

Code Book – RunData
Created Sept 25, 2015

ID

Identification number: unique identifier for each subject (n=1 to 30)

activity

Activity label (factor variable, levels 1-6):

- 1 – Walking
- 2 – Walking Upstairs
- 3 – Walking Downstairs
- 4 – Sitting
- 5 – Standing
- 6 – Laying

*** The following variables are defined in groups of three – measurements made along the X, Y, and X axes, measured in the following way (this information borrowed from features_info.txt, part of the package downloaded with the raw data from

[http://archive.ics.uci.edu/ml/datasets/Human+Activity+Recognition+Using+Smart phones](http://archive.ics.uci.edu/ml/datasets/Human+Activity+Recognition+Using+Smart+phones)):

The sensor signals (accelerometer and gyroscope) were pre-processed by applying noise filters and then sampled in fixed-width sliding windows of 2.56 sec and 50% overlap (128 readings/window). The sensor acceleration signal, which has gravitational and body motion components, was separated using a Butterworth low-pass filter into body acceleration and gravity.

tBodyAcc.mean...X

tBodyAcc.mean...Y

tBodyAcc.mean...Z

Time domain – mean of body acceleration signal MEAN

tBodyAcc.std...X

tBodyAcc.std...Y

tBodyAcc.std...Z

Time domain – mean of body acceleration signal STANDARD DEVIATION

tGravityAcc.mean...X

tGravityAcc.mean...Y

tGravityAcc.mean...Z

Time domain – mean of gravity acceleration signal MEAN

tGravityAcc.std...X

tGravityAcc.std...Y

tGravityAcc.std...Z

Time domain – mean of gravity acceleration signal STANDARD DEVIATION

tBodyAccJerk.mean...X

tBodyAccJerk.mean...Y

tBodyAccJerk.mean...Z

Time domain – mean of acceleration jerk signal MEAN

tBodyAccJerk.std...X

tBodyAccJerk.std...Y

tBodyAccJerk.std...Z

Time domain – mean of acceleration jerk signal STANDARD DEVIATION

tBodyGyro.mean...X

tBodyGyro.mean...Y

tBodyGyro.mean...Z

Time domain – mean of gyroscope raw signal MEAN

tBodyGyro.std...X

tBodyGyro.std...Y

tBodyGyro.std...Z

Time domain – mean of gyroscope raw signal STANDARD DEVIATION

tBodyGyroJerk.mean...X

tBodyGyroJerk.mean...Y

tBodyGyroJerk.mean...Z

Time domain – mean of gyroscope jerk signal MEAN

tBodyGyroJerk.std...X

tBodyGyroJerk.std...Y

tBodyGyroJerk.std...Z

Time domain – mean of gyroscope jerk signal STANDARD DEVIATION

*** The magnitude of the three-dimensional signals using the Euclidean norm ***

tBodyAccMag.mean..

mean of body acceleration magnitude MEAN

tBodyAccMag.std..

mean of body acceleration magnitude STANDARD DEVIATION

tGravityAccMag.mean..

mean of gravity acceleration magnitude MEAN

tGravityAccMag.std..

mean of gravity acceleration magnitude STANDARD DEVIATION

tBodyAccJerkMag.mean..

mean of body acceleration jerk magnitude MEAN

tBodyAccJerkMag.std..

mean of body acceleration jerk magnitude STANDARD DEVIATION

tBodyGyroMag.mean..

mean of body gyroscope magnitude MEAN

tBodyGyroMag.std..

mean of body gyroscope magnitude STANDARD DEVIATION

tBodyGyroJerkMag.mean..

mean of body gyroscope jerk magnitude MEAN

tBodyGyroJerkMag.std..

mean of body gyroscope jerk magnitude STANDARD DEVIATION

*** The following variables, in a similar fashion to the time-related variables above, are grouped into threes – measurements made along the X, Y, and Z axes. The variables below are frequency domain signals.

fBodyAcc.mean...X

fBodyAcc.mean...Y

fBodyAcc.mean...Z

Frequency domain – mean of body acceleration signal MEAN

fBodyAcc.std...X

fBodyAcc.std...Y

fBodyAcc.std...Z

Frequency domain – mean of body acceleration signal STANDARD DEVIATION

fBodyAcc.meanFreq...X

fBodyAcc.meanFreq...Y

fBodyAcc.meanFreq...Z

Frequency domain – mean of body acceleration mean frequency

fBodyAccJerk.mean...X

fBodyAccJerk.mean...Y

fBodyAccJerk.mean...Z

Frequency domain – mean of body acceleration jerk signal MEAN

fBodyAccJerk.std...X

fBodyAccJerk.std...Y

fBodyAccJerk.std...Z

Frequency domain – mean of body acceleration jerk signal STANDARD DEVIATION

fBodyAccJerk.meanFreq...X

fBodyAccJerk.meanFreq...Y

fBodyAccJerk.meanFreq...Z

Frequency domain – mean of body acceleration jerk signal mean frequency

fBodyGyro.mean...X

fBodyGyro.mean...Y

fBodyGyro.mean...Z

Frequency domain – mean of gyroscope raw signal MEAN

fBodyGyro.std...X

fBodyGyro.std...Y

fBodyGyro.std...Z

Frequency domain – mean of gyroscope raw signal STANDARD DEVIATION

fBodyGyro.meanFreq...X

fBodyGyro.meanFreq...Y

fBodyGyro.meanFreq...Z

Frequency domain – mean of gyroscope raw signal mean frequency

*** Magnitude of three-dimensional signals, Euclidean norm ***

fBodyAccMag.mean..

mean of body acceleration magnitude MEAN

fBodyAccMag.std..

mean of body acceleration magnitude STANDARD DEVIATION

fBodyAccMag.meanFreq..

mean of body acceleration magnitude mean frequency

fBodyBodyAccJerkMag.mean..

mean of body acceleration magnitude MEAN

fBodyBodyAccJerkMag.std..

mean of body acceleration magnitude STANDARD DEVIATION

fBodyBodyAccJerkMag.meanFreq..

mean of body acceleration magnitude mean frequency

fBodyBodyGyroMag.mean..
mean of body gyroscope magnitude MEAN

fBodyBodyGyroMag.std..
mean of body gyroscope magnitude STANDARD DEVIATION

fBodyBodyGyroMag.meanFreq..
mean of body gyroscope magnitude mean frequency

fBodyBodyGyroJerkMag.mean..
mean of body gyroscope jerk magnitude MEAN

fBodyBodyGyroJerkMag.std..
mean of body gyroscope jerk magnitude STANDARD DEVIATION

fBodyBodyGyroJerkMag.meanFreq..
mean of body gyroscope jerk magnitude mean frequency