

Data Dictionary – Tidy Data from Human Activity Recognition Using Smartphones Data Set

This data was downloaded from the Coursera Getting and Cleaning data course site at <https://d396qusza40orc.cloudfront.net/getdata%2Fprojectfiles%2FUCI%20HAR%20Dataset.zip>

It relates to the project at

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

The data was tidied and cleaned and summarized by Activity name and Subject Code (i.e. each participant in the test). The fields on the summarized file are as follows:-

[1] activity_name Character

WALKING

WALKING_UPSTAIRS

WALKING_DOWNSTAIRS

SITTING

STANDING

LAYING

[2] subject_code Numeric

Test Participant code 1-30

Average data by Activity code, test subject of multiple observations over time of data from the accelerometer measuring mean acceleration due to body movements in each of the three dimensions.

Units are g's. (gravity of earth -> 9.80665 m/seg2)

[3] average_time_body_acceleration_mean()-X Numeric

[4] average_time_body_acceleration_mean()-Y Numeric

[5] average_time_body_acceleration_mean()-Z Numeric

Average data by Activity code, test subject of multiple observations over time of data from the accelerometer measuring mean acceleration due to gravity in each of the three dimensions.

[6] average_time_gravity_acceleration_mean()-X Numeric

[7] average_time_gravity_acceleration_mean()-Y Numeric

[8] average_time_gravity_acceleration_mean()-Z Numeric

Units are g's. (gravity of earth -> 9.80665 m/seg2)

Average data by Activity code, test subject of multiple observations of data from the accelerometer measuring mean linear acceleration due to body movements in each of the three dimensions.

[9] average_time_body_acceleration_jerk_mean()-X Numeric

[10] average_time_body_acceleration_jerk_mean()-Y Numeric

[11] average_time_body_acceleration_jerk_mean()-Z Numeric

Units are g's. (gravity of earth -> 9.80665 m/seg2)

Average data by Activity code, test subject of multiple observations of data from the gyroscope measuring movement due to body movements in each of the three dimensions.

[12] average_time_body_gyroscope_mean()-X Numeric

[13] average_time_body_gyroscope_mean()-Y Numeric

[14] average_time_body_gyroscope_mean()-Z Numeric

Units are rad/seg

Average data by Activity code, test subject of multiple observations of data from the gyroscope measuring mean angular velocity due to body movements in each of the three dimensions.

[15] average_time_body_gyroscope_jerk_mean()-X Numeric

| | |
|------------------------------------------------|---------|
| [16] average_time_body_gyroscope_jerk_mean()-Y | Numeric |
| [17] average_time_body_gyroscope_jerk_mean()-Z | Numeric |
| Units are rad/seg | |

Average data by Activity code, test subject of the magnitude of the mean if the above signals of body linear acceleration and angular velocity signals calculated using the Euclidean norm i.e. converting the (X,Y,Z) values into a magnitude.

| | |
|-----------------------------------------------------|---------|
| [18] average_time_body_acceleration_mag_mean() | Numeric |
| [19] average_time_gravity_acceleration_mag_mean() | Numeric |
| [20] average_time_body_acceleration_jerk_mag_mean() | Numeric |
| [21] average_time_body_gyroscope_mag_mean() | Numeric |
| [22] average_time_body_gyroscope_jerk_mag_mean() | Numeric |

Average data by Activity code, test subject of a Fast Fourier Transform (FFT) of the above signals of body linear acceleration and angular velocity .

| | |
|--------------------------------------------------|---------|
| [23] average_fft_body_acceleration_mean()-X | Numeric |
| [24] average_fft_body_acceleration_mean()-Y | Numeric |
| [25] average_fft_body_acceleration_mean()-Z | Numeric |
| [26] average_fft_body_acceleration_jerk_mean()-X | Numeric |
| [27] average_fft_body_acceleration_jerk_mean()-Y | Numeric |
| [28] average_fft_body_acceleration_jerk_mean()-Z | Numeric |

| | |
|------------------------------------------|---------|
| [29] average_fft_body_gyroscope_mean()-X | Numeric |
| [30] average_fft_body_gyroscope_mean()-Y | Numeric |
| [31] average_fft_body_gyroscope_mean()-Z | Numeric |

| | |
|---------------------------------------------------------|---------|
| [32] average_fft_body_acceleration_mag_mean() | Numeric |
| [33] average_fft_body_body_acceleration_jerk_mag_mean() | Numeric |
| [34] average_fft_body_body_gyroscope_mag_mean() | Numeric |
| [35] average_fft_body_body_gyroscope_jerk_mag_mean() | Numeric |

Average data by Activity code, test subject of multiple observations over time of data from the accelerometer measuring the standard deviation of acceleration due to body movements in each of the three dimensions.

| | |
|-----------------------------------------------------|---------|
| [36] average_time_body_acceleration_std()-X | Numeric |
| [37] average_time_body_acceleration_std()-Y | Numeric |
| [38] average_time_body_acceleration_std()-Z | Numeric |
| Units are g's. (gravity of earth -> 9.80665 m/seg2) | |

Average data by Activity code, test subject of multiple observations over time of data from the accelerometer measuring standard deviation of acceleration due to gravity in each of the three dimensions.

| | |
|-----------------------------------------------------|---------|
| [39] average_time_gravity_acceleration_std()-X | Numeric |
| [40] average_time_gravity_acceleration_std()-Y | Numeric |
| [41] average_time_gravity_acceleration_std()-Z | Numeric |
| Units are g's. (gravity of earth -> 9.80665 m/seg2) | |

Average data by Activity code, test subject of multiple observations of data from the accelerometer measuring standard deviation of linear acceleration due to body movements in each of the three dimensions.

| | |
|------------------------------------------------------|---------|
| [42] average_time_body_acceleration_jerk_std()-X | Numeric |
| [43] average_time_body_acceleration_jerk_std()-Y | Numeric |
| [Units are g's. (gravity of earth -> 9.80665 m/seg2) | |

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44] average_time_body_acceleration_jerk_std()-Z Numeric

Average data by Activity code, test subject of multiple observations of data from the gyroscope measuring standard deviation of movements due to body movements in each of the three dimensions.

[45] average_time_body_gyroscope_std()-X Numeric

[46] average_time_body_gyroscope_std()-Y Numeric

[47] average_time_body_gyroscope_std()-Z Numeric

Units are rad/seg

Average data by Activity code, test subject of multiple observations of data from the gyroscope measuring standard deviation of angular velocity due to body movements in each of the three dimensions.

[48] average_time_body_gyroscope_jerk_std()-X Numeric

[49] average_time_body_gyroscope_jerk_std()-Y Numeric

[50] average_time_body_gyroscope_jerk_std()-Z Numeric

Units are rad/seg

Average data by Activity code, test subject of the magnitude of the above standard deviation of signals of body linear acceleration and angular velocity signals calculated using the Euclidean norm i.e. converting the (X,Y,Z) values into a magnitude.

[51] average_time_body_acceleration_mag_std() Numeric

[52] average_time_gravity_acceleration_mag_std() Numeric

[53] average_time_body_acceleration_jerk_mag_std() Numeric

[54] average_time_body_gyroscope_mag_std() Numeric

[55] average_time_body_gyroscope_jerk_mag_std() Numeric

Units are rad/seg

Average data by Activity code, test subject of a Fast Fourier Transform (FFT) of the above standard deviation signals of body linear acceleration and angular velocity .

[56] average_fft_body_acceleration_std()-X Numeric

[57] average_fft_body_acceleration_std()-Y Numeric

[58] average_fft_body_acceleration_std()-Z Numeric

[59] average_fft_body_acceleration_jerk_std()-X Numeric

[60] average_fft_body_acceleration_jerk_std()-Y Numeric

[61] average_fft_body_acceleration_jerk_std()-Z Numeric

[62] average_fft_body_gyroscope_std()-X Numeric

[63] average_fft_body_gyroscope_std()-Y Numeric

[64] average_fft_body_gyroscope_std()-Z Numeric

[65] average_fft_body_acceleration_mag_std() Numeric

[66] average_fft_body_body_acceleration_jerk_mag_std() Numeric

[67] average_fft_body_body_gyroscope_mag_std() Numeric

[68] average_fft_body_body_gyroscope_jerk_mag_std() Numeric