y		
	5- 1 - 1 - 10 -	The average of the standard deviation of		
54	fBodyAccJerk-std()-Z	variable fBodyAccJerk for axis Z		
	5- 1-5	The average of the mean of variable		
55	fBodyGyro-mean()-X	fBodyGyro for axis X		
5 6	(D. 1.6. ())	The average of the mean of variable		
56	fBodyGyro-mean()-Y	fBodyGyro for axis Y		
- 7	fp. d. C	The average of the mean of variable		
57	fBodyGyro-mean()-Z	fBodyGyro for axis Z		
го	fDoduCuro std() V	The average of the standard deviation of		
58	fBodyGyro-std()-X	variable fBodyGyro for axis X		
59	fRodyCyro std() V	The average of the standard deviation of		
	fBodyGyro-std()-Y	variable fBodyGyro for axis Y The average of the standard deviation of		
60	fBodyGyro-std()-Z	The average of the standard deviation of variable fBodyGyro for axis Z		
	ibodydyio sta() 2	The average of the mean of variable		
61	fBodyAccMag-mean()	fBodyAccMag		
	in the state of th	The average of the standard deviation of		
62	fBodyAccMag-std()	variable fBodyAccMag		
	fBodyBodyAccJerkMag-	The average of the mean of variable		
63	mean()	fBodyBodyAccJerkMag		
	fBodyBodyAccJerkMag-	The average of the standard deviation of		
64	std()	variable fBodyBodyAccJerkMag		
	fBodyBodyGyroMag-	The average of the mean of variable		
65	mean()	fBodyBodyGyroMag		
		The average of the standard deviation of		
66	fBodyBodyGyroMag-std()	variable fBodyBodyGyroMag		
	fBodyBodyGyroJerkMag-	The average of the mean of variable		
67	mean()	fBodyBodyGyroJerkMag		
	fBodyBodyGyroJerkMag-	The average of the standard deviation of		
68	std()	variable fBodyBodyGyroJerkMag		