**Codebook for Coursera getdata-011 Course Project**

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The final tidy data set produced by the R script **'run\_analysis.R'** is a text file containing 11880 observations of 4 variables. Each of these variables is described below, along with the variable type, short description, and general dimensions.

**subject**

numeric

unique number assigned to each subject in the study

1. values 1:30

Note: In the original data sets, the subject values were recorded in text files ‘subject\_test.txt’ and ‘subject\_train.txt’.

**activity**

string

unique activity engaged in by each subject

factor w/ 6 levels

1. WALKING
2. WALKING\_UPSTAIRS
3. WALKING\_DOWNSTAIRS
4. SITTING
5. STANDING
6. LAYING

Note: In the original data sets, the activity values were recorded in text files ‘y\_test.txt’ and ‘y\_train.txt’.

**measurement**

string

label for mean of each measurement taken in the study

factor w/66 levels

1. tBodyAcc-mean()-X
2. tBodyAcc-mean()-Y
3. tBodyAcc-mean()-Z
4. tBodyAcc-std()-X
5. tBodyAcc-std()-Y
6. tBodyAcc-std()-Z
7. tGravityAcc-mean()-X
8. tGravityAcc-mean()-Y
9. tGravityAcc-mean()-Z
10. tGravityAcc-std()-X
11. tGravityAcc-std()-Y
12. tGravityAcc-std()-Z
13. tBodyAccJerk-mean()-X
14. tBodyAccJerk-mean()-Y
15. tBodyAccJerk-mean()-Z
16. tBodyAccJerk-std()-X
17. tBodyAccJerk-std()-Y
18. tBodyAccJerk-std()-Z
19. tBodyGyro-mean()-X
20. tBodyGyro-mean()-Y
21. tBodyGyro-mean()-Z
22. tBodyGyro-std()-X
23. tBodyGyro-std()-Y
24. tBodyGyro-std()-Z
25. tBodyGyroJerk-mean()-X
26. tBodyGyroJerk-mean()-Y
27. tBodyGyroJerk-mean()-Z
28. tBodyGyroJerk-std()-X
29. tBodyGyroJerk-std()-Y
30. tBodyGyroJerk-std()-Z
31. tBodyAccMag-mean()
32. tBodyAccMag-std()
33. tGravityAccMag-mean()
34. tGravityAccMag-std()
35. tBodyAccJerkMag-mean()
36. tBodyAccJerkMag-std()
37. tBodyGyroMag-mean()
38. tBodyGyroMag-std()
39. tBodyGyroJerkMag-mean()
40. tBodyGyroJerkMag-std()
41. fBodyAcc-mean()-X
42. fBodyAcc-mean()-Y
43. fBodyAcc-mean()-Z
44. fBodyAcc-std()-X
45. fBodyAcc-std()-Y
46. fBodyAcc-std()-Z
47. fBodyAccJerk-mean()-X
48. fBodyAccJerk-mean()-Y
49. fBodyAccJerk-mean()-Z
50. fBodyAccJerk-std()-X
51. fBodyAccJerk-std()-Y
52. fBodyAccJerk-std()-Z
53. fBodyGyro-mean()-X
54. fBodyGyro-mean()-Y
55. fBodyGyro-mean()-Z
56. fBodyGyro-std()-X
57. fBodyGyro-std()-Y
58. fBodyGyro-std()-Z
59. fBodyAccMag-mean()
60. fBodyAccMag-std()
61. fBodyBodyAccJerkMag-mean()
62. fBodyBodyAccJerkMag-std()
63. fBodyBodyGyroMag-mean()
64. fBodyBodyGyroMag-std()
65. fBodyBodyGyroJerkMag-mean()
66. fBodyBodyGyroJerkMag-std()

Note: In the original data sets, 561 measurement labels were recorded in a text file ‘features.txt’ and comprised differing results of mathematical operations carried out on the original inertial readings taken from smartphones used in the study. For the purpose of this project, only the mean and standard deviation values were extracted.

**measurementMean**

numeric

mean of each measurement, for each activity, for each subject.

values -0.99770: 0.97450

Note: In the original data sets, the measurements were stored in two text files ‘X\_test.txt’ and ‘X\_train.txt’ comprising several thousand observations of the 561 variables noted. These were joined for this project to produce a single table for further analysis.

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END NOTES: Data for this project were taken from the following source:

Human Activity Recognition Using Smartphones Dataset, Version 1.0

Jorge L. Reyes-Ortiz, Davide Anguita, Alessandro Ghio, Luca Oneto.

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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.

Further information about the original data sets, along with downloadable data, can be found here:

http://archive.ics.uci.edu/ml/datasets/Human+Activity+Recognition+Using+Smartphones