DATA DICTIONARY – 2012 HUMAN ACTIVITY RECOGNITION

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activity

"Activity Name"

Storage mode: character
Measurement: nominal

Values and labels	N	Percent	
LAYING '6'	30	16.7	16.7
SITTING '4'	30	16.7	16.7
STANDING '5'	30	16.7	16.7
WALKING '1'	30	16.7	16.7
WALKING_DOWNSTAIRS '3'	30	16.7	16.7
WALKING_UPSTAIRS '2'	30	16.7	16.7

==========

subject

"Subject ID"

Storage mode: integer
Measurement: interval

Min:	1.000
Max:	30.000
Mean:	15.500
Std.Dev.:	8.655
Skewness:	0.000
Kurtosis:	-1.203

Note:

Each subject is given a unique identifier from 1 to 30

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tBodyAcc.mean...X

"Mean body accel. signals in X-dir (in hz)"

Storage mode: double
Measurement: interval

Min: 0.222
Max: 0.301
Mean: 0.274
Std.Dev.: 0.012
Skewness: -1.055
Kurtosis: 2.329

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tBodyAcc.mean...Y

"Mean body accel. signals in Y-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.041
Max: -0.001
Mean: -0.018
Std.Dev.: 0.006
Skewness: -0.537
Kurtosis: 1.612

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tBodyAcc.mean...Z

"Mean body accel. signals in Z-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.153
Max: -0.075
Mean: -0.109
Std.Dev.: 0.010
Skewness: -1.115
Kurtosis: 4.910

==========

tBodyAcc.std...X

"Standard deviation body accel. signals in X-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.996
Max: 0.627
Mean: -0.558
Std.Dev.: 0.450
Skewness: 0.438
Kurtosis: -1.216

==========

tBodyAcc.std...Y

"Standard deviation body accel. signals in Y-dir (in hz)"

Storage mode: double

Measurement: interval

Min: -0.990
Max: 0.617
Mean: -0.460
Std.Dev.: 0.495
Skewness: 0.235
Kurtosis: -1.586

==========

tBodyAcc.std...Z

"Standard deviation body accel. signals in Z-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.988
Max: 0.609
Mean: -0.576
Std.Dev.: 0.394
Skewness: 0.451
Kurtosis: -1.026

==========

tGravityAcc.mean...X

"Mean gravity accel. signals in X-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.680
Max: 0.975
Mean: 0.697
Std.Dev.: 0.486

Skewness: -1.811
Kurtosis: 1.452

==========

tGravityAcc.mean...Y

"Mean gravity accel. signals in Y-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.480
Max: 0.957
Mean: -0.016
Std.Dev.: 0.344
Skewness: 1.427
Kurtosis: 1.051

==========

tGravityAcc.mean...Z

"Mean gravity accel. signals in Z-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.495
Max: 0.958
Mean: 0.074
Std.Dev.: 0.288
Skewness: 1.145
Kurtosis: 1.208

==========

tGravityAcc.std...X

"Standard deviation gravity accel. signals in X-dir (in hz)"

Storage mode: double
Measurement: interval

Min:	-0.997
Max:	-0.830
Mean:	-0.964
Std.Dev.:	0.025
Skewness:	1.669
Kurtosis:	5.051

==========

tGravityAcc.std...Y

"Standard deviation gravity accel. signals in Y-dir (in hz)"

Storage mode: double
Measurement: interval

Min:	-0.994
Max:	-0.644
Mean:	-0.952
Std.Dev.:	0.033
Skewness:	4.817
Kurtosis:	42.501

==========

tGravityAcc.std...Z

"Standard deviation gravity accel. signals in Z-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.991
Max: -0.610
Mean: -0.936
Std.Dev.: 0.040
Skewness: 3.248
Kurtosis: 22.288

==========

tBodyAccJerk.mean...X

"Mean body accel. Jerk signals in X-dir (in hz)"

Storage mode: double
Measurement: interval

Min: 0.043
Max: 0.130
Mean: 0.079
Std.Dev.: 0.013
Skewness: 0.821
Kurtosis: 2.560

==========

tBodyAccJerk.mean...Y

"Mean body accel. Jerk signals in Y-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.039
Max: 0.057
Mean: 0.008

Std.Dev.: 0.014
Skewness: -0.192
Kurtosis: 1.606

==========

tBodyAccJerk.mean...Z

"Mean body accel. Jerk signals in Z-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.067
Max: 0.038
Mean: -0.005
Std.Dev.: 0.013
Skewness: -0.835
Kurtosis: 3.525

==========

tBodyAccJerk.std...X

"Standard deviation body accel. Jerk signals in X-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.995
Max: 0.544
Mean: -0.595
Std.Dev.: 0.416
Skewness: 0.424
Kurtosis: -1.273

==========

tBodyAccJerk.std...Y

"Standard deviation body accel. Jerk signals in Y-dir (in hz)"

Storage mode: double
Measurement: interval

Min:	-0.990
Max:	0.355
Mean:	-0.565
Std.Dev.:	0.432
Skewness:	0.362
Kurtosis:	-1.450

==========

tBodyAccJerk.std...Z

"Standard deviation body accel. Jerk signals in Z-dir (in hz)"

Storage mode: double
Measurement: interval

Min:	-0.993
Max:	0.031
Mean:	-0.736
Std.Dev.:	0.276
Skewness:	0.679
Kurtosis:	-0.681

==========

tBodyGyro.mean...X

"Mean body gyro signals in X-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.206
Max: 0.193
Mean: -0.032
Std.Dev.: 0.054
Skewness: 0.341
Kurtosis: 2.391

==========

tBodyGyro.mean...Y

"Mean body gyro signals in Y-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.204
Max: 0.027
Mean: -0.074
Std.Dev.: 0.035
Skewness: -0.286
Kurtosis: 2.070

==========

tBodyGyro.mean...Z

"Mean body gyro signals in Z-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.072
Max: 0.179

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        Mean:   0.087
    Std.Dev.:   0.036
    Skewness:  -0.781
    Kurtosis:   3.224

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  tBodyGyro.std...X

  "Standard deviation body gyro signals in X-dir (in hz)"

--------------------------------------------------------------------------------

  Storage mode: double
  Measurement: interval

        Min:  -0.994
        Max:   0.268
       Mean:  -0.692
    Std.Dev.:   0.290
    Skewness:   0.391
    Kurtosis:  -1.073

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  tBodyGyro.std...Y

  "Standard deviation body gyro signals in Y-dir (in hz)"

--------------------------------------------------------------------------------

  Storage mode: double
  Measurement: interval

        Min:  -0.994
        Max:   0.477
       Mean:  -0.653
    Std.Dev.:   0.351
    Skewness:   0.731
    Kurtosis:  -0.458
```

==========

tBodyGyro.std...Z

"Standard deviation body gyro signals in Z-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.986
Max: 0.565
Mean: -0.616
Std.Dev.: 0.372
Skewness: 0.531
Kurtosis: -0.798

==========

tBodyGyroJerk.mean...X

"Mean body gyro Jerk signals in X-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.157
Max: -0.022
Mean: -0.096
Std.Dev.: 0.023
Skewness: 0.485
Kurtosis: 1.825

==========

tBodyGyroJerk.mean...Y

"Mean body gyro Jerk signals in Y-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.077
Max: -0.013
Mean: -0.043
Std.Dev.: 0.010
Skewness: -0.814
Kurtosis: 2.785

==========

tBodyGyroJerk.mean...Z

"Mean body gyro Jerk signals in Z-dir (in hz)"

Storage mode: double
Measurement: interval

Min: -0.092
Max: -0.007
Mean: -0.055
Std.Dev.: 0.012
Skewness: 0.258
Kurtosis: 1.867

==========

tBodyGyroJerk.std...X

"Standard deviation body gyro Jerk signals in X-dir (in hz)"

Storage mode: double
Measurement: interval

```
         Min:  -0.997
         Max:   0.179
        Mean:  -0.704
    Std.Dev.:   0.300
    Skewness:   0.554
    Kurtosis:  -0.916

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  tBodyGyroJerk.std...Y

  "Standard deviation body gyro Jerk signals in Y-dir (in hz)"

--------------------------------------------------------------------------------

  Storage mode: double
  Measurement: interval

         Min:  -0.997
         Max:   0.296
        Mean:  -0.764
    Std.Dev.:   0.267
    Skewness:   1.156
    Kurtosis:   1.064

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  tBodyGyroJerk.std...Z

  "Standard deviation body gyro Jerk signals in Z-dir (in hz)"

--------------------------------------------------------------------------------

  Storage mode: double
  Measurement: interval

         Min:  -0.995
         Max:   0.193
        Mean:  -0.710
    Std.Dev.:   0.304
    Skewness:   0.649
    Kurtosis:  -0.652
```

==========

tBodyAccMag.mean..

"Mean magnitude of body accel. signals (in hz)"

Storage mode: double
Measurement: interval

Min: -0.986
Max: 0.645
Mean: -0.497
Std.Dev.: 0.472
Skewness: 0.231
Kurtosis: -1.587

==========

tBodyAccMag.std..

"Standard deviation of magnitude of body accel. signals (in hz)"

Storage mode: double
Measurement: interval

Min: -0.986
Max: 0.428
Mean: -0.544
Std.Dev.: 0.430
Skewness: 0.464
Kurtosis: -1.194

==========

tGravityAccMag.mean..

"Mean magnitude of gravity accel. signals (in hz)"

Storage mode: double
Measurement: interval

Min: -0.986
Max: 0.645
Mean: -0.497
Std.Dev.: 0.472
Skewness: 0.231
Kurtosis: -1.587

==========

tGravityAccMag.std..

"Standard deviation of magnitude of gravity accel. signals (in hz)"

Storage mode: double
Measurement: interval

Min: -0.986
Max: 0.428
Mean: -0.544
Std.Dev.: 0.430
Skewness: 0.464
Kurtosis: -1.194

==========

tBodyAccJerkMag.mean..

"Mean magnitude of gravity accel. Jerk signals (in hz)"

Storage mode: double
Measurement: interval

```
         Min:  -0.993
         Max:   0.434
        Mean:  -0.608
     Std.Dev.:   0.395
     Skewness:   0.360
     Kurtosis:  -1.388

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  tBodyAccJerkMag.std..

  "Standard deviation of magnitude of gravity accel. Jerk signals (in hz)"

--------------------------------------------------------------------------------

  Storage mode: double
  Measurement: interval

         Min:  -0.995
         Max:   0.451
        Mean:  -0.584
     Std.Dev.:   0.422
     Skewness:   0.425
     Kurtosis:  -1.319

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  tBodyGyroMag.mean..

  "Mean magnitude of body gyro signals (in hz)"

--------------------------------------------------------------------------------

  Storage mode: double
  Measurement: interval

         Min:  -0.981
         Max:   0.418
        Mean:  -0.565
     Std.Dev.:   0.397
     Skewness:   0.313
```

Kurtosis: -1.422

==========

tBodyGyroMag.std..

"Standard deviation of magnitude of body gyro signals (in hz)"

Storage mode: double
Measurement: interval

Min: -0.981
Max: 0.300
Mean: -0.630
Std.Dev.:   0.336
Skewness: 0.482
Kurtosis: -1.027

==========

tBodyGyroJerkMag.mean..

"Mean magnitude of body gyro Jerk signals (in hz)"

Storage mode: double
Measurement: interval

Min: -0.997
Max: 0.088
Mean: -0.736
Std.Dev.:   0.276
Skewness: 0.660
Kurtosis: -0.646

==========

tBodyGyroJerkMag.std..

"Standard deviation of magnitude of body gyro Jerk signals (in hz)"

Storage mode: double
Measurement: interval

Min: -0.998
Max: 0.250
Mean: -0.755
Std.Dev.: 0.265
Skewness: 1.016
Kurtosis: 0.546

==========

fBodyAcc.mean...X

"FFT of tBodyAcc.mean...X (in hz)"

Storage mode: double
Measurement: interval

Min: -0.995
Max: 0.537
Mean: -0.576
Std.Dev.: 0.429
Skewness: 0.391
Kurtosis: -1.328

==========

fBodyAcc.mean...Y

"FFT of tBodyAcc.mean...Y (in hz)"

Storage mode: double

Measurement: interval

Min: -0.989
Max: 0.524
Mean: -0.489
Std.Dev.: 0.479
Skewness: 0.259
Kurtosis: -1.567

==========

fBodyAcc.mean...Z

"FFT of tBodyAcc.mean...Z (in hz)"

Storage mode: double
Measurement: interval

Min: -0.989
Max: 0.281
Mean: -0.630
Std.Dev.: 0.355
Skewness: 0.470
Kurtosis: -1.073

==========

fBodyAcc.std...X

"FFT of tBodyAcc.std...X (in hz)"

Storage mode: double
Measurement: interval

Min: -0.997
Max: 0.659
Mean: -0.552
Std.Dev.: 0.459

Skewness: 0.469
Kurtosis: -1.145

==========

fBodyAcc.std...Y

"FFT of tBodyAcc.std...Y (in hz)"

Storage mode: double
Measurement: interval

Min: -0.991
Max: 0.560
Mean: -0.481
Std.Dev.: 0.473
Skewness: 0.244
Kurtosis: -1.566

==========

fBodyAcc.std...Z

"FFT of tBodyAcc.std...Z (in hz)"

Storage mode: double
Measurement: interval

Min: -0.987
Max: 0.687
Mean: -0.582
Std.Dev.: 0.387
Skewness: 0.518
Kurtosis: -0.808

==========

fBodyAccJerk.mean...X

"FFT of tBodyAccJerk.mean...X (in hz)"

Storage mode: double
Measurement: interval

Min: -0.995
Max: 0.474
Mean: -0.614
Std.Dev.: 0.397
Skewness: 0.444
Kurtosis: -1.222

==========

fBodyAccJerk.mean...Y

"FFT of tBodyAccJerk.mean...Y (in hz)"

Storage mode: double
Measurement: interval

Min: -0.989
Max: 0.277
Mean: -0.588
Std.Dev.: 0.407
Skewness: 0.347
Kurtosis: -1.478

==========

fBodyAccJerk.mean...Z

"FFT of tBodyAccJerk.mean...Z (in hz)"

Storage mode: double
Measurement: interval

Min: -0.992
Max: 0.158
Mean: -0.714
Std.Dev.: 0.296
Skewness: 0.670
Kurtosis: -0.677

==========

fBodyAccJerk.std...X

"FFT of tBodyAccJerk.std...X (in hz)"

Storage mode: double
Measurement: interval

Min: -0.995
Max: 0.477
Mean: -0.612
Std.Dev.: 0.399
Skewness: 0.413
Kurtosis: -1.306

==========

fBodyAccJerk.std...Y

"FFT of tBodyAccJerk.std...Y (in hz)"

Storage mode: double
Measurement: interval

Min: -0.990
Max: 0.350
Mean: -0.571

Std.Dev.: 0.431
Skewness: 0.393
Kurtosis: -1.386

==========

fBodyAccJerk.std...Z

"FFT of tBodyAccJerk.std...Z (in hz)"

Storage mode: double
Measurement: interval

Min: -0.993
Max: -0.006
Mean: -0.756
Std.Dev.: 0.256
Skewness: 0.709
Kurtosis: -0.606

==========

fBodyGyro.mean...X

"FFT of tBodyGyro.mean...X (in hz)"

Storage mode: double
Measurement: interval

Min: -0.993
Max: 0.475
Mean: -0.637
Std.Dev.: 0.346
Skewness: 0.417
Kurtosis: -1.040

==========

fBodyGyro.mean...Y

"FFT of tBodyGyro.mean...Y (in hz)"

Storage mode: double
Measurement: interval

Min: -0.994
Max: 0.329
Mean: -0.677
Std.Dev.: 0.331
Skewness: 0.738
Kurtosis: -0.471

==========

fBodyGyro.mean...Z

"FFT of tBodyGyro.mean...Z (in hz)"

Storage mode: double
Measurement: interval

Min: -0.986
Max: 0.492
Mean: -0.604
Std.Dev.: 0.383
Skewness: 0.445
Kurtosis: -1.128

==========

fBodyGyro.std...X

"FFT of tBodyGyro.std...X (in hz)"

Storage mode: double
Measurement: interval

Min: -0.995
Max: 0.197
Mean: -0.711
Std.Dev.: 0.272
Skewness: 0.401
Kurtosis: -1.052

==========

fBodyGyro.std...Y

"FFT of tBodyGyro.std...Y (in hz)"

Storage mode: double
Measurement: interval

Min: -0.994
Max: 0.646
Mean: -0.645
Std.Dev.: 0.362
Skewness: 0.830
Kurtosis: -0.090

==========

fBodyGyro.std...Z

"FFT of tBodyGyro.std...Z (in hz)"

Storage mode: double
Measurement: interval

Min: -0.987
Max: 0.522

Mean: -0.658
Std.Dev.: 0.335
Skewness: 0.631
Kurtosis: -0.449

==========

fBodyAccMag.mean..

"FFT of tBodyAccMag.mean.. (in hz)"

Storage mode: double
Measurement: interval

Min: -0.987
Max: 0.587
Mean: -0.537
Std.Dev.: 0.450
Skewness: 0.464
Kurtosis: -1.197

==========

fBodyAccMag.std..

"FFT of tBodyAccMag.std.. (in hz)"

Storage mode: double
Measurement: interval

Min: -0.988
Max: 0.179
Mean: -0.621
Std.Dev.: 0.352
Skewness: 0.493
Kurtosis: -1.134

==========

fBodyAccJerkMag.mean..

"FFT of tBodyAccJerkMag.mean.. (in hz)"

Storage mode: double
Measurement: interval

Min: -0.994
Max: 0.538
Mean: -0.576
Std.Dev.: 0.430
Skewness: 0.424
Kurtosis: -1.293

==========

fBodyAccJerkMag.std..

"FFT of tBodyAccJerkMag.std.. (in hz)"

Storage mode: double
Measurement: interval

Min: -0.994
Max: 0.316
Mean: -0.599
Std.Dev.: 0.408
Skewness: 0.453
Kurtosis: -1.301

==========

fBodyGyroMag.mean..

"FFT of tBodyGyroMag.mag.. (in hz)"

Storage mode: double
Measurement: interval

Min: -0.987
Max: 0.204
Mean: -0.667
Std.Dev.: 0.317
Skewness: 0.582
Kurtosis: -0.793

==========

fBodyGyroMag.std..

"FFT of tBodyGyroMag.std.. (in hz)"

Storage mode: double
Measurement: interval

Min: -0.981
Max: 0.237
Mean: -0.672
Std.Dev.: 0.292
Skewness: 0.493
Kurtosis: -0.955

==========

fBodyGyroJerkMag.mean..

"FFT of tBodyGyroJerkMag.mean.. (in hz)"

Storage mode: double
Measurement: interval

```
         Min:  -0.998
         Max:   0.147
        Mean:  -0.756
     Std.Dev.:   0.262
     Skewness:   0.957
     Kurtosis:   0.276

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  fBodyGyroJerkMag.std..

  "FFT of tBodyGyroJerkMag.std.. (in hz)"

--------------------------------------------------------------------------------

  Storage mode: double
  Measurement: interval

         Min:  -0.998
         Max:   0.288
        Mean:  -0.772
     Std.Dev.:   0.250
     Skewness:   1.137
     Kurtosis:   1.122
```