Data dictionary for the "tidydata" dataset

December 26, 2015

Version 1.0

Introduction

"tidydata" is derived from the data found here:
https://d396qusza40orc.cloudfront.net/getdata%2Fprojectfiles%2FUCI%20HAR%20Dataset.zip

Background information about the project can be found here:
http://archive.ics.uci.edu/ml/datasets/Human+Activity+Recognition+Using+Smartphones

Dataset description

A data frame with 180 observations on 27 variables.

List of Variables

Column 1: Subject

A numeric vector identifying the study participant. There were 30 volunteer study participants between the ages of 19-48.

Column 2: Activity

A factor indicating which activity the participant was doing. The levels are LAYING, SITTING, STANDING, WALKING, WALKING_DOWNSTAIRS, and WALKING_UPSTAIRS. Each person performed each activity while wearing a smartphone. Measurements were recorded by the accelerometer and gyroscope in the phone.

Column 3: Time_Acceleration_Magnitude_mean

A numeric vector with the mean magnitude of the body motion signal from the accelerometer, calculated from the time domain. Units of measure are 'g's (gravity of earth -> 9.80665 m/seg2.) The original label for this variable was tBodyAccMag-mean().

Column 4: Time_Gravity_Accleration_Magnitude_mean

A numeric vector with the mean magnitude of the gravitational motion signal from the accelerometer, calculated from the time domain. Units of measure are 'g's (gravity of earth -> 9.80665 m/seg2.) The original label for this variable was tGravityAccMag-mean().

Column 5: Time_Acceleration_JerkSignal_mean

A numeric vector with the mean magnitude of the body motion signal from the accelerometer, calculated from the time domain and derived in time to get Jerk signals. Units of measure are 'g's (gravity of earth -> 9.80665 m/seg2.) The original label for this variable was tBodyAccJerkMag-mean().

Column 6: Time_Gyroscopic_Magnitude_mean

A numeric vector with the mean magnitude of the signal from the gyroscope, calculated from the time domain. Units of measure are rad/seg. The original label for this variable was tBodyGyroMag-mean().

Column 7: Time_Gyroscopic_JerkSignal_mean

A numeric vector with the mean magnitude of the signal from the gyroscope, calculated from the time domain and derived in time to get Jerk signals. Units of measure are rad/seg. The original label for this variable was tBodyGyroJerkMag-mean().

Column 8: Freq_Acceleration_Magnitude_mean

A numeric vector with the mean magnitude of the body motion signal from the accelerometer, calculated from the frequency domain. Units of measure are 'g's (gravity of earth -> 9.80665 m/seg2.) The original label for this variable was fBodyAccMag-mean().

Column 9: Freq_Acceleration_JerkSignal_mean

A numeric vector with the mean magnitude of the body motion signal from the accelerometer, calculated from the frequency domain and derived in time to get Jerk signals. Units of measure are 'g's (gravity of earth -> 9.80665 m/seg2.) The original label for this variable was fBodyBodyAccJerkMag-mean().

Column 10: Freq_Gyroscopic_Magnitude_mean

A numeric vector with the mean magnitude of the signal from the gyroscope, calculated from the time domain. Units of measure are rad/seg. The original label for this variable was fBodyBodyGyroMag-mean().

Column 11: Freq_Gyroscopic_JerkSignal_mean

A numeric vector with the mean magnitude of the signal from the gyroscope, calculated from the time domain and derived in time to get Jerk signals. Units of measure are rad/seg. The original label for this variable was fBodyBodyGyroJerkMag-mean().

Column 12: Angle_time_Acceleration_gravitymean

A numeric vector with the angle of the gravity mean of the body motion signal from the accelerometer, calculated from the time domain. Units of measure were not specified by the researchers, but as gyroscopic variables were measured in rad/seg, it would be more likely the researchers used radians than degrees. The original label for this variable was Angle(tBodyAccMean,gravity).

Column 13: Angle_time_Acceleration_JerkSignal_gravitymean

A numeric vector with the angle of the gravity mean of the body motion signal from the accelerometer, calculated from the time domain and derived in time to get Jerk signals. Units of measure were not specified by the researchers, but as gyroscopic variables were measured in rad/seg, it would be more likely the researchers used radians than degrees. The original label for this variable was Angle(tBodyAccJerkMean), gravityMean).

Column 14: Angle_time_Gyroscopic_gravitymean

A numeric vector with the angle of the gravity mean of the signal from the gyroscope, calculated from the time domain. Units of measure were not specified by the researchers, but as gyroscopic variables were measured in rad/seg, it would be more likely the researchers used radians than degrees. The original label for this variable was Angle(tBodyGyroMean,gravityMean).

Column 15: Angle_time_Gyroscopic_JerkSignal_gravitymean

A numeric vector with the angle of the gravity mean of the signal from the gyroscope, calculated from the time domain and derived in time to get Jerk signals. Units of measure were not specified by the researchers, but as gyroscopic variables were measured in rad/seg, it would be more likely the researchers used radians than degrees. The original label for this variable was Angle(tBodyGyroJerkMean,gravityMean).

Column 16: Angle_X_GravityMean

A numeric vector indicating the angle in the X dimension of the gravity mean. Units of measure were not specified by the researchers, but as gyroscopic variables were measured in rad/seg, it would be more likely the researchers used radians than degrees. The original label for this variable was Angle(X,gravityMean).

Column 17: Angle_Y_gravitymean

A numeric vector indicating the angle in the Y dimension of the gravity mean. Units of measure were not specified by the researchers, but as gyroscopic variables were measured in rad/seg, it would be more likely the researchers used radians than degrees. The original label for this variable was Angle(Y,gravityMean).

Column 18: Angle_Z_gravitymean

A numeric vector indicating the angle in the Z dimension of the gravity mean. Units of measure were not specified by the researchers, but as gyroscopic variables were measured in rad/seg, it would be more likely the researchers used radians than degrees. The original label for this variable was Angle(Z,gravityMean).

Column 19: Time_Acceleration_Magnitude_StdDev

A numeric vector with the standard deviation of the magnitude of the body motion signal from the accelerometer, calculated from the time domain. Units of measure are 'g's (gravity of earth -> 9.80665 m/seg2.) The original label for this variable was tBodyAccMag-std().

Column 20: Time_Gravity_Accleration_Magnitude_StdDev

A numeric vector with the standard deviation of the magnitude of the gravitational motion signal from the accelerometer, calculated from the time domain. Units of measure are 'g's (gravity of earth -> 9.80665 m/seg2.) The original label for this variable was tGravityAccMag-std().

Column 21: Time_Acceleration_JerkSignal_StdDev

A numeric vector with the standard deviation of the magnitude of the body motion signal from the accelerometer, calculated from the time domain and derived in time to get Jerk signals. Units of measure are 'g's (gravity of earth -> 9.80665 m/seg2.) The original label for this variable was tBodyAccJerkMag-std().

Column 22: Time_Gyroscopic_Magnitude_StdDev

A numeric vector with the standard deviation of the magnitude of the signal from the gyroscope, calculated from the time domain. Units of measure are rad/seg. The original label for this variable was tBodyGyroMag-std().

Column 23: Time_Gyroscopic_JerkSignal_StdDev

A numeric vector with the standard deviation of the magnitude of the signal from the gyroscope, calculated from the time domain and derived in time to get Jerk signals. Units of measure are rad/seg. The original label for this variable was tBodyGyroJerkMag-std().

Column 24: Freq_Acceleration_Magnitude_StdDev

A numeric vector with the standard deviation of the magnitude of the body motion signal from the accelerometer, calculated from the frequency domain. Units of measure are 'g's (gravity of earth -> 9.80665 m/seg2.) The original label for this variable was fBodyAccMag-std().

Column 25: Freq_Acceleration_JerkSignal_StdDev

A numeric vector with the standard deviation of the magnitude of the body motion signal from the accelerometer, calculated from the frequency domain and derived in time to get Jerk signals. Units of measure are 'g's (gravity of earth -> 9.80665 m/seg2.) The original label for this variable was fBodyBodyAccJerkMag-std().

Column 26: Freq_Gyroscopic_Magnitude_StdDev

A numeric vector with the standard deviation of the magnitude of the signal from the gyroscope, calculated from the time domain. Units of measure are rad/seg. The original label for this variable was fBodyBodyGyroMag-std().

Column 27: Freq_Gyroscopic_JerkSignal_StdDev

A numeric vector with the standard deviation of the magnitude of the signal from the gyroscope, calculated from the time domain and derived in time to get Jerk signals. Units of measure are rad/seg. The original label for this variable was fBodyBodyGyroJerkMag-std().