

## Codebook

The source datasets are taken from The Human Activity Recognition Using Smartphones Dataset, Version 1.0. (Davide Anguita, Alessandro Ghio, Luca Oneto, Xavier Parra and Jorge L. Reyes-Ortiz. Human Activity Recognition on Smartphones using a Multiclass Hardware-Friendly Support Vector Machine. International Workshop of Ambient Assisted Living (IWAAL 2012). Vitoria-Gasteiz, Spain. Dec 2012).

The data has been cleansed into a format that provides summary data, by activity, for each subject. For more information about the source of each measurement, see the source study referenced above.

Data columns are as follows:

SubjectNumber	Subject number identifies the subject to whom the measurement applies. Has range 1 to 30.
Activity	WALKING WALKING UPSTAIRS WALKING DOWNSTAIRS SITTING STANDING LAYING
timeBodyAccMean-X	Average, for this subject and activity, of all measurements of the variable tBodyAcc-mean()-X.
timeBodyAccMean-Y	Average, for this subject and activity, of all measurements of the variable tBodyAcc-mean()-Y.
timeBodyAccMean-Z	Average, for this subject and activity, of all measurements of the variable tBodyAcc-mean()-Z.
timeBodyAccStd-X	Average, for this subject and activity, of all measurements of the variable tBodyAcc-std()-X.
timeBodyAccStd-Y	Average, for this subject and activity, of all measurements of the variable tBodyAcc-std()-Y.
imeBodyAccStd-Z	Average, for this subject and activity, of all measurements of the variable tBodyAcc-std()-Z.
timeGravityAccMean-X	Average, for this subject and activity, of all measurements of the variable tGravityAcc-mean()-X.
timeGravityAccMean-Y	Average, for this subject and activity, of all measurements of the variable tGravityAcc-mean()-Y.
timeGravityAccMean-Z	Average, for this subject and activity, of all measurements of the variable tGravityAcc-mean()-Z.
timeGravityAccStd-X	Average, for this subject and activity, of all measurements of the variable tGravityAcc-std()-X.
timeGravityAccStd-Y	Average, for this subject and activity, of all measurements of the variable tGravityAcc-std()-Y.
timeGravityAccStd-Z	Average, for this subject and activity, of all measurements of the variable tGravityAcc-std()-Z.

timeBodyAccJerkMean-X	Average, for this subject and activity, of all measurements of the variable tBodyAccJerk-mean()-X.
timeBodyAccJerkMean-Y	Average, for this subject and activity, of all measurements of the variable tBodyAccJerk-mean()-Y.
timeBodyAccJerkMean-Z	Average, for this subject and activity, of all measurements of the variable tBodyAccJerk-mean()-Z.
timeBodyAccJerkStd-X	Average, for this subject and activity, of all measurements of the variable tBodyAccJerk-std()-X.
timeBodyAccJerkStd-Y	Average, for this subject and activity, of all measurements of the variable tBodyAccJerk-std()-Y.
timeBodyAccJerkStd-Z	Average, for this subject and activity, of all measurements of the variable tBodyAccJerk-std()-Z.
timeBodyGyroMean-X	Average, for this subject and activity, of all measurements of the variable tBodyGyro – mean()-X.
timeBodyGyroMean-Y	Average, for this subject and activity, of all measurements of the variable tBodyGyro – mean()-Y.
timeBodyGyroMean-Z	Average, for this subject and activity, of all measurements of the variable tBodyGyro – mean()-Z.
timeBodyGyroStd-X	Average, for this subject and activity, of all measurements of the variable tBodyGyro – std()-X.
timeBodyGyroStd-Y	Average, for this subject and activity, of all measurements of the variable tBodyGyro – std()-Y.
timeBodyGyroStd-Z	Average, for this subject and activity, of all measurements of the variable tBodyGyro – std()-Z.
timeBodyGyroJerkMean-X	Average, for this subject and activity, of all measurements of the variable tBodyGyroJerk – mean()-X.
timeBodyGyroJerkMean-Y	Average, for this subject and activity, of all measurements of the variable tBodyGyroJerk – mean()-Y.
timeBodyGyroJerkMean-Z	Average, for this subject and activity, of all measurements of the variable tBodyGyroJerk – mean()-Z.
timeBodyGyroJerkStd-X	Average, for this subject and activity, of all measurements of the variable tBodyGyroJerk -std()-X.
timeBodyGyroJerkStd-Y	Average, for this subject and activity, of all measurements of the variable tBodyGyroJerk -std()-Y.
timeBodyGyroJerkStd-Z	Average, for this subject and activity, of all measurements of the variable tBodyGyroJerk -std()-Z.
timeBodyAccMagMean	Average, for this subject and activity, of all measurements of the variable tBodyAccMag-mean()
timeBodyAccMagStd	Average, for this subject and activity, of all measurements of the variable tBodyAccMag-std()
timeGravityAccMagMean	Average, for this subject and activity, of all measurements of the variable tGravityAccMag-mean()
timeGravityAccMagStd	Average, for this subject and activity, of all measurements of the variable tGravityAccMag-std()

timeBodyAccJerkMagMean	Average, for this subject and activity, of all measurements of the variable tBodyAccJerkMag-mean()
timeBodyAccJerkMagStd	Average, for this subject and activity, of all measurements of the variable tBodyAccJerkMag-std()
timeBodyGyroMagMean	Average, for this subject and activity, of all measurements of the variable tBodyGyroMag-mean()
timeBodyGyroMagStd	Average, for this subject and activity, of all measurements of the variable tBodyGyroMag-std()
timeBodyGyroJerkMagMean	Average, for this subject and activity, of all measurements of the variable tBodyGyroJerkMag-mean()
timeBodyGyroJerkMagStd	Average, for this subject and activity, of all measurements of the variable tBodyGyroJerkMag-std()
frequencyBodyAccMean-X	Average, for this subject and activity, of all measurements of the variable fBodyAcc-mean()-X.
frequencyBodyAccMean-Y	Average, for this subject and activity, of all measurements of the variable fBodyAcc-mean()-Y.
frequencyBodyAccMean-Z	Average, for this subject and activity, of all measurements of the variable fBodyAcc-mean()-Z.
frequencyBodyAccStd-X	Average, for this subject and activity, of all measurements of the variable fBodyAcc-std()-X.
frequencyBodyAccStd-Y	Average, for this subject and activity, of all measurements of the variable fBodyAcc-std()-Y.
frequencyBodyAccStd-Z	Average, for this subject and activity, of all measurements of the variable fBodyAcc-std()-Z.
frequencyBodyAccMeanFreq()-X	Average, for this subject and activity, of all measurements of the variable fBodyAcc - meanFreq()-X.
frequencyBodyAccMeanFreq()-Y	Average, for this subject and activity, of all measurements of the variable fBodyAcc - meanFreq()-Y
frequencyBodyAccMeanFreq()-Z	Average, for this subject and activity, of all measurements of the variable fBodyAcc - meanFreq()-Z.
frequencyBodyAccJerkMean-X	Average, for this subject and activity, of all measurements of the variable fBodyAccJerk-mean()-X.
frequencyBodyAccJerkMean-Y	Average, for this subject and activity, of all measurements of the variable fBodyAccJerk-mean()-Y.
frequencyBodyAccJerkMean-Z	Average, for this subject and activity, of all measurements of the variable fBodyAccJerk-mean()-Z.
frequencyBodyAccJerkStd-X	Average, for this subject and activity, of all measurements of the variable fBodyAccJerk-std()-X.
frequencyBodyAccJerkStd-Y	Average, for this subject and activity, of all measurements of the variable fBodyAccJerk-std()-Y.

frequencyBodyAccJerkStd-Z	Average, for this subject and activity, of all measurements of the variable fBodyAccJerk-std()-Z.
frequencyBodyAccJerkMeanFreq()-X	Average, for this subject and activity, of all measurements of the variable fBodyAccJerk-meanFreq() -X.
frequencyBodyAccJerkMeanFreq()-Y	Average, for this subject and activity, of all measurements of the variable fBodyAccJerk-meanFreq() -y.
frequencyBodyAccJerkMeanFreq()-Z	Average, for this subject and activity, of all measurements of the variable fBodyAccJerk-meanFreq() -Z.
frequencyBodyGyroMean-X	Average, for this subject and activity, of all measurements of the variable fBodyGyro - mean-X.
frequencyBodyGyroMean-Y	Average, for this subject and activity, of all measurements of the variable fBodyGyro - mean-Y.
frequencyBodyGyroMean-Z	Average, for this subject and activity, of all measurements of the variable fBodyGyro - mean-Z.
frequencyBodyGyroStd-X	Average, for this subject and activity, of all measurements of the variable fBodyGyro - std-X.
frequencyBodyGyroStd-Y	Average, for this subject and activity, of all measurements of the variable fBodyGyro - std-Y.
frequencyBodyGyroStd-Z	Average, for this subject and activity, of all measurements of the variable fBodyGyro - std-Z.
frequencyBodyGyroMeanFreq()-X	Average, for this subject and activity, of all measurements of the variable fBodyGyro-meanFreq()-X.
frequencyBodyGyroMeanFreq()-Y	Average, for this subject and activity, of all measurements of the variable fBodyGyro-meanFreq()-Y.
frequencyBodyGyroMeanFreq()-Z	Average, for this subject and activity, of all measurements of the variable fBodyGyro-meanFreq()-Z.
frequencyBodyAccMagMean	Average, for this subject and activity, of all measurements of the variable fBodyAccMag-mean() - X.
frequencyBodyAccMagStd	Average, for this subject and activity, of all measurements of the variable fBodyAccMag-mean()-Y.
frequencyBodyAccMagMeanFreq()	Average, for this subject and activity, of all measurements of the variable fBodyAccMag-mean()-Z.
frequencyBodyBodyAccJerkMagMean	Average, for this subject and activity, of all measurements of the variable fBodyBodyAccJerkMag-mean()
frequencyBodyBodyAccJerkMagStd	Average, for this subject and activity, of all measurements of the variable fBodyBodyAccJerkMag-std()

frequencyBodyBodyAccJerkMagMeanFreq()	Average, for this subject and activity, of all measurements of the variable fBodyBodyAccJerkMag-meanFreq()
frequencyBodyBodyGyroMagMean	Average, for this subject and activity, of all measurements of the variable fBodyBodyGyroMag-mean()
frequencyBodyBodyGyroMagStd	Average, for this subject and activity, of all measurements of the variable fBodyBodyGyroMag-std()
frequencyBodyBodyGyroMagMeanFreq()	Average, for this subject and activity, of all measurements of the variable tBodyBodyGyroMag-meanFreq()
frequencyBodyBodyGyroJerkMagMean	Average, for this subject and activity, of all measurements of the variable fBodyBodyGyroJerkMag-mean()
frequencyBodyBodyGyroJerkMagStd	Average, for this subject and activity, of all measurements of the variable fBodyBodyGyroJerkMag-std()
frequencyBodyBodyGyroJerkMagMeanFreq()	Average, for this subject and activity, of all measurements of the variable fBodyBodyGyroJerkMag-meanFreq()