

Data Dictionary

Tidy Data Set 1 [stored in variable var_TidyDataSet1] and Tidy Data Set 2 [stored in variable var_TidyDataSet2]. The only difference between the two data set is that the second tidy dataset is a condensed form of the first. The second tidy data set is computed by taking a mean of all the observations (#3 onwards below) across a combination of subject (#1 below) and activity (#2 below). Code book below describes both the data sets. There are 88 variables in total, first two referring to the master combination of subject and activity. All other variables form the observational data set storing the feature observations.

#	Column Name	Description (Feature Data Set starts from #3)	Typical Actual Data Elements
1	Subject	Integer value denoting one of the subjects	1,2,3...
2	Activity	Text value denoting one of the activities	LAYING, SITTING, WALKING_DOWNSTAIRS...
3	tBodyAcc-mean()-X	Mean of body acceleration X Axis	[-1,1]
4	tBodyAcc-mean()-Y	Mean of body acceleration Y Axis	[-1,1]
5	tBodyAcc-mean()-Z	Mean of body acceleration Z Axis	[-1,1]
6	tBodyAcc-std()-X	Standard Deviation of body acceleration X Axis	[-1,1]
7	tBodyAcc-std()-Y	Standard Deviation of body acceleration Y Axis	[-1,1]
8	tBodyAcc-std()-Z	Standard Deviation of body acceleration Z Axis	[-1,1]
9	tGravityAcc-mean()-X	Mean of gravitational acceleration X Axis	[-1,1]
10	tGravityAcc-mean()-Y	Mean of gravitational acceleration Y Axis	[-1,1]
11	tGravityAcc-mean()-Z	Mean of gravitational acceleration Z Axis	[-1,1]
12	tGravityAcc-std()-X	Standard Deviation of gravitational acceleration X Axis	[-1,1]
13	tGravityAcc-std()-Y	Standard Deviation of gravitational acceleration Y Axis	[-1,1]
14	tGravityAcc-std()-Z	Standard Deviation of gravitational acceleration Z Axis	[-1,1]
15	tBodyAccJerk-mean()-X	Mean of body linear acceleration Jerk Signal X Axis	[-1,1]
16	tBodyAccJerk-mean()-Y	Mean of body linear acceleration Jerk Signal Y Axis	[-1,1]
17	tBodyAccJerk-mean()-Z	Mean of body linear acceleration Jerk Signal Z Axis	[-1,1]
18	tBodyAccJerk-std()-X	Standard Deviation of body linear acceleration Jerk Signal X Axis	[-1,1]
19	tBodyAccJerk-std()-Y	Standard Deviation of body linear acceleration Jerk Signal Y Axis	[-1,1]
20	tBodyAccJerk-std()-Z	Standard Deviation of body linear acceleration Jerk Signal Z Axis	[-1,1]
21	tBodyGyro-mean()-X	Mean of body gyroscope signal X Axis	[-1,1]
22	tBodyGyro-mean()-Y	Mean of body gyroscope signal Y Axis	[-1,1]
23	tBodyGyro-mean()-Z	Mean of body gyroscope signal Z Axis	[-1,1]

24	tBodyGyro-std()-X	Standard Deviation of body gyroscope signal X Axis	[-1,1]
25	tBodyGyro-std()-Y	Standard Deviation of body gyroscope signal Y Axis	[-1,1]
26	tBodyGyro-std()-Z	Standard Deviation of body gyroscope signal Z Axis	[-1,1]
27	tBodyGyroJerk-mean()-X	Mean of gyroscopic Jerk Signal X Axis	[-1,1]
28	tBodyGyroJerk-mean()-Y	Mean of gyroscopic Jerk Signal Y Axis	[-1,1]
29	tBodyGyroJerk-mean()-Z	Mean of gyroscopic Jerk Signal Z Axis	[-1,1]
30	tBodyGyroJerk-std()-X	Standard Deviation of gyroscopic Jerk Signal X Axis	[-1,1]
31	tBodyGyroJerk-std()-Y	Standard Deviation of gyroscopic Jerk Signal Y Axis	[-1,1]
32	tBodyGyroJerk-std()-Z	Standard Deviation of gyroscopic Jerk Signal Z Axis	[-1,1]
33	tBodyAccMag-mean()	Mean of Euclidean norm of body acceleration	[-1,1]
34	tBodyAccMag-std()	Standard Deviation of Euclidean norm of body acceleration	[-1,1]
35	tGravityAccMag-mean()	Mean of Euclidean norm of gravitational acceleration	[-1,1]
36	tGravityAccMag-std()	Standard Deviation of Euclidean norm of gravitational acceleration	[-1,1]
37	tBodyAccJerkMag-mean()	Mean of Euclidean norm of body linear acceleration Jerk Signal	[-1,1]
38	tBodyAccJerkMag-std()	Standard Deviation of Euclidean norm of body linear acceleration Jerk Signal	[-1,1]
39	tBodyGyroMag-mean()	Mean of Euclidean norm of body gyroscope signal	[-1,1]
40	tBodyGyroMag-std()	Standard Deviation of Euclidean norm of body gyroscope signal	[-1,1]
41	tBodyGyroJerkMag-mean()	Mean of Euclidean norm of gyroscopic Jerk Signal	[-1,1]
42	tBodyGyroJerkMag-std()	Standard Deviation of Euclidean norm of gyroscopic Jerk Signal	[-1,1]
43	fBodyAcc-mean()-X	Fast Fourier Transform of Mean of body acceleration X Axis	[-1,1]
44	fBodyAcc-mean()-Y	Fast Fourier Transform of Mean of body acceleration Y Axis	[-1,1]
45	fBodyAcc-mean()-Z	Fast Fourier Transform of Mean of body acceleration Z Axis	[-1,1]
46	fBodyAcc-std()-X	Fast Fourier Transform of Standard Deviation of body acceleration X Axis	[-1,1]
47	fBodyAcc-std()-Y	Fast Fourier Transform of Standard Deviation of body acceleration Y Axis	[-1,1]
48	fBodyAcc-std()-Z	Fast Fourier Transform of Standard Deviation of body acceleration Z Axis	[-1,1]
49	fBodyAcc-meanFreq()-X	Fast Fourier Transform of Mean Frequency of body acceleration X Axis	[-1,1]
50	fBodyAcc-meanFreq()-Y	Fast Fourier Transform of Mean Frequency of body acceleration Y Axis	[-1,1]
51	fBodyAcc-meanFreq()-Z	Fast Fourier Transform of Mean Frequency of body acceleration Z Axis	[-1,1]
52	fBodyAccJerk-mean()-X	Fast Fourier Transform of Mean of body linear acceleration Jerk Signal X Axis	[-1,1]
53	fBodyAccJerk-mean()-Y	Fast Fourier Transform of Mean of body linear acceleration Jerk Signal Y Axis	[-1,1]
54	fBodyAccJerk-mean()-Z	Fast Fourier Transform of Mean of body linear acceleration Jerk Signal Z Axis	[-1,1]

55	fBodyAccJerk-std()-X	Fast Fourier Transform of Standard Deviation of body linear acceleration Jerk Signal X Axis	[-1,1]
56	fBodyAccJerk-std()-Y	Fast Fourier Transform of Standard Deviation of body linear acceleration Jerk Signal Y Axis	[-1,1]
57	fBodyAccJerk-std()-Z	Fast Fourier Transform of Standard Deviation of body linear acceleration Jerk Signal Z Axis	[-1,1]
58	fBodyAccJerk-meanFreq()-X	Fast Fourier Transform of Mean Frequency of body linear acceleration Jerk Signal X Axis	[-1,1]
59	fBodyAccJerk-meanFreq()-Y	Fast Fourier Transform of Mean Frequency of body linear acceleration Jerk Signal Y Axis	[-1,1]
60	fBodyAccJerk-meanFreq()-Z	Fast Fourier Transform of Mean Frequency of body linear acceleration Jerk Signal Z Axis	[-1,1]
61	fBodyGyro-mean()-X	Fast Fourier Transform of Mean of body gyroscope signal X Axis	[-1,1]
62	fBodyGyro-mean()-Y	Fast Fourier Transform of Mean of body gyroscope signal Y Axis	[-1,1]
63	fBodyGyro-mean()-Z	Fast Fourier Transform of Mean of body gyroscope signal Z Axis	[-1,1]
64	fBodyGyro-std()-X	Fast Fourier Transform of Standard Deviation of body gyroscope signal X Axis	[-1,1]
65	fBodyGyro-std()-Y	Fast Fourier Transform of Standard Deviation of body gyroscope signal Y Axis	[-1,1]
66	fBodyGyro-std()-Z	Fast Fourier Transform of Standard Deviation of body gyroscope signal Z Axis	[-1,1]
67	fBodyGyro-meanFreq()-X	Fast Fourier Transform of Mean Frequency of body gyroscope signal X Axis	[-1,1]
68	fBodyGyro-meanFreq()-Y	Fast Fourier Transform of Mean Frequency of body gyroscope signal Y Axis	[-1,1]
69	fBodyGyro-meanFreq()-Z	Fast Fourier Transform of Mean Frequency of body gyroscope signal Z Axis	[-1,1]
70	fBodyAccMag-mean()	Fast Fourier Transform of Mean of Euclidean norm of body acceleration	[-1,1]
71	fBodyAccMag-std()	Fast Fourier Transform of Standard Deviation of Euclidean norm of body acceleration	[-1,1]
72	fBodyAccMag-meanFreq()	Fast Fourier Transform of Mean Frequency of Euclidean norm of body acceleration	[-1,1]
73	fBodyBodyAccJerkMag-mean()	Fast Fourier Transform of Mean of Euclidean norm of body linear acceleration Jerk Signal	[-1,1]
74	fBodyBodyAccJerkMag-std()	Fast Fourier Transform of Standard Deviation of Euclidean norm of body linear acceleration Jerk Signal	[-1,1]
75	fBodyBodyAccJerkMag-meanFreq()	Fast Fourier Transform of Mean Frequency of Euclidean norm of body linear acceleration Jerk Signal	[-1,1]
76	fBodyBodyGyroMag-mean()	Fast Fourier Transform of Mean of Euclidean norm of body gyroscope signal	[-1,1]
77	fBodyBodyGyroMag-std()	Fast Fourier Transform of Standard Deviation of Euclidean norm of body gyroscope signal	[-1,1]
78	fBodyBodyGyroMag-meanFreq()	Fast Fourier Transform of Mean Frequency of Euclidean norm of body gyroscope signal	[-1,1]
79	fBodyBodyGyroJerkMag-mean()	Fast Fourier Transform of Mean of Euclidean norm of gyroscopic Jerk Signal	[-1,1]
80	fBodyBodyGyroJerkMag-std()	Fast Fourier Transform of Standard Deviation of Euclidean norm of gyroscopic Jerk Signal	[-1,1]
81	fBodyBodyGyroJerkMag-meanFreq()	Fast Fourier Transform of Mean Frequency of Euclidean norm of gyroscopic Jerk Signal	[-1,1]
82	angle(tBodyAccMean,gravity)	Angle between average signal pertinent to BodyAccMean and gravity	[-1,1]
83	angle(tBodyAccJerkMean,gravityMean)	Angle between average signal pertinent to BodyAccJerk and gravitymean	[-1,1]
84	angle(tBodyGyroMean,gravityMean)	Angle between average signal pertinent to BodyGyro and gravity	[-1,1]
85	angle(tBodyGyroJerkMean,gravityMean)	Angle between average signal pertinent to BodyGyroJerk and gravity	[-1,1]

86	angle(X,gravityMean)	Angle between X axis and average of gravity signal	[-1,1]
87	angle(Y,gravityMean)	Angle between Y axis and average of gravity signal	[-1,1]
88	angle(Z,gravityMean)	Angle between Z axis and average of gravity signal	[-1,1]