CodeBook

This file is the CodeBook associated to the script “run_analysis.R”. It describes the variables and values of its output. A copy of the program can be found in this Github repository. The description of the algorithm and its input files are available in the README.md file.

Description of the variables

Subject_id

Identification number associated to the subject of the experiment.
Number in the range from 1 to 30.

Activity

Activity performed by the subject during the measurements.
Possible values are WALKING, WALKING_UPSTAIRS, WALKING_DOWNSTAIRS, SITTING, STANDING and LAYING.

tBodyAcc-mean()-X

Mean value of the body acceleration
Axis = X
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAcc-mean()-Y

Mean value of the body acceleration
Axis = Y
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAcc-mean()-Z

Mean value of the body acceleration
Axis = Z
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tGravityAcc-mean()-X

Mean value of the gravity acceleration
Axis = X
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tGravityAcc-mean()-Y

Mean value of the gravity acceleration
Axis = Y
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tGravityAcc-mean()-Z

Mean value of the gravity acceleration
Axis = Z
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAccJerk-mean()-X

Mean value of the Jerk signal for the body acceleration
Axis = X
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAccJerk-mean()-Y

Mean value of the Jerk signal for the body acceleration
Axis = Y
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAccJerk-mean()-Z

Mean value of the Jerk signal for the body acceleration
Axis = Z
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyro-mean()-X

Mean value of the angular velocity of they body
Axis = X
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyro-mean()-Y

Mean value of the angular velocity of they body

Axis = Y
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyro-mean()-Z

Mean value of the angular velocity of they body
Axis = Z
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyroJerk-mean()-X

Mean value of the Jerk signal of the angular velocity of they body
Axis = X
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyroJerk-mean()-Y

Mean value of the Jerk signal of the angular velocity of they body
Axis = Y
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyroJerk-mean()-Z

Mean value of the Jerk signal of the angular velocity of they body
Axis = Z
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAccMag-mean()

Mean value of the body acceleration
Magnitude of the Euclidean norm
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tGravityAccMag-mean()

Mean value of the gravity acceleration
Magnitude of the Euclidean norm
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAccJerkMag-mean()

Mean value of the Jerk signal for the body acceleration
Magnitude of the Euclidean norm
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyroMag-mean()

Mean value of the angular velocity of they body
Magnitude of the Euclidean norm
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyroJerkMag-mean()

Mean value of the Jerk signal of the angular velocity of they body
Magnitude of the Euclidean norm
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

fBodyAcc-mean()-X

Mean value of the body acceleration
Axis = X
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAcc-mean()-Y

Mean value of the body acceleration
Axis = Y
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAcc-mean()-Z

Mean value of the body acceleration
Axis = Z
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAccJerk-mean()-X

Mean value of the Jerk signal for the body acceleration

Axis = X
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAccJerk-mean()-Y

Mean value of the Jerk signal for the body acceleration
Axis = Y
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAccJerk-mean()-Z

Mean value of the Jerk signal for the body acceleration
Axis = Z
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyGyro-mean()-X

Mean value of the angular velocity of they body
Axis = X
Instrument = Gyroscope
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyGyro-mean()-Y

Mean value of the angular velocity of they body
Axis = Y
Instrument = Gyroscope
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyGyro-mean()-Z

Mean value of the angular velocity of they body
Axis = Z
Instrument = Gyroscope
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAccMag-mean()

Mean value of the body acceleration
Magnitude of the Euclidean norm
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyBodyAccJerkMag-mean()
Mean value of the Jerk signal for the body acceleration
Magnitude of the Euclidean norm
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyBodyGyroMag-mean()
Mean value of the angular velocity of they body
Magnitude of the Euclidean norm
Instrument = Gyroscope
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyBodyGyroJerkMag-mean()
Mean value of the Jerk signal of the angular velocity of they body
Magnitude of the Euclidean norm
Instrument = Gyroscope
Domain = Frequency
Units = Normalized and bounded within [-1,1]

tBodyAcc-std()-X
Standard deviation of the body acceleration
Axis = X
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAcc-std()-Y
Standard deviation of the body acceleration
Axis = Y
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAcc-std()-Z
Standard deviation of the body acceleration
Axis = Z
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tGravityAcc-std()-X
Standard deviation of the gravity acceleration

Axis = X
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tGravityAcc-std()-Y

Standard deviation of the gravity acceleration
Axis = Y
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tGravityAcc-std()-Z

Standard deviation of the gravity acceleration
Axis = Z
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAccJerk-std()-X

Standard deviation of the Jerk signal for the body acceleration
Axis = X
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAccJerk-std()-Y

Standard deviation of the Jerk signal for the body acceleration
Axis = Y
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAccJerk-std()-Z

Standard deviation of the Jerk signal for the body acceleration
Axis = Z
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyro-std()-X

Standard deviation of the angular velocity of they body
Axis = X
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyro-std()-Y

Standard deviation of the angular velocity of they body
Axis = Y
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyro-std()-Z

Standard deviation of the angular velocity of they body
Axis = Z
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyroJerk-std()-X

Standard deviation of the Jerk signal of the angular velocity of they body
Axis = X
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyroJerk-std()-Y

Standard deviation of the Jerk signal of the angular velocity of they body
Axis = Y
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyroJerk-std()-Z

Standard deviation of the Jerk signal of the angular velocity of they body
Axis = Z
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAccMag-std()

Standard deviation of the body acceleration
Magnitude of the Euclidean norm
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tGravityAccMag-std()

Standard deviation of the gravity acceleration

Magnitude of the Euclidean norm
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyAccJerkMag-std()
Standard deviation of the Jerk signal for the body acceleration
Magnitude of the Euclidean norm
Instrument = Accelerometer
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyroMag-std()
Standard deviation of the angular velocity of they body
Magnitude of the Euclidean norm
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

tBodyGyroJerkMag-std()
Standard deviation of the Jerk signal of the angular velocity of they body
Magnitude of the Euclidean norm
Instrument = Gyroscope
Domain = Time
Units = Normalized and bounded within [-1,1]

fBodyAcc-std()-X
Standard deviation of the body acceleration
Axis = X
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAcc-std()-Y
Standard deviation of the body acceleration
Axis = Y
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAcc-std()-Z
Standard deviation of the body acceleration
Axis = Z
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAccJerk-std()-X

Standard deviation of the Jerk signal for the body acceleration
Axis = X
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAccJerk-std()-Y

Standard deviation of the Jerk signal for the body acceleration
Axis = Y
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAccJerk-std()-Z

Standard deviation of the Jerk signal for the body acceleration
Axis = Z
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyGyro-std()-X

Standard deviation of the angular velocity of they body
Axis = X
Instrument = Gyroscope
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyGyro-std()-Y

Standard deviation of the angular velocity of they body
Axis = Y
Instrument = Gyroscope
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyGyro-std()-Z

Standard deviation of the angular velocity of they body
Axis = Z
Instrument = Gyroscope
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyAccMag-std()

Standard deviation of the body acceleration

Magnitude of the Euclidean norm
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyBodyAccJerkMag-std()
Standard deviation of the Jerk signal for the body acceleration
Magnitude of the Euclidean norm
Instrument = Accelerometer
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyBodyGyroMag-std()
Standard deviation of the angular velocity of they body
Magnitude of the Euclidean norm
Instrument = Gyroscope
Domain = Frequency
Units = Normalized and bounded within [-1,1]

fBodyBodyGyroJerkMag-std()
Standard deviation of the Jerk signal of the angular velocity of they body
Magnitude of the Euclidean norm
Instrument = Gyroscope
Domain = Frequency
Units = Normalized and bounded within [-1,1]