

Code Book for the tidy data set “X_tidy”

The X_tidy data set comprises the average of the mean and std deviation columns in the original dataset, grouped by the subject (on whom the measurements were performed) and the activity (the different activities performed by the subject). The original dataset represented the recordings of 30 subjects performing activities of daily living (ADL) while carrying a waist-mounted smartphone with embedded inertial sensors. So each record in the X_tidy dataset represents the average values of the mean and the std deviation for each combination of the subject and the activity. Since there are 30 subjects and 6 activities, we have 180 records in total.

Please note all the measurement variables (i.e. columns apart from the activity and the subject code) represent an average value

COLUMN NAME	TYPE	DESCRIPTION
activity	character	Describes the activity being performed by the subject when the measurements were made. Can take one of the six values: “WALKING”, “WALKING_UPSTAIRS”, “WALKING_DOWNSTAIRS”, “SITTING”, “STANDING”, “LAYING”
subject_code	number	Identifies the subject on whom the measurements were made. Since there are 30 subjects, this field takes values from 1 to 30
tbodyacc-std-x	number	Standard deviation of the body acceleration in the X direction
tbodyacc-std-y	number	Standard deviation of the body acceleration in the Y direction
tbodyacc-std-z	number	Standard deviation of the body acceleration in the Z direction
tgravityacc-std-x	number	Standard deviation of the gravity acceleration in the X direction
tgravityacc-std-y	number	Standard deviation of the gravity acceleration in the Y direction
tgravityacc-std-z	number	Standard deviation of the gravity acceleration in the Z direction
tbodyaccjerk-std-x	number	Standard deviation of the body jerk in the X direction
tbodyaccjerk-std-y	number	Standard deviation of the body jerk in the Y direction
tbodyaccjerk-std-z	number	Standard deviation of the body jerk in the Z direction
tbodygyro-std-x	number	Standard deviation of the angular velocity in the X direction
tbodygyro-std-y	number	Standard deviation of the angular velocity in the Y direction
tbodygyro-std-z	number	Standard deviation of the angular velocity in the Z direction
tbodygyrojerk-std-x	number	Standard deviation of the angular jerk in the X direction
tbodygyrojerk-std-y	number	Standard deviation of the angular jerk in the Y direction

tbodygyrojerk-std-z	number	Standard deviation of the angular jerk in the Z direction
tbodyaccmag-std	number	Standard deviation body acceleration
tgravityaccmag-std	number	Standard deviation gravity
tbodyaccjerkmag-std	number	Standard deviation jerk
tbodygyromag-std	number	Standard deviation gyromag
tbodygyrojerkmag-std	number	Standard deviation gyro jerk
fbodyacc-std-x	number	Standard deviation fourier transformed body acceleration X direction
fbodyacc-std-y	number	Standard deviation fourier transformed body acceleration Y direction
fbodyacc-std-z	number	Standard deviation fourier transformed body acceleration Z direction
fbodyaccjerk-std-x	number	Standard deviation fourier transformed body jerk X direction
fbodyaccjerk-std-y	number	Standard deviation fourier transformed body jerk Y direction
fbodyaccjerk-std-z	number	Standard deviation fourier transformed body jerk Z direction
fbodygyro-std-x	number	Standard deviation fourier transformed gyro X direction
fbodygyro-std-y	number	Standard deviation fourier transformed gyro Y direction
fbodygyro-std-z	number	Standard deviation fourier transformed gyro Z direction
fbodyaccmag-std	number	Standard deviation fourier transformed body acceleration magnitude
fbodybodyaccjerkmag-std	number	Standard deviation fourier transformed body jerk magnitude
fbodybodygyromag-std	number	Standard deviation fourier transformed gyro magnitude
fbodybodygyrojerkmag-std	number	Standard deviation fourier transformed gyro jerk magnitude
tbodyacc-mean-x	number	Mean body acceleration in the X direction
tbodyacc-mean-y	number	Mean body acceleration in the Y direction
tbodyacc-mean-z	number	Mean body acceleration in the Z direction
tgravityacc-mean-x	number	Mean gravity acceleration in the X direction
tgravityacc-mean-y	number	Mean gravity acceleration in the Y direction
tgravityacc-mean-z	number	Mean gravity acceleration in the Z direction
tbodyaccjerk-mean-x	number	Mean body acceleration jerk in the X direction
tbodyaccjerk-mean-y	number	Mean body acceleration jerk in the Y direction

tbodyaccjerk-mean-z	number	Mean body acceleration jerk in the Z direction
tbodygyro-mean-x	number	Mean angular velocity (gyro) mean in the X direction
tbodygyro-mean-y	number	Mean angular velocity (gyro) mean in the Y direction
tbodygyro-mean-z	number	Mean angular velocity (gyro) mean in the Z direction
tbodygyrojerk-mean-x	number	Mean body gyro jerk in the X direction
tbodygyrojerk-mean-y	number	Mean body gyro jerk in the Y direction
tbodygyrojerk-mean-z	number	Mean body gyro jerk in the Z direction
tbodyaccmag-mean	number	Mean body acceleration magnitude
tgravityaccmag-mean	number	Mean gravity acceleration magnitude
tbodyaccjerkmag-mean	number	Mean body acceleration jerk magnitude
tbodygyromag-mean	number	Mean body gyro magnitude
tbodygyrojerkmag-mean	number	Mean body gyro jerk magnitude
fbodyacc-mean-x	number	Fourier transformed mean body acceleration in the X direction
fbodyacc-mean-y	number	Fourier transformed mean body acceleration in the Y direction
fbodyacc-mean-z	number	Fourier transformed mean body acceleration in the Z direction
fbodyacc-meanfreq-x	number	Fourier transformed body acceleration mean frequency in the X direction
fbodyacc-meanfreq-y	number	Fourier transformed body acceleration mean frequency in the Y direction
fbodyacc-meanfreq-z	number	Fourier transformed body acceleration mean frequency in the Z direction
fbodyaccjerk-mean-x	number	Fourier transformed mean body acceleration jerk in the X direction
fbodyaccjerk-mean-y	number	Fourier transformed mean body acceleration jerk in the Y direction
fbodyaccjerk-mean-z	number	Fourier transformed mean body acceleration jerk in the Z direction
fbodyaccjerk-meanfreq-x	number	Fourier transformed body acceleration jerk mean frequency in the X direction
fbodyaccjerk-meanfreq-y	number	Fourier transformed body acceleration jerk mean frequency in the Y direction
fbodyaccjerk-meanfreq-z	number	Fourier transformed body acceleration jerk mean frequency in the Z direction
fbodygyro-mean-x	number	Fourier transformed gyro mean in the X direction

fbodygyro-mean-y	number	Fourier transformed gyro mean in the Y direction
fbodygyro-mean-z	number	Fourier transformed gyro mean in the Z direction
fbodygyro-meanfreq-x	number	Fourier transformed body gyro mean frequency in the X direction
fbodygyro-meanfreq-y	number	Fourier transformed body gyro mean frequency in the Y direction
fbodygyro-meanfreq-z	number	Fourier transformed body gyro mean frequency in the Z direction
fbodyaccmag-mean	number	Fourier transformed body acceleration magnitude mean
fbodyaccmag-meanfreq	number	Fourier transformed body acceleration magnitude mean frequency
fbodybodyaccjerkmag-mean	number	Fourier transformed body acceleration jerk magnitude mean
fbodybodyaccjerkmag-meanfreq	number	Fourier transformed body acceleration jerk magnitude mean frequency
fbodybodygyromag-mean	number	Fourier transformed body gyro magnitude mean
fbodybodygyromag-meanfreq	number	Fourier transformed body gyro magnitude mean frequency
fbodybodygyrojerkmag-mean	number	Fourier transformed body gyro jerk magnitude mean
fbodybodygyrojerkmag-meanfreq	number	Fourier transformed body gyro jerk magnitude mean frequency