

Data Dictionary of UCI HAR Dataset

After transforming it into Tidy Data

Study Design

Raw data set comes from

<https://d396qusza40orc.cloudfront.net/getdata%2Fprojectfiles%2FUCI%20HAR%20Dataset.zip>

First variable comes from subject_train.txt/subject_test.txt

Second variable comes from activity_labels.txt

Variable from number 3 to 68 are calculated from variables in features.txt in the dataset, in which had either "mean()" or "std()" occurs.

meanFreq() is Weighted average of the frequency components, so it is not taken as mean as it not itself mean.

There are 66 variables in which either "mean()" or "std()" occurs.

The 66 variables given below are the mean values of these 66 variables grouped by subject_num and activity name.

The numerical values for variables given below are the mean values calculated from X_train.txt and Y_train.txt for the 66 variables calculated above.

Code_Book

1. **subject_num**
type: integer
subject number from 30 volunteers who participated in the experiment
2. **activity_name**
type: character string
activity name i.e(walking, sitting, standing, laying etc)
3. **mean_time_body_acceleration_X**
type: numerical
time domain body linear acceleration signal's Mean value in X-direction
mean of 'tBodyAcc-mean()-X' variable
4. **mean_time_body_acceleration_Y**
type: numerical
time domain body linear acceleration signal's Mean value in Y-direction
mean of 'tBodyAcc-mean()-Y' variable
5. **mean_time_body_acceleration_Z**
type: numerical
time domain body linear acceleration signal's Mean value in Z-direction
mean of 'tBodyAcc-mean()-Z' variable
6. **std_time_body_acceleration_X**
type: numerical
time domain body linear acceleration signal's Standard deviation in X-direction
mean of 'tBodyAcc-std()-X' variable
7. **std_time_body_acceleration_Y**

- type: numerical
time domain body linear acceleration signal's Standard deviation in Y-direction
mean of 'tBodyAcc-std()-Y' variable
8. **std_time_body_acceleration_Z**
type: numerical
time domain body linear acceleration signal's Standard deviation in Z-direction
mean of 'tBodyAcc-std()-Z' variable
9. **mean_time_gravity_acceleration_X**
type: numerical
time domain gravity linear acceleration signal's Mean value in X-direction
mean of 'tGravityAcc-mean()-X' variable
10. **mean_time_gravity_acceleration_Y**
type: numerical
time domain gravity linear acceleration signal's Mean value in Y-direction
mean of 'tGravityAcc-mean()-Y' variable
11. **mean_time_gravity_acceleration_Z**
type: numerical
time domain gravity linear acceleration signal's Mean value in Z-direction
mean of 'tGravityAcc-mean()-Z' variable
12. **std_time_gravity_acceleration_X**
type: numerical
time domain gravity linear acceleration signal's Standard deviation in X-direction
mean of 'tGravityAcc-std()-X' variable
13. **std_time_gravity_acceleration_Y**
type: numerical
time domain gravity linear acceleration signal's Standard deviation in Y-direction
mean of 'tGravityAcc-std()-Y' variable
14. **std_time_gravity_acceleration_Z**
type: numerical
time domain gravity linear acceleration signal's Standard deviation in Z-direction
mean of 'tGravityAcc-std()-Z' variable
15. **mean_time_body_acceleration_jerk_X**
type: numerical
time domain body linear acceleration Jerk signal's Mean value in X-direction
mean of 'tBodyAccJerk-mean()-X' variable
16. **mean_time_body_acceleration_jerk_Y**
type: numerical
time domain body linear acceleration Jerk signal's Mean value in Y-direction
mean of 'tBodyAccJerk-mean()-Y' variable
17. **mean_time_body_acceleration_jerk_Z**
type: numerical
time domain body linear acceleration Jerk signal's Mean value in Z-direction
mean of 'tBodyAccJerk-mean()-Z' variable
18. **std_time_body_acceleration_jerk_X**
type: numerical
time domain body linear acceleration Jerk signal's Standard deviation in X-direction
mean of 'tBodyAccJerk-std()-X' variable
19. **std_time_body_acceleration_jerk_Y**
type: numerical
time domain body linear acceleration Jerk signal's Standard deviation in Y-direction

- mean of 'tBodyAccJerk-std()-Y' variable
20. **std_time_body_acceleration_jerk_Z**
type: numerical
time domain body linear acceleration Jerk signal's Standard deviation in Z-direction
mean of 'tBodyAccJerk-std()-Z' variable
21. **mean_time_body_gyroscope_X**
type: numerical
time domain body gyroscope angular velocity's Mean value in X-direction
mean of 'tBodyGyro-mean()-X' variable
22. **mean_time_body_gyroscope_Y**
type: numerical
time domain body gyroscope angular velocity's Mean value in Y-direction
mean of 'tBodyGyro-mean()-Y' variable
23. **mean_time_body_gyroscope_Z**
type: numerical
time domain body gyroscope angular velocity's Mean value in Z-direction
mean of 'tBodyGyro-mean()-Z' variable
24. **std_time_body_gyroscope_X**
type: numerical
time domain body gyroscope angular velocity's Standard deviation in X-direction
mean of 'tBodyGyro-std()-X' variable
25. **std_time_body_gyroscope_Y**
type: numerical
time domain body gyroscope angular velocity's Standard deviation in Y-direction
mean of 'tBodyGyro-std()-Y' variable
26. **std_time_body_gyroscope_Z**
type: numerical
time domain body gyroscope angular velocity's Standard deviation in Z-direction
mean of 'tBodyGyro-std()-Z' variable
27. **mean_time_body_gyroscope_jerk_X**
type: numerical
time domain body gyroscope angular velocity Jerk signal's Mean value in X-direction
mean of 'tBodyGyroJerk-mean()-X' variable
28. **mean_time_body_gyroscope_jerk_Y**
type: numerical
time domain body gyroscope angular velocity Jerk signal's Mean value in Y-direction
mean of 'tBodyGyroJerk-mean()-Y' variable
29. **mean_time_body_gyroscope_jerk_Z**
type: numerical
time domain body gyroscope angular velocity Jerk signal's Mean value in Z-direction
mean of 'tBodyGyroJerk-mean()-Z' variable
30. **std_time_body_gyroscope_jerk_X**
type: numerical
time domain body gyroscope angular velocity Jerk signal's Standard deviation in X-direction
mean of 'tBodyGyroJerk-std()-X' variable
31. **std_time_body_gyroscope_jerk_Y**
type: numerical
time domain body gyroscope angular velocity Jerk signal's Standard deviation in Y-direction
mean of 'tBodyGyroJerk-std()-Y' variable
32. **std_time_body_gyroscope_jerk_Z**

- type: numerical
time domain body gyroscope angular velocity Jerk signal's Standard deviation in Z-direction
mean of 'tBodyGyroJerk-std()-Z' variable
- 33.**mean_time_body_acceleration_magnitude**
type: numerical
time domain body linear acceleration signal magnitude's Mean value
mean of 'tBodyAccMag-mean()' variable
- 34.**std_time_body_acceleration_magnitude**
type: numerical
time domain body linear acceleration signal magnitude's Standard deviation
mean of 'tBodyAccMag-std()' variable
- 35.**mean_time_gravity_acceleration_magnitude**
type: numerical
time domain gravity acceleration signal magnitude's Mean value
mean of 'tGravityAccMag-mean()' variable
- 36.**std_time_gravity_acceleration_magnitude**
type: numerical
time domain gravity acceleration signal magnitude's Standard deviation
mean of 'tGravityAccMag-std()' variable
- 37.**mean_time_body_acceleration_jerk_magnitude**
type: numerical
time domain body linear acceleration Jerk signal magnitude's Mean value
mean of 'tBodyAccJerkMag-mean()' variable
- 38.**std_time_body_acceleration_jerk_magnitude**
type: numerical
time domain body linear accelerometer Jerk signal magnitude's Standard deviation
mean of 'tBodyAccJerkMag-std()' variable
- 39.**mean_time_body_gyroscope_magnitude**
type: numerical
time domain body gyroscope angular velocity magnitude's Mean value
mean of 'tBodyGyroMag-mean()' variable
- 40.**std_time_body_gyroscope_magnitude**
type: numerical
time domain body gyroscope angular velocity magnitude's Standard deviation
mean of 'tBodyGyroMag-std()' variable
- 41.**mean_time_body_gyroscope_jerk_magnitude**
type: numerical
time domain body gyroscope angular velocity Jerk signal magnitude's Mean value
mean of 'tBodyGyroJerkMag-mean()' variable
- 42.**std_time_body_gyroscope_jerk_magnitude**
type: numerical
time domain body gyroscope angular velocity Jerk signal magnitude's Standard deviation
mean of 'tBodyGyroJerkMag-std()' variable
- 43.**mean_frequency_body_acceleration_X**
type: numerical
frequency domain body linear acceleration signal's Mean value in X-direction
mean of 'fBodyAcc-mean()-X' variable
- 44.**mean_frequency_body_acceleration_Y**
type: numerical
frequency domain body linear acceleration signal's Mean value in Y-direction

- mean of 'fBodyAcc-mean()-Y' variable
45. **mean_frequency_body_acceleration_Z**
type: numerical
frequency domain body linear acceleration signal's Mean value in Z-direction
mean of 'fBodyAcc-mean()-Z' variable
46. **std_frequency_body_acceleration_X**
type: numerical
frequency domain body linear acceleration signal's Standard deviation in X-direction
mean of 'fBodyAcc-std()-X' variable
47. **std_frequency_body_acceleration_Y**
type: numerical
frequency domain body linear acceleration signal's Standard deviation in Y-direction
mean of 'fBodyAcc-std()-Y' variable
48. **std_frequency_body_acceleration_Z**
type: numerical
frequency domain body linear acceleration signal's Standard deviation in Z-direction
mean of 'fBodyAcc-std()-Z' variable
49. **mean_frequency_body_acceleration_jerk_X**
type: numerical
frequency domain body linear acceleration Jerk signal's Mean value in X-direction
mean of 'fBodyAccJerk-mean()-X' variable
50. **mean_frequency_body_acceleration_jerk_Y**
type: numerical
frequency domain body linear acceleration Jerk signal's Mean value in Y-direction
mean of 'fBodyAccJerk-mean()-Y' variable
51. **mean_frequency_body_acceleration_jerk_Z**
type: numerical
frequency domain body linear acceleration Jerk signal's Mean value in Z-direction
mean of 'fBodyAccJerk-mean()-Z' variable
52. **std_frequency_body_acceleration_jerk_X**
type: numerical
frequency domain body linear acceleration Jerk signal's Standard deviation in X-direction
mean of 'fBodyAccJerk-std()-X' variable
53. **std_frequency_body_acceleration_jerk_Y**
type: numerical
frequency domain body linear acceleration Jerk signal's Standard deviation in Y-direction
mean of 'fBodyAccJerk-std()-Y' variable
54. **std_frequency_body_acceleration_jerk_Z**
type: numerical
frequency domain body linear acceleration Jerk signal's Standard deviation in Z-direction
mean of 'fBodyAccJerk-std()-Z' variable
55. **mean_frequency_body_gyroscope_X**
type: numerical
frequency domain body gyroscope angular velocity's Mean value in X-direction
mean of 'fBodyGyro-mean()-X' variable
56. **mean_frequency_body_gyroscope_Y**
type: numerical
frequency domain body gyroscope angular velocity's Mean value in Y-direction
mean of 'fBodyGyro-mean()-Y' variable
57. **mean_frequency_body_gyroscope_Z**

- type: numerical
frequency domain body gyroscope angular velocity's Mean value in Z-direction
mean of 'fBodyGyro-mean()-Z' variable
- 58.**std_frequency_body_gyroscope_X**
type: numerical
frequency domain body gyroscope angular velocity's Standard deviation in X-direction
mean of 'fBodyGyro-std()-X' variable
- 59.**std_frequency_body_gyroscope_Y**
type: numerical
frequency domain body gyroscope angular velocity's Standard deviation in Y-direction
mean of 'fBodyGyro-std()-Y' variable
- 60.**std_frequency_body_gyroscope_Z**
type: numerical
frequency domain body gyroscope angular velocity's Standard deviation in Z-direction
mean of 'fBodyGyro-std()-Z' variable
- 61.**mean_frequency_body_acceleration_magnitude**
type: numerical
frequency domain body linear acceleration signal magnitude's Mean value
mean of 'fBodyAccMag-mean()' variable
- 62.**std_frequency_body_acceleration_magnitude**
type: numerical
frequency domain body linear acceleration signal magnitude's Standard deviation
mean of 'fBodyAccMag-std()' variable
- 63.**mean_frequency_body_acceleration_jerk_magnitude**
type: numerical
frequency domain body linear acceleration Jerk signal magnitude's Mean value
mean of 'fBodyBodyAccJerkMag-mean()' variable
- 64.**std_frequency_body_acceleration_jerk_magnitude**
type: numerical
frequency domain body linear acceleration Jerk signal magnitude's Standard deviation
mean of 'fBodyBodyAccJerkMag-std()' variable
- 65.**mean_frequency_body_gyroscope_magnitude**
type: numerical
frequency domain body gyroscope angular velocity magnitude's Mean value
mean of 'fBodyBodyGyroMag-mean()' variable
- 66.**std_frequency_body_gyroscope_magnitude**
type: numerical
frequency domain body gyroscope angular velocity magnitude's Standard deviation
mean of 'fBodyBodyGyroMag-std()' variable
- 67.**mean_frequency_body_gyroscope_jerk_magnitude**
type: numerical
frequency domain body gyroscope angular velocity Jerk signal magnitude's Mean value
mean of 'fBodyBodyGyroJerkMag-mean()' variable
- 68.**std_frequency_body_gyroscope_jerk_magnitude**
type: numerical
frequency domain body gyroscope angular velocity Jerk signal magnitude's Standard deviation
mean of 'fBodyBodyGyroJerkMag-std()' variable