DATA DICTIONARY

Averages for Human Activity Recognition Using Smartphones Dataset

```
subject                 integer
    Subject code in experiment
                        1..30

activity                factor
    Type of activity measured
                        LAYING
                        SITTING
                        STANDING
                        WALKING
                        WALKING_DOWNSTAIRS
                        WALKING_UPSTAIRS

avg-tBodyAcc-mean-X     numeric
    Average for body acceleration means measured in the X axis
                        -1..1

avg-tBodyAcc-mean-Y     numeric
    Average for body acceleration means measured in the Y axis
                        -1..1

avg-tBodyAcc-mean-Z     numeric
    Average for body acceleration means measured in the Z axis
                        -1..1

avg-tBodyAcc-std-X      numeric
    Average for body acceleration standard deviations measured in the X axis
                        -1..1

avg-tBodyAcc-std-Y      numeric
    Average for body acceleration standard deviations measured in the Y axis
                        -1..1

avg-tBodyAcc-std-Z      numeric
    Average for body acceleration standard deviations measured in the Z axis
                        -1..1

avg-tGravityAcc-mean-X  numeric
    Average for gravity acceleration means measured in the X axis
                        -1..1

avg-tGravityAcc-mean-Y  numeric
    Average for gravity acceleration means measured in the Y axis
                        -1..1

avg-tGravityAcc-mean-Z  numeric
    Average for gravity acceleration means measured in the Z axis
                        -1..1
```

avg-tGravityAcc-std-X numeric
    Average for gravity acceleration standard deviations measured in the X axis
                        -1..1

avg-tGravityAcc-std-Y numeric
    Average for gravity acceleration standard deviations measured in the Y axis
                        -1..1

avg-tGravityAcc-std-Z numeric
    Average for gravity acceleration standard deviations measured in the Z axis
                        -1..1

avg-tBodyAccJerk-mean-X numeric
    Average for body acceleration jerk means measured in the X axis
                        -1..1

avg-tBodyAccJerk-mean-Y numeric
    Average for body acceleration jerk means measured in the Y axis
                        -1..1

avg-tBodyAccJerk-mean-Z numeric
    Average for body acceleration jerk means measured in the Z axis
                        -1..1

avg-tBodyAccJerk-std-X numeric
    Average for body acceleration jerk standard deviations measured in the X axis
                        -1..1

avg-tBodyAccJerk-std-Y numeric
    Average for body acceleration jerk standard deviations measured in the Y axis
                        -1..1

avg-tBodyAccJerk-std-Z numeric
    Average for body acceleration jerk standard deviations measured in the Z axis
                        -1..1

avg-tBodyGyro-mean-X   numeric
    Average for body gyroscope means measured in the X axis
                        -1..1

avg-tBodyGyro-mean-Y   numeric
    Average for body gyroscope means measured in the Y axis
                        -1..1

avg-tBodyGyro-mean-Z   numeric
    Average for body gyroscope means measured in the Z axis
                        -1..1

avg-tBodyGyro-std-X   numeric
    Average for body gyroscope standard deviations measured in the X axis
                        -1..1

avg-tBodyGyro-std-Y numeric
Average for body gyroscope standard deviations measured in the Y axis
-1..1

avg-tBodyGyro-std-Z numeric
Average for body gyroscope standard deviations measured in the Z axis
-1..1

avg-tBodyGyroJerk-mean-X numeric
Average for body gyroscope jerk means measured in the X axis
-1..1

avg-tBodyGyroJerk-mean-Y numeric
Average for body gyroscope jerk means measured in the Y axis
-1..1

avg-tBodyGyroJerk-mean-Z numeric
Average for body gyroscope jerk means measured in the Z axis
-1..1

avg-tBodyGyroJerk-std-X numeric
Average for body gyroscope jerk standard deviations measured in the X axis
-1..1

avg-tBodyGyroJerk-std-Y numeric
Average for body gyroscope jerk standard deviations measured in the X axis
-1..1

avg-tBodyGyroJerk-std-Z numeric
Average for body gyroscope jerk standard deviations measured in the X axis
-1..1

avg-tBodyAccMag-mean numeric
Average for body acceleration magnitude means measured
-1..1

avg-tBodyAccMag-std numeric
Average for body acceleration magnitude standard deviations measured
-1..1

avg-tGravityAccMag-mean numeric
Average for gravity acceleration magnitude means measured
-1..1

avg-tGravityAccMag-std numeric
Average for gravity acceleration magnitude standard deviations measured
-1..1

avg-tBodyAccJerkMag-mean numeric
Average for body acceleration jerk magnitude means measured
-1..1

```
avg-tBodyAccJerkMag-std numeric
    Average for body acceleration jerk magnitude standard deviations measured
                        -1..1

avg-tBodyGyroMag-mean   numeric
    Average for body giroscope magnitude means measured
                        -1..1

avg-tBodyGyroMag-std    numeric
    Average for body giroscope magnitude standard deviations measured
                        -1..1

avg-tBodyGyroJerkMag-mean numeric
    Average for body giroscope jerk magnitude means measured
                        -1..1

avg-tBodyGyroJerkMag-std numeric
    Average for body giroscope jerk magnitude standard deviations measured
                         -1..1

avg-fBodyAcc-mean-X     numeric
    Average for body acceleration means measured in the X axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAcc-mean-Y     numeric
    Average for body acceleration means measured in the Y axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAcc-mean-Z     numeric
    Average for body acceleration means measured in the Z axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAcc-std-X      numeric
    Average for body acceleration standard deviations measured in the X axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAcc-std-Y      numeric
    Average for body acceleration standard deviations measured in the Y axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAcc-std-Z      numeric
    Average for body acceleration standard deviations measured in the Z axis,
    treated with Fast Fourier Transform
                        -1..1
```

avg-fBodyAccJerk-mean-X numeric
    Average for body acceleration jerk means measured in the X axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAccJerk-mean-Y numeric
    Average for body acceleration jerk means measured in the Y axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAccJerk-mean-Z numeric
    Average for body acceleration jerk means measured in the Z axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAccJerk-std-X numeric
    Average for body acceleration jerk standard deviations measured in the X axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAccJerk-std-Y numeric
    Average for body acceleration jerk standard deviations measured in the Y axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAccJerk-std-Z numeric
    Average for body acceleration jerk standard deviations measured in the Z axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyGyro-mean-X   numeric
    Average for body gyroscope means measured in the X axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyGyro-mean-Y   numeric
    Average for body gyroscope means measured in the Y axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyGyro-mean-Z   numeric
    Average for body gyroscope means measured in the Z axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyGyro-std-X   numeric
    Average for body gyroscope standard deviations measured in the X axis,
    treated with Fast Fourier Transform
                        -1..1

```
avg-fBodyGyro-std-Y     numeric
    Average for body gyroscope standard deviations measured in the Y axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyGyro-std-Z     numeric
    Average for body gyroscope standard deviations measured in the Z axis,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAccMag-mean    numeric
    Average for body acceleration magnitude means,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyAccMag-std     numeric
    Average for body acceleration magnitude standard deviations,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyBodyAccJerkMag-mean
    Average for body acceleration jerk magnitude means,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyBodyAccJerkMag-std
    Average for body acceleration jerk magnitude standard deviations,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyBodyGyroMag-mean
    Average for body gyroscope magnitude means,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyBodyGyroMag-std
    Average for body gyroscope magnitude standard deviation,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyBodyGyroJerkMag-mean
    Average for body gyroscope jerk magnitude means,
    treated with Fast Fourier Transform
                        -1..1

avg-fBodyBodyGyroJerkMag-std
    Average for body gyroscope jerk magnitude standard deviations,
    treated with Fast Fourier Transform
                        -1..1
```