1. CodeBook
   1. Variable List

All measurement variables names (aside from variable “Activities” and “subject”) are based on the following:

Signals- time/fast fourier transform

Acceleration signal – body/gravity

Jerk signal – Jerk/null

Tool used to measure signals- Accelerometer/gyroscope

Computation of movements based on - mean/standard deviation

3 axial – x/y/z

All measurement variables units are based on linear acceleration for accelerometer or angular velocity for gyroscope.

Variable “Activities” contains one of the six activities: WALKING, WALKING\_UPSTAIRS, WALKING\_DOWNSTAIRS, SITTING, STANDING, LAYING

Variable “Subject” – numerical identifiers of participants in the study

* 1. Variable Name

timeBodyAccelerometerMeanX

timeBodyAccelerometerMeanY

timeBodyAccelerometerMeanZ

timeBodyAccelerometerStandardDeviationX

timeBodyAccelerometerStandardDeviationY

timeBodyAccelerometerStandardDeviationZ

timeGravityAccelerometerMeanX

timeGravityAccelerometerMeanY

timeGravityAccelerometerMeanZ

timeGravityAccelerometerStandardDeviationX

timeGravityAccelerometerStandardDeviationY

timeGravityAccelerometerStandardDeviationZ

timeBodyAccelerometerJerkMeanX

timeBodyAccelerometerJerkMeanY

timeBodyAccelerometerJerkMeanZ

timeBodyAccelerometerJerkStandardDeviationX

timeBodyAccelerometerJerkStandardDeviationY

timeBodyAccelerometerJerkStandardDeviationZ

timeBodyGyroscopeMeanX

timeBodyGyroscopeMeanY

timeBodyGyroscopeMeanZ

timeBodyGyroscopeStandardDeviationX

timeBodyGyroscopeStandardDeviationY

timeBodyGyroscopeStandardDeviationZ

timeBodyGyroscopeJerkMeanX

timeBodyGyroscopeJerkMeanY

timeBodyGyroscopeJerkMeanZ

timeBodyGyroscopeJerkStandardDeviationX

timeBodyGyroscopeJerkStandardDeviationY

timeBodyGyroscopeJerkStandardDeviationZ

timeBodyAccelerometerMagnitudeMean

timeBodyAccelerometerMagnitudeStandardDeviation

timeGravityAccelerometerMagnitudeMean

timeGravityAccelerometerMagnitudeStandardDeviation

timeBodyAccelerometerJerkMagnitudeMean

timeBodyAccelerometerJerkMagnitudeStandardDeviation

timeBodyGyroscopeMagnitudeMean

timeBodyGyroscopeMagnitudeStandardDeviation

timeBodyGyroscopeJerkMagnitudeMean

timeBodyGyroscopeJerkMagnitudeStandardDeviation

fastFourierTransformBodyAccelerometerMeanX

fastFourierTransformBodyAccelerometerMeanY

fastFourierTransformBodyAccelerometerMeanZ

fastFourierTransformBodyAccelerometerStandardDeviationX

fastFourierTransformBodyAccelerometerStandardDeviationY

fastFourierTransformBodyAccelerometerStandardDeviationZ

fastFourierTransformBodyAccelerometerMeanFrequencyX

fastFourierTransformBodyAccelerometerMeanFrequencyY

fastFourierTransformBodyAccelerometerMeanFrequencyZ

fastFourierTransformBodyAccelerometerJerkMeanX

fastFourierTransformBodyAccelerometerJerkMeanY

fastFourierTransformBodyAccelerometerJerkMeanZ

fastFourierTransformBodyAccelerometerJerkStandardDeviationX

fastFourierTransformBodyAccelerometerJerkStandardDeviationY

fastFourierTransformBodyAccelerometerJerkStandardDeviationZ

fastFourierTransformBodyAccelerometerJerkMeanFrequencyX

fastFourierTransformBodyAccelerometerJerkMeanFrequencyY

fastFourierTransformBodyAccelerometerJerkMeanFrequencyZ

fastFourierTransformBodyGyroscopeMeanX

fastFourierTransformBodyGyroscopeMeanY

fastFourierTransformBodyGyroscopeMeanZ

fastFourierTransformBodyGyroscopeStandardDeviationX

fastFourierTransformBodyGyroscopeStandardDeviationY

fastFourierTransformBodyGyroscopeStandardDeviationZ

fastFourierTransformBodyGyroscopeMeanFrequencyX

fastFourierTransformBodyGyroscopeMeanFrequencyY

fastFourierTransformBodyGyroscopeMeanFrequencyZ

fastFourierTransformBodyAccelerometerMagnitudeMean

fastFourierTransformBodyAccelerometerMagnitudeStandardDeviation

fastFourierTransformBodyAccelerometerMagnitudeMeanFrequency

fastFourierTransformBodyBodyAccelerometerJerkMagnitudeMean

fastFourierTransformBodyBodyAccelerometerJerkMagnitudeStandardDeviation

fastFourierTransformBodyBodyAccelerometerJerkMagnitudeMeanFrequency

fastFourierTransformBodyBodyGyroscopeMagnitudeMean

fastFourierTransformBodyBodyGyroscopeMagnitudeStandardDeviation

fastFourierTransformBodyBodyGyroscopeMagnitudeMeanFrequency

fastFourierTransformBodyBodyGyroscopeJerkMagnitudeMean

fastFourierTransformBodyBodyGyroscopeJerkMagnitudeStandardDeviation

fastFourierTransformBodyBodyGyroscopeJerkMagnitudeMeanFrequency

Activities

Subject

1. Study Design

Data was downloaded from <https://d396qusza40orc.cloudfront.net/getdata%2Fprojectfiles%2FUCI%20HAR%20Dataset.zip>. Description of the data and project is available at the site <http://archive.ics.uci.edu/ml/datasets/Human+Activity+Recognition+Using+Smartphones>

For the project, we kept only any measured data regarding mean and standard deviation. Test and Train subjects were combined. For more information, see script getting\_and\_cleaning\_data\_analysis.R on how the data were transformed.