## DATA DICTIONARY - Human Activity Recognition Using Smartphones Dataset

180 obs. of 88 variables:

#### Subjects 1

Unique identifier from 1 to 30 indicating the subject code who performed the activity.

#### Activity

The 6 activity names which the subject performed.

- WALKING
- WALKING UPSTAIRS
- WALKING DOWNSTAIRS
- SITTING
- STANDING
- LAYING

#### tBodyAcc.mean...X

Mean of body acceleration in time domain signals at x axis  $0.222\ 0.261\ 0.279\ 0.277\ 0.289\ \dots$ 

### tBodyAcc.mean...Y

Mean of body acceleration in time domain signals at y axis -0.04051 -0.00131 -0.01614 -0.01738 -0.00992 ...

#### tBodyAcc.mean...Z

Mean of body acceleration in time domain signals at z axis -0.113 -0.105 -0.111 -0.108 ...

#### tGravityAcc.mean...X

Mean of gravity acceleration in time domain signals x axis  $-0.249 \ 0.832 \ 0.943 \ 0.935 \ 0.932 \dots$ 

#### tGravityAcc.mean...Y

Mean of gravity acceleration in time domain signals y axis 0.706 0.204 -0.273 -0.282 -0.267  $\dots$ 

## tGravityAcc.mean...Z

Mean of gravity acceleration in time domain signals z axis 0.4458 0.332 0.0135 -0.0681 -0.0621 ...

#### tBodyAccJerk.mean...X

Mean the body linear acceleration derived in time to obtain Jerk signals  ${\bf x}$  axis

0.0811 0.0775 0.0754 0.074 0.0542 ...

#### tBodyAccJerk.mean...Y

Mean the body linear acceleration derived in time to obtain Jerk signals y axis

0.003838 -0.000619 0.007976 0.028272 0.02965 ...

### tBodyAccJerk.mean...Z

Mean of the body linear acceleration derived in time to obtain Jerk signals  $\boldsymbol{z}$  axis

0.01083 -0.00337 -0.00369 -0.00417 -0.01097 ...

### tBodyGyro.mean...X

Mean of the body angular velocity derived in time domain signals  $\boldsymbol{x}$  axis

-0.0166 -0.0454 -0.024 -0.0418 -0.0351 ...

### tBodyGyro.mean...Y

Mean of the body angular velocity derived in time domain signals Y axis

-0.0645 -0.0919 -0.0594 -0.0695 -0.0909 ...

## tBodyGyro.mean...Z

Mean of the body angular velocity derived in time domain signals  ${\bf z}$  axis

0.1487 0.0629 0.0748 0.0849 0.0901 ...

## tBodyGyroJerk.mean...X

Mean of the body angular velocity derived in time to obtain Jerk signals x axis

-0.1073 -0.0937 -0.0996 -0.09 -0.074 ...

#### tBodyGyroJerk.mean...Y

Mean of the body angular velocity derived in time to obtain  $\mbox{Jerk signals Y axis}$ 

-0.0415 -0.0402 -0.0441 -0.0398 -0.044 ...

### tBodyGyroJerk.mean...Z

Mean of the body angular velocity derived in time to obtain Jerk signals Z axis

-0.0741 -0.0467 -0.049 -0.0461 -0.027 ...

### tBodyAccMag.mean..

Mean of the magnitude of body acceleration in time domain signal.

-0.8419 -0.9485 -0.9843 -0.137 0.0272 ...

## tGravityAccMag.mean..

Mean of the magnitude of gravity acceleration in time domain signal.

-0.8419 -0.9485 -0.9843 -0.137 0.0272 ...

## tBodyAccJerkMag.mean..

Mean of the magnitude of the body linear acceleration derived in time to obtain Jerk signals.

-0.9544 -0.9874 -0.9924 -0.1414 -0.0894 ...

## tBodyGyroMag.mean..

Mean of the magnitude the body angular velocity derived in time domain signals.

-0.8748 -0.9309 -0.9765 -0.161 -0.0757 ...

# tBodyGyroJerkMag.mean..

Mean of the magnitude the body angular velocity derived in time to obtain Jerk signals.

-0.963 -0.992 -0.995 -0.299 -0.295 ...

# ${\tt fBodyAcc.mean...X}$

Mean of body acceleration in frequency domain signals at  $\mathbf{x}$  axis

-0.9391 -0.9796 -0.9952 -0.2028 0.0382 ...

#### fBodyAcc.mean...Y

Mean of body acceleration in frequency domain signals at y axis

-0.86707 -0.94408 -0.97707 0.08971 0.00155 ...

# fBodyAcc.mean...Z

Mean of body acceleration in frequency domain signals at  $\boldsymbol{z}$  axis

-0.883 -0.959 -0.985 -0.332 -0.226 ...

#### fBodyAcc.meanFreq...X

Mean frequency of body acceleration in frequency domain signals at  ${\bf x}$  axis

-0.1588 -0.0495 0.0865 -0.2075 -0.3074 ...

#### fBodyAcc.meanFreq...Y

Mean frequency of body acceleration in frequency domain signals at y axis

0.0975 0.0759 0.1175 0.1131 0.0632 ...

### fBodyAcc.meanFreq...Z

Mean frequency of body acceleration in frequency domain signals at  ${\bf z}$  axis

0.0894 0.2388 0.2449 0.0497 0.2943 ...

#### fBodyAccJerk.mean...X

Mean the body linear acceleration derived in frequency domain to obtain Jerk signals x axis

-0.9571 -0.9866 -0.9946 -0.1705 -0.0277 ...

# ${\tt fBodyAccJerk.mean...Y}$

Mean the body linear acceleration derived in frequency domain to obtain Jerk Signals Y axis

-0.9225 -0.9816 -0.9854 -0.0352 -0.1287 ...

# ${\tt fBodyAccJerk.mean...Z}$

Mean the body linear acceleration derived in frequency domain to obtain Jerk Signals Z axis

-0.948 -0.986 -0.991 -0.469 -0.288 ...

# fBodyAccJerk.meanFreq...X

Mean frequency of the body linear acceleration derived in frequency domain to obtain Jerk Signals X axis

0.132 0.257 0.314 -0.209 -0.253 ...

### fBodyAccJerk.meanFreq...Y

Mean frequency of the body linear acceleration derived in frequency domain to obtain Jerk Signals Y axis 0.0245 0.0475 0.0392 -0.3862 -0.3376 ...

# fBodyAccJerk.meanFreq...Z

Mean frequency of the body linear acceleration derived in frequency domain to obtain Jerk Signals Z axis 0.02439 0.09239 0.13858 -0.18553 0.00937 ...

### fBodyGyro.mean...X

Mean of the body angular velocity derived in frequency domain signals x axis

-0.85 -0.976 -0.986 -0.339 -0.352 ...

# fBodyGyro.mean...Y

Mean of the body angular velocity derived in frequency domain signals Y axis

-0.9522 -0.9758 -0.989 -0.1031 -0.0557 ...

#### fBodyGyro.mean...Z

Mean of the body angular velocity derived in frequency domain signals Z axis

-0.9093 -0.9513 -0.9808 -0.2559 -0.0319 ...

### fBodyGyro.meanFreq...X

Mean frequency of the body angular velocity derived in frequency domain signals X axis

-0.00355 0.18915 -0.12029 0.01478 -0.10045 ...

### fBodyGyro.meanFreq...Y

Mean frequency of the body angular velocity derived in frequency domain signals Y axis

-0.0915 0.0631 -0.0447 -0.0658 0.0826 ...

### fBodyGyro.meanFreq...Z

Mean frequency of the body angular velocity derived in frequency domain signals Z axis

0.010458 -0.029784 0.100608 0.000773 -0.075676 ...

# fBodyAccMag.mean..

Mean of the magnitude of body acceleration in frequency domain signal

-0.8618 -0.9478 -0.9854 -0.1286 0.0966 ...

## fBodyAccMag.meanFreq..

Mean Frequency of the magnitude of body acceleration in frequency domain signal

0.0864 0.2367 0.2846 0.1906 0.1192 ...

## fBodyBodyAccJerkMag.mean..

Mean of the magnitude of the body linear acceleration derived in frequency domain to obtain Jerk signals.

-0.9333 -0.9853 -0.9925 -0.0571 0.0262 ...

### fBodyBodyAccJerkMag.meanFreq..

Mean frequency of magnitude of the body linear acceleration derived in frequency domain to obtain Jerk signals.

0.2664 0.3519 0.4222 0.0938 0.0765 ...

### fBodyBodyGyroMag.mean..

Mean of magnitude of the body angular velocity derived in frequency domain signals  $% \left( 1\right) =\left( 1\right) +\left( 1\right)$ 

-0.862 -0.958 -0.985 -0.199 -0.186 ...

## fBodyBodyGyroMag.meanFreq..

Mean frequency of magnitude of the body angular velocity derived in frequency domain signals

-0.139775 -0.000262 -0.028606 0.268844 0.349614 ...

# fBodyBodyGyroJerkMag.mean..

Mean of magnitude of the body linear acceleration derived in frequency domain to obtain Jerk signals.

-0.942 -0.99 -0.995 -0.319 -0.282 ...

### fBodyBodyGyroJerkMag.meanFreq..

Mean frequency of magnitude of the body linear acceleration derived in frequency domain to obtain Jerk signals.

0.176 0.185 0.334 0.191 0.19 ...

# angle.tBodyAccMean.gravity.

gravity mean of the angle of the body linear acceleration in time domain.

0.021366 0.027442 -0.000222 0.060454 -0.002695 ...

## angle.tBodyAccJerkMean..gravityMean.

gravity mean of the angle of the body linear acceleration derived in time to obtain Jerk signals.

0.00306 0.02971 0.02196 -0.00793 0.08993 ...

#### angle.tBodyGyroMean.gravityMean.

gravity mean of the angle of the body angular velocity derived in time domain signals.

-0.00167 0.0677 -0.03379 0.01306 0.06334 ...

# angle.tBodyGyroJerkMean.gravityMean.

gravity mean of the angle of the body angular velocity derived in time to obtain Jerk signals  $0.0844 - 0.0649 - 0.0279 - 0.0187 - 0.04 \dots$ 

## angle.X.gravityMean.

gravity mean of the angle in X direction.  $0.427 \ -0.591 \ -0.743 \ -0.729 \ -0.744 \ \dots$ 

#### angle.Y.gravityMean.

gravity mean of the angle in y direction.  $-0.5203 -0.0605 \ 0.2702 \ 0.277 \ 0.2672 \dots$ 

#### angle.Z.gravityMean.

gravity mean of the angle in z direction.  $-0.3524 -0.218 \ 0.0123 \ 0.0689 \ 0.065 \dots$ 

### tBodyAcc.std...X

Standard deviation of body acceleration in time domain signals at  ${\bf x}$  axis

-0.928 -0.977 -0.996 -0.284 0.03 ...

# tBodyAcc.std...Y

Standard deviation of body acceleration in time domain signals at Y axis

-0.8368 -0.9226 -0.9732 0.1145 -0.0319 ...

# tBodyAcc.std...Z

Standard deviation of body acceleration in time domain signals at  ${\bf Z}$  axis

-0.826 -0.94 -0.98 -0.26 -0.23 ...

## tGravityAcc.std...X

Standard deviation of gravity acceleration in time domain signals X axis

-0.897 -0.968 -0.994 -0.977 -0.951 ...

### tGravityAcc.std...Y

Standard deviation of gravity acceleration in time domain signals Y axis

-0.908 -0.936 -0.981 -0.971 -0.937 ...

### tGravityAcc.std...Z

Standard deviation of gravity acceleration in time domain signals Z axis

-0.852 -0.949 -0.976 -0.948 -0.896 ...

# tBodyAccJerk.std...X

Standard deviation of the body linear acceleration derived in time to obtain Jerk signals  ${\tt X}$  axis

-0.9585 -0.9864 -0.9946 -0.1136 -0.0123 ...

## tBodyAccJerk.std...Y

Standard deviation of the body linear acceleration derived in time to obtain Jerk signals Y axis

-0.924 -0.981 -0.986 0.067 -0.102 ...

## $\verb|tBodyAccJerk.std...Z||$

Standard deviation of the body linear acceleration derived in time to obtain Jerk Signals  ${\tt Z}$  axis

-0.955 -0.988 -0.992 -0.503 -0.346 ...

# tBodyGyro.std...X

Standard deviation of the body angular velocity derived in time domain signals  ${\bf x}$  axis

-0.874 -0.977 -0.987 -0.474 -0.458 ...

# tBodyGyro.std...Y

Standard deviation of the body angular velocity derived in time domain signals Y axis

-0.9511 -0.9665 -0.9877 -0.0546 -0.1263 ...

# tBodyGyro.std...Z

Standard deviation of the body angular velocity derived in time domain signals Z axis

-0.908 -0.941 -0.981 -0.344 -0.125 ...

## tBodyGyroJerk.std...X

Standard deviation of the body angular velocity derived in time to obtain Jerk Signals X axis  $-0.919 \ -0.992 \ -0.993 \ -0.207 \ -0.487 \dots$ 

# tBodyGyroJerk.std...Y

Standard deviation of the body angular velocity derived in time to obtain Jerk Signals Y axis  $-0.968 -0.99 -0.995 -0.304 -0.239 \dots$ 

#### tBodyGyroJerk.std...Z

Standard deviation of the body angular velocity derived in time to obtain Jerk Signals Z axis
-0.958 -0.988 -0.992 -0.404 -0.269 ...

### tBodyAccMag.std..

Standard deviation of the magnitude of body acceleration in time domain signal  $% \left( 1\right) =\left( 1\right) +\left( 1\right) +\left($ 

-0.7951 -0.9271 -0.9819 -0.2197 0.0199 ...

## tGravityAccMag.std..

Standard deviation of the magnitude of gravity acceleration in time domain signal

-0.7951 -0.9271 -0.9819 -0.2197 0.0199 ...

#### tBodyAccJerkMag.std..

Standard deviation of the magnitude of the body linear acceleration derived in time to obtain Jerk signals.

-0.9282 -0.9841 -0.9931 -0.0745 -0.0258 ...

## tBodyGyroMag.std..

Standard deviation of the magnitude the body angular velocity derived in time domain signals.

-0.819 -0.935 -0.979 -0.187 -0.226 ...

# tBodyGyroJerkMag.std..

Standard deviation of the magnitude the body angular velocity derived in time to obtain Jerk signals.

-0.936 -0.988 -0.995 -0.325 -0.307 ...

#### fBodyAcc.std...X

Standard deviation of body acceleration in frequency domain signals at X axis

-0.9244 -0.9764 -0.996 -0.3191 0.0243 ...

## fBodyAcc.std...Y

Standard deviation of body acceleration in frequency domain signals at Y  $\ensuremath{\mathrm{axis}}$ 

-0.834 -0.917 -0.972 0.056 -0.113 ...

# fBodyAcc.std...Z

Standard deviation of body acceleration in frequency domain signals at  $\ensuremath{\text{Z}}$  axis

-0.813 -0.934 -0.978 -0.28 -0.298 ...

#### fBodyAccJerk.std...X

Standard deviation the body linear acceleration derived in frequency domain to obtain Jerk signals  $\boldsymbol{x}$  axis

### fBodyAccJerk.std...Y

Standard deviation the body linear acceleration derived in frequency domain to obtain Jerk Signals Y axis
-0.932 -0.983 -0.987 0.107 -0.135 ...

## fBodyAccJerk.std...Z

Standard deviation the body linear acceleration derived in frequency domain to obtain Jerk Signals Z axis  $-0.961 -0.988 -0.992 -0.535 -0.402 \dots$ 

## fBodyGyro.std...X

Standard deviation of the body angular velocity derived in frequency domain signals X axis

-0.882 -0.978 -0.987 -0.517 -0.495 ...

# fBodyGyro.std...Y

Standard deviation of the body angular velocity derived in frequency domain signals Y  ${\tt axis}$ 

-0.9512 -0.9623 -0.9871 -0.0335 -0.1814 ...

#### fBodyGyro.std...Z

Standard deviation of the body angular velocity derived in frequency domain signals Z axis

-0.917 -0.944 -0.982 -0.437 -0.238 ...

# fBodyAccMag.std..

Magnitude of Standard deviation of body acceleration in frequency domain signals.

-0.798 -0.928 -0.982 -0.398 -0.187 ...

# fBodyBodyAccJerkMag.std..

Magnitude of Standard deviation the body linear acceleration der ived in frequency domain to obtain Jerk Signals.

-0.922 -0.982 -0.993 -0.103 -0.104 ...

# fBodyBodyGyroMag.std..

Magnitude of Standard deviation of the body angular velocity derived in frequency domain signals.

-0.824 -0.932 -0.978 -0.321 -0.398 ...

# ${\tt fBodyBodyGyroJerkMag.std.}.$

Magnitude of Standard deviation of the magnitude the body angula r velocity derived in frequency domain to obtain Jerk signals.

-0.933 -0.987 -0.995 -0.382 -0.392 ...