#### DATA DICTIONARY

One observation per Subject/Activity pair.

- [1] "Subject"
  - A group of 30 volunteers within an age bracket of 19-48 years. Numbered 1 to 30.
- [2] "Activity"
  - One of walking, walking\_upstairs, walking\_downstairs, sitting, standing or laying
- [3] "timeBodyAcc.mean.X"
  - average of mean of body X axis acceleration in time domain units normalized and bounded within [-1,1]
- [4] "timeBodyAcc.mean.Y"
  - average of mean of body Y axis acceleration in time domain units normalized and bounded within [-1,1]
- [5] "timeBodyAcc.mean.Z"
  - average of mean of body Z axis acceleration in time domain units normalized and bounded within [-1,1]
- [6] "timeBodyAcc.std.X"
  - average of standard deviation of body  ${\tt X}$  axis acceleration in time domain
  - units normalized and bounded within [-1,1]
- [7] "timeBodyAcc.std.Y"
  - average of standard deviation of body Y axis acceleration in time domain
  - units normalized and bounded within [-1,1]
- [8] "timeBodyAcc.std.Z"
  - average of standard deviation of body Z axis acceleration in time domain
  - units normalized and bounded within [-1,1]
- [9] "timeGravityAcc.mean.X"
  - average of mean of gravity X axis acceleration in time domain units normalized and bounded within [-1,1]
- [10] "timeGravityAcc.mean.Y"
  - average of mean of gravity Y axis acceleration in time domain units normalized and bounded within [-1,1]
- [11] "timeGravityAcc.mean.Z"
  - average of mean of gravity Z axis acceleration in time domain units normalized and bounded within [-1,1]
- [12] "timeGravityAcc.std.X"
  - average of standard deviation of gravity X axis acceleration

in time domain units normalized and bounded within [-1,1]

# [13] "timeGravityAcc.std.Y"

average of standard deviation of gravity Y axis acceleration in time  $\operatorname{domain}$ 

units normalized and bounded within [-1,1]

# [14] "timeGravityAcc.std.Z"

average of standard deviation of gravity  ${\bf Z}$  axis acceleration in time domain

units normalized and bounded within [-1,1]

# [15] "timeBodyAccJerk.mean.X"

average of mean of body X axis acceleration jerk in time domain

units normalized and bounded within [-1,1]

# [16] "timeBodyAccJerk.mean.Y"

average of mean of body Y axis acceleration jerk in time domain

units normalized and bounded within [-1,1]

#### [17] "timeBodyAccJerk.mean.Z"

average of mean of body Z axis acceleration jerk in time domain

units normalized and bounded within [-1,1]

#### [18] "timeBodyAccJerk.std.X"

average of standard deviation of body X axis acceleration jerk in time domain

units normalized and bounded within [-1,1]

# [19] "timeBodyAccJerk.std.Y"

average of standard deviation of body Y axis acceleration jerk in time domain

units normalized and bounded within [-1,1]

#### [20] "timeBodyAccJerk.std.Z"

average of standard deviation of body  ${\bf Z}$  axis acceleration jerk in time domain

units normalized and bounded within [-1,1]

#### [21] "timeBodyGyro.mean.X"

average of mean of body X axis angular velocity in time domain units normalized and bounded within [-1,1]

# [22] "timeBodyGyro.mean.Y"

average of mean of body Y axis angular velocity in time domain units normalized and bounded within [-1,1]

#### [23] "timeBodyGyro.mean.Z"

average of mean of body Z axis angular velocity in time domain

units normalized and bounded within [-1,1]

[24] "timeBodyGyro.std.X"

average of standard deviation of body  ${\tt X}$  axis angular velocity in time domain

units normalized and bounded within [-1,1]

[25] "timeBodyGyro.std.Y"

average of standard deviation of body Y axis angular velocity in time domain

units normalized and bounded within [-1,1]

[26] "timeBodyGyro.std.Z"

average of standard deviation of body  ${\tt Z}$  axis angular velocity in time domain

units normalized and bounded within [-1,1]

[27] "timeBodyGyroJerk.mean.X"

average of mean of body X axis angular velocity jerk in time domain

units normalized and bounded within [-1,1]

[28] "timeBodyGyroJerk.mean.Y"

average of mean of body Y axis angular velocity jerk in time domain

units normalized and bounded within [-1,1]

[29] "timeBodyGyroJerk.mean.Z"

average of mean of body Z axis angular velocity jerk in time domain

units normalized and bounded within [-1,1]

[30] "timeBodyGyroJerk.std.X"

average of standard deviation of body X axis angular velocity jerk in time domain

units normalized and bounded within [-1,1]

[31] "timeBodyGyroJerk.std.Y"

average of standard deviation of body Y axis angular velocity jerk in time domain

units normalized and bounded within [-1,1]

[32] "timeBodyGyroJerk.std.Z"

average of standard deviation of body Z axis angular velocity jerk in time domain

units normalized and bounded within [-1,1]

[33] "timeBodyAccMag.mean"

average of mean of body acceleration magnitude in time domain units normalized and bounded within [-1,1]

[34] "timeBodyAccMag.std"

average of standard deviation of body acceleration magnitude

in time domain units normalized and bounded within [-1,1]

# [35] "timeGravityAccMag.mean" average of mean of gravity acceleration magnitude in time domain units normalized and bounded within [-1,1]

- [36] "timeGravityAccMag.std" average of standard deviation of gravity acceleration magnitude in time domain units normalized and bounded within [-1,1]
- [37] "timeBodyAccJerkMag.mean" average of mean of body acceleration jerk magnitude in time domain units normalized and bounded within [-1,1]
- [38] "timeBodyAccJerkMag.std" average of standard deviation of body acceleration jerk magnitude in time domain units normalized and bounded within [-1,1]
- [39] "timeBodyGyroMag.mean" average of mean of body angular velocity magnitude in time domain units normalized and bounded within [-1,1]
- [40] "timeBodyGyroMag.std" average of standard deviation of body angular velocity magnitude in time domain units normalized and bounded within [-1,1]
- [41] "timeBodyGyroJerkMag.mean" average of mean of body angular velocity jerk magnitude in time domain units normalized and bounded within [-1,1]
- [42] "timeBodyGyroJerkMag.std" average of standard deviation of body angular velocity jerk magnitude in time domain units normalized and bounded within [-1,1]
- [43] "frequencyBodyAcc.mean.X" average of mean of body X axis acceleration in frequency domain units normalized and bounded within [-1,1]
- [44] "frequencyBodyAcc.mean.Y" average of mean of body Y axis acceleration in frequency domain units normalized and bounded within [-1,1]

- [45] "frequencyBodyAcc.mean.Z" average of mean of body Z axis acceleration in frequency domain units normalized and bounded within [-1,1]
- [46] "frequencyBodyAcc.std.X" average of standard deviation of body X axis acceleration in frequency domain units normalized and bounded within [-1,1]
- [47] "frequencyBodyAcc.std.Y" average of standard deviation of body Y axis acceleration in frequency domain units normalized and bounded within [-1,1]
- [48] "frequencyBodyAcc.std.Z" average of standard deviation of body Z axis acceleration in frequency domain units normalized and bounded within [-1,1]
- [49] "frequencyBodyAccJerk.mean.X" average of mean of body X axis acceleration jerk in frequency domain units normalized and bounded within [-1,1]
- [50] "frequencyBodyAccJerk.mean.Y" average of mean of body Y axis acceleration jerk in frequency domain units normalized and bounded within [-1,1]
- [51] "frequencyBodyAccJerk.mean.Z" average of mean of body Z axis acceleration jerk in frequency domain units normalized and bounded within [-1,1]
- [52] "frequencyBodyAccJerk.std.X" average of standard deviation of body X axis acceleration jerk in frequency domain units normalized and bounded within [-1,1]
- [53] "frequencyBodyAccJerk.std.Y" average of standard deviation of body Y axis acceleration jerk in frequency domain units normalized and bounded within [-1,1]
- [54] "frequencyBodyAccJerk.std.Z" average of standard deviation of body Z axis acceleration jerk in frequency domain units normalized and bounded within [-1,1]
- [55] "frequencyBodyGyro.mean.X" average of mean of body X axis angular velocity in frequency domain

units normalized and bounded within [-1,1]

- [56] "frequencyBodyGyro.mean.Y" average of mean of body Y axis angular velocity in frequency domain units normalized and bounded within [-1,1]
- [57] "frequencyBodyGyro.mean.Z" average of mean of body Z axis angular velocity in frequency domain units normalized and bounded within [-1,1]
- [58] "frequencyBodyGyro.std.X" average of standard deviation of body X axis angular velocity in frequency domain units normalized and bounded within [-1,1]
- [59] "frequencyBodyGyro.std.Y" average of standard deviation of body Y axis angular velocity in frequency domain units normalized and bounded within [-1,1]
- [60] "frequencyBodyGyro.std.Z" average of standard deviation of body Z axis angular velocity in frequency domain units normalized and bounded within [-1,1]
- [61] "frequencyBodyAccMag.mean" average of mean of body acceleration magnitude in frequency domain units normalized and bounded within [-1,1]
- [62] "frequencyBodyAccMag.std" average of standard deviation of body acceleration magnitude in frequency domain units normalized and bounded within [-1,1]
- [63] "frequencyBodyAccJerkMag.mean" average of mean of body acceleration jerk magnitude in frequency domain units normalized and bounded within [-1,1]
- [64] "frequencyBodyAccJerkMag.std" average of standard deviation of body acceleration jerk magnitude in frequency domain units normalized and bounded within [-1,1]
- [65] "frequencyBodyGyroMag.mean" average of mean of body angular velocity magnitude in frequency domain units normalized and bounded within [-1,1]
- [66] "frequencyBodyGyroMag.std"

average of standard deviation of body angular velocity magnitude in frequency domain units normalized and bounded within [-1,1]

- [67] "frequencyBodyGyroJerkMag.mean" average of mean of body angular velocity jerk magnitude in frequency domain units normalized and bounded within [-1,1]
- [68] "frequencyBodyGyroJerkMag.std" average of standard deviation of body angular velocity jerk magnitude in frequency domain units normalized and bounded within [-1,1]

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