

This codebook will provide descriptions of variables, data, and transformations or work performed for a tidy data set result.

The zip file can be downloaded from:

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

Variable	Description	Data Source	Data Type	Data Range
<b>Subject</b>	IDs assigned to activity set. Combined Subject and Activity can be used as a unique ID	subject_test.txt and subject_train.txt (cbind)	Int	1 to 30
<b>Activity</b>	Six activity names	activity_labels.txt merged with y_test.txt and y_train by activity	Char	1 WALKING 2 WALKING_UPSTAIRS 3 WALKING_DOWNSTAIRS 4 SITTING 5 STANDING 6 LAYING
<b>timeBodyAccelerometer-mean()-X</b>	The variables starting with “time” represent the mean of the time measured at a constant rate of 50HZ in the direction of X. The body linear acceleration and angular velocity are derived to obtain “jerk” signals.	x_train.txt and x_test.txt	Numeric	0.0426880986186441 to 0.130193043809524
<b>timeGravityAccelerometer-mean()-X</b>				0.22159824394 to 0.3014610196
<b>timeBodyAccelerometerJerk-mean()-X</b>				-0.157212539189362 to -0.0220916265065217
<b>timeBodyGyroscope-mean()-X</b>				-0.205775427307692 to 0.19270447595122
<b>timeBodyGyroscopeJerk-mean()-X</b>				-0.680043155060241 to 0.974508732
<b>timeBodyAccelerometer-mean()-Y</b>	The variables starting with “time” represent the mean of the time measured at a constant rate of 50HZ in the direction of Y. The body linear acceleration and angular velocity are derived to obtain “jerk” signals.	x_train.txt and x_test.txt	Numeric	-0.0405139534294 to -0.00130828765170213
<b>timeGravityAccelerometer-mean()-Y</b>				-0.479894842941176 to 0.956593814210526
<b>timeBodyAccelerometerJerk-mean()-Y</b>				-0.0386872111282051 to 0.056818586275
<b>timeBodyGyroscope-mean()-Y</b>				-0.204205356087805 to 0.0274707556666667
<b>timeBodyGyroscopeJerk-mean()-Y</b>				-0.0768089915604167 to -0.0132022768074468
<b>timeBodyAccelerometer-mean()-Z</b>	The variables starting with	x_train.txt and x_test.txt	Numeric	-0.152513899520833 to -0.07537846886

Variable	Description	Data Source	Data Type	Data Range
timeGravityAccelerometer-mean()-Z	<p>“time” represent the mean of the time measured at a constant rate of 50HZ in the direction of Z. The body linear acceleration and angular velocity are derived to obtain “jerk” signals.</p>			-0.49508872037037 to 0.9578730416
timeBodyAccelerometerJerk-mean()-Z				-0.0674583919268293 to 0.0380533591627451
timeBodyGyroscope-mean()-Z				-0.0724546025804878 to 0.179102058245614
timeBodyGyroscopeJerk-mean()-Z				-0.0924998531372549 to -0.00694066389361702
timeBodyAccelerometerMagnitude-mean()	<p>The variables starting with “time” represent the mean of the time measured at a constant rate of 50HZ. The body linear acceleration and angular velocity are derived to obtain “jerk” signals.</p>	x_train.txt and x_test.txt	Numeric	-0.986493196666667 to 0.644604325128205
timeGravityAccelerometerMagnitude-mean()				-0.986493196666667 to 0.644604325128205
timeBodyAccelerometerJerkMagnitude-mean()				-0.99281471515625 to 0.434490400974359
timeBodyGyroscopeMagnitude-mean()				-0.980740846769231 to 0.418004608615385
timeBodyGyroscopeJerkMagnitude-mean()				-0.997322526811594 to 0.0875816618205128
frequencyBodyAccelerometerMagnitude-mean()	<p>The variables starting with “frequency” represent the mean of the values on which a Fast Fourier Transform was applied, so they are signals in the frequency domain. The body linear acceleration and angular velocity are derived to obtain “jerk” signals.</p>	x_train.txt and x_test.txt	Numeric	-0.986800645362319 to 0.586637550769231
frequencyBodyAccelerometerJerkMagnitude-mean()				-0.993998275797101 to 0.538404846128205
frequencyBodyGyroscopeMagnitude-mean()				-0.986535242105263 to 0.203979764835897
frequencyBodyGyroscopeJerkMagnitude-mean()				-0.997617389275362 to 0.146618569064407
frequencyBodyAccelerometerJerk-mean()-X	<p>The variables starting with “frequency” represent the mean of the values on which a Fast</p>	x_train.txt and x_test.txt	Numeric	-0.994630797358491 to 0.474317256051282
frequencyBodyAccelerometer-mean()-X				-0.995249932641509 to 0.537012022051282

Variable	Description	Data Source	Data Type	Data Range
<b>frequencyBodyGyroscope-mean()-X</b>	Fourier Transform was applied in the direction X. They are signals in the frequency domain. The body linear acceleration and angular velocity are derived to obtain “jerk” signals.			-0.99312260884058 to 0.474962448333333
<b>frequencyBodyAccelerometer-mean()-Y</b>	The variables starting with “frequency” represent the mean of the values on which a Fast Fourier Transform was applied in the direction Y. They are signals in the frequency domain. The body linear acceleration and angular velocity are derived to obtain “jerk” signals.	x_train.txt and x_test.txt	Numeric	-0.989034304057971 to 0.524187686888889
<b>frequencyBodyAccelerometerJerk-mean()-Y</b>				-0.989398823913043 to 0.276716853307692
<b>frequencyBodyGyroscope-mean()-Y</b>				-0.994025488297872 to 0.328817010088889
<b>frequencyBodyAccelerometer-mean()-Z</b>	The variables starting with “frequency” represent the mean of the values on which a Fast Fourier Transform was applied in the direction Z. They are signals in the frequency domain. The body linear acceleration and angular velocity are derived to obtain “jerk” signals.	x_train.txt and x_test.txt	Numeric	-0.989473926666667 to 0.280735952206667
<b>frequencyBodyAccelerometerJerk-mean()-Z</b>				-0.992018447826087 to 0.157775692377778
<b>frequencyBodyGyroscope-mean()-Z</b>				-0.985957788 to 0.492414379822222
<b>timeBodyAccelerometerMagnitude-std()</b>	The variables represent the standard of the	x_train.txt and x_test.txt	Numeric	-0.986464542615385 to 0.428405922622222

Variable	Description	Data Source	Data Type	Data Range
timeGravityAccelerometerMagnitude-std()	time measured at a constant rate of 50HZ.			-0.986464542615385 to 0.428405922622222
timeBodyAccelerometerJerkMagnitude-std()				-0.994646916811594 to 0.450612065720513
timeBodyGyroscopeMagnitude-std()				-0.981372675614035 to 0.299975979851852
timeBodyGyroscopeJerkMagnitude-std()				-0.997666071594203 to 0.250173204117966
frequencyBodyAccelerometerMagnitude-std()	The variables represent the standard of values on which a Fast Fourier transform and the “Magnitude” is the value calculated in using Euclidean Norm.	x_train.txt and x_test.txt	Numeric	-0.987648484461539 to 0.178684580868889
frequencyBodyAccelerometerJerkMagnitude-std()				-0.994366667681159 to 0.316346415348718
frequencyBodyGyroscopeMagnitude-std()				-0.981468841692308 to 0.236659662496296
frequencyBodyGyroscopeJerkMagnitude-std()				-0.99758523057971 to 0.287834616098305
frequencyBodyAccelerometerJerk-std()-X	The variables represent the standard of values on which a Fast Fourier transform in the direction X	x_train.txt and x_test.txt	Numeric	-0.995073759245283 to 0.476803887476923
frequencyBodyAccelerometer-std()-X				-0.996604570307692 to 0.658506543333333
frequencyBodyGyroscope-std()-X				-0.994652185217391 to 0.196613286661538
timeBodyAccelerometerJerk-std()-X	The variables represent the standard of the time values measured in the direction X	x_train.txt and x_test.txt	Numeric	-0.994604542264151 to 0.544273037307692
timeBodyAccelerometer-std()-X				-0.996068635384615 to 0.626917070512821
timeBodyGyroscopeJerk-std()-X				-0.99654254057971 to 0.179148649684615
timeBodyGyroscope-std()-X				-0.994276591304348 to 0.267657219333333
timeGravityAccelerometer-std()-X				-0.996764227384615 to -0.829554947808219
timeBodyAccelerometer-std()-Y	The variables represent the standard of the time values measured in the direction Y.	x_train.txt and x_test.txt	Numeric	-0.990240946666667 to 0.616937015333333
timeGravityAccelerometer-std()-Y				-0.99424764884058 to -0.643578361424658
timeBodyAccelerometerJerk-std()-Y				-0.989513565652174 to 0.355306716915385
timeBodyGyroscope-std()-Y				-0.994210471914894 to 0.476518714444444

Variable	Description	Data Source	Data Type	Data Range
timeBodyGyroscopeJerk-std()-Y				-0.997081575652174 to 0.295945926186441
frequencyBodyAccelerometer-std()-Y	The variables represent the standard of the frequency values measured in the direction Y.	x_train.txt and x_test.txt	Numeric	-0.990680395362319 to 0.560191344
frequencyBodyAccelerometerJerk-std()-Y				-0.990468082753623 to 0.349771285415897
frequencyBodyGyroscope-std()-Y				-0.994353086595745 to 0.646233637037037
timeBodyAccelerometer-std()-Z	The variables represent the standard of the time values measured in the direction Z.	x_train.txt and x_test.txt	Numeric	-0.987658662307692 to 0.609017879074074
timeGravityAccelerometer-std()-Z				-0.990957249538462 to -0.610161166287671
timeBodyAccelerometerJerk-std()-Z				-0.993288313333333 to 0.0310157077775926
timeBodyGyroscope-std()-Z				-0.985538363333333 to 0.564875818162963
timeBodyGyroscopeJerk-std()-Z				-0.995380794637681 to 0.193206498960417
frequencyBodyAccelerometer-std()-Z	The variables represent the standard of the frequency values measured in the direction Z.	x_train.txt and x_test.txt	Numeric	-0.987224804307692 to 0.687124163703704
frequencyBodyAccelerometerJerk-std()-Z				-0.993107759855072 to -0.00623647528983051
frequencyBodyGyroscope-std()-Z				-0.986725274871795 to 0.522454216314815