**Data Dictionary**

This new dataset was created for the “Getting and Cleaning Data” Course Project. It has the average of each variable for each activity and each subject on the “Human Activity Recognition Using Smartphones Dataset”. There are 81 columns and 180 rows in the new dataset.

subject

      1 - 30    Volunteers who participated the experiments

2. activity

    6 activities:

   "LAYING"

   "SITTING"

   "STANDING"

   "WALKING"

   "WALKING\_DOWNSTAIRS"

   “WALKING\_UPSTAIRS”

3 - 81. the average of each variable for each activity and each subject

The variables are mean value (“-mean()”), standard deviation (“-std()”), or mean frequency (“-meanFreq()) of the following variables:

tBodyAcc-XYZ 3-axial body linear acceleration signals in time domain

tGravityAcc-XYZ 3-axial gravity acceleration signals in time domain

tBodyAccJerk-XYZ 3-axial body acceleration Jerk signals in time domain

tBodyGyro-XYZ 3-axial body gyroscope signals in time domain

tBodyGyroJerk-XYZ 3-axial body gyroscope Jerk signals in time domain

tBodyAccMag body acceleration magnitude in time domain

tGravityAccMag gravity acceleration magnitude in time domain

tBodyAccJerkMag body acceleration Jerk magnitude in time domain

tBodyGyroMag body gyroscope magnitude in time domain

tBodyGyroJerkMag body gyroscope Jerk magnitude in time domain

fBodyAcc-XYZ Fast Fourier Transform of 3-axial body acceleration signals

fBodyAccJerk-XYZ Fast Fourier Transform of 3-axial body acceleration Jerk signals

fBodyGyro-XYZ Fast Fourier Transform of 3-axial body gyroscope signals

fBodyAccMag Fast Fourier Transform of body acceleration magnitude

fBodyAccJerkMag Fast Fourier Transform of body acceleration Jerk magnitude

fBodyGyroMag Fast Fourier Transform of body gyroscope magnitude

fBodyGyroJerkMag Fast Fourier Transform of body gyroscope Jerk magnitude

Summary statistics of the variable 3 - 81:

Min.        1st Qu.        Median      Mean       3rd Qu.      Max.

tBodyAcc-mean()-X                0.22160  0.2712000  0.277000  0.274300  0.280000  0.301500

tBodyAcc-mean()-Y               -0.04051 -0.0200200 -0.017260 -0.017880 -0.014940 -0.001308

tBodyAcc-mean()-Z               -0.15250 -0.1121000 -0.108200 -0.109200 -0.104400 -0.075380

tBodyAcc-std()-X                -0.99610 -0.9799000 -0.752600 -0.557700 -0.198400  0.626900

tBodyAcc-std()-Y                -0.99020 -0.9421000 -0.509000 -0.460500 -0.030770  0.616900

tBodyAcc-std()-Z                -0.98770 -0.9498000 -0.651800 -0.575600 -0.230600  0.609000

tGravityAcc-mean()-X            -0.68000  0.8376000  0.920800  0.697500  0.942500  0.974500

tGravityAcc-mean()-Y            -0.47990 -0.2332000 -0.127800 -0.016210  0.087730  0.956600

tGravityAcc-mean()-Z            -0.49510 -0.1173000  0.023840  0.074130  0.149500  0.957900

tGravityAcc-std()-X             -0.99680 -0.9825000 -0.969500 -0.963800 -0.950900 -0.829600

tGravityAcc-std()-Y             -0.99420 -0.9711000 -0.959000 -0.952400 -0.937000 -0.643600

tGravityAcc-std()-Z             -0.99100 -0.9605000 -0.945000 -0.936400 -0.918000 -0.610200

tBodyAccJerk-mean()-X            0.04269  0.0739600  0.076400  0.079470  0.083300  0.130200

tBodyAccJerk-mean()-Y           -0.03869  0.0004664  0.009470  0.007565  0.013400  0.056820

tBodyAccJerk-mean()-Z           -0.06746 -0.0106000 -0.003861 -0.004953  0.001958  0.038050

tBodyAccJerk-std()-X            -0.99460 -0.9832000 -0.810400 -0.594900 -0.223300  0.544300

tBodyAccJerk-std()-Y            -0.98950 -0.9724000 -0.775600 -0.565400 -0.148300  0.355300

tBodyAccJerk-std()-Z            -0.99330 -0.9827000 -0.883700 -0.736000 -0.512100  0.031020

tBodyGyro-mean()-X              -0.20580 -0.0471200 -0.028710 -0.032440 -0.016760  0.192700

tBodyGyro-mean()-Y              -0.20420 -0.0895500 -0.073180 -0.074260 -0.061130  0.027470

tBodyGyro-mean()-Z              -0.07245  0.0747500  0.085120  0.087440  0.101800  0.179100

tBodyGyro-std()-X               -0.99430 -0.9735000 -0.789000 -0.691600 -0.441400  0.267700

tBodyGyro-std()-Y               -0.99420 -0.9629000 -0.801700 -0.653300 -0.419600  0.476500

tBodyGyro-std()-Z               -0.98550 -0.9609000 -0.801000 -0.616400 -0.310600  0.564900

tBodyGyroJerk-mean()-X          -0.15720 -0.1032000 -0.098680 -0.096060 -0.091100 -0.022090

tBodyGyroJerk-mean()-Y          -0.07681 -0.0455200 -0.041120 -0.042690 -0.038420 -0.013200

tBodyGyroJerk-mean()-Z          -0.09250 -0.0617200 -0.053430 -0.054800 -0.048980 -0.006941

tBodyGyroJerk-std()-X           -0.99650 -0.9800000 -0.839600 -0.703600 -0.462900  0.179100

tBodyGyroJerk-std()-Y           -0.99710 -0.9832000 -0.894200 -0.763600 -0.586100  0.295900

tBodyGyroJerk-std()-Z           -0.99540 -0.9848000 -0.861000 -0.709600 -0.474100  0.193200

tBodyAccMag-mean()              -0.98650 -0.9573000 -0.482900 -0.497300 -0.091900  0.644600

tBodyAccMag-std()               -0.98650 -0.9430000 -0.607400 -0.543900 -0.209000  0.428400

tGravityAccMag-mean()           -0.98650 -0.9573000 -0.482900 -0.497300 -0.091900  0.644600

tGravityAccMag-std()            -0.98650 -0.9430000 -0.607400 -0.543900 -0.209000  0.428400

tBodyAccJerkMag-mean()          -0.99280 -0.9807000 -0.816800 -0.607900 -0.245600  0.434500

tBodyAccJerkMag-std()           -0.99460 -0.9765000 -0.801400 -0.584200 -0.217300  0.450600

tBodyGyroMag-mean()             -0.98070 -0.9461000 -0.655100 -0.565200 -0.215900  0.418000

tBodyGyroMag-std()              -0.98140 -0.9476000 -0.742000 -0.630400 -0.360200  0.300000

tBodyGyroJerkMag-mean()         -0.99730 -0.9852000 -0.864800 -0.736400 -0.511900  0.087580

tBodyGyroJerkMag-std()          -0.99770 -0.9805000 -0.880900 -0.755000 -0.576700  0.250200

fBodyAcc-mean()-X               -0.99520 -0.9787000 -0.769100 -0.575800 -0.217400  0.537000

fBodyAcc-mean()-Y               -0.98900 -0.9536000 -0.595000 -0.488700 -0.063410  0.524200

fBodyAcc-mean()-Z               -0.98950 -0.9619000 -0.723600 -0.629700 -0.318300  0.280700

fBodyAcc-std()-X                -0.99660 -0.9820000 -0.747000 -0.552200 -0.196600  0.658500

fBodyAcc-std()-Y                -0.99070 -0.9404000 -0.513400 -0.481500 -0.079130  0.560200

fBodyAcc-std()-Z                -0.98720 -0.9459000 -0.644100 -0.582400 -0.265500  0.687100

fBodyAcc-meanFreq()-X           -0.63590 -0.3917000 -0.257300 -0.232300 -0.061050  0.159100

fBodyAcc-meanFreq()-Y           -0.37950 -0.0813100  0.007855  0.011530  0.086280  0.466500

fBodyAcc-meanFreq()-Z           -0.52010 -0.0362900  0.065820  0.043720  0.175400  0.402500

fBodyAccJerk-mean()-X           -0.99460 -0.9828000 -0.812600 -0.613900 -0.282000  0.474300

fBodyAccJerk-mean()-Y           -0.98940 -0.9725000 -0.781700 -0.588200 -0.196300  0.276700

fBodyAccJerk-mean()-Z           -0.99200 -0.9796000 -0.870700 -0.714400 -0.469700  0.157800

fBodyAccJerk-std()-X            -0.99510 -0.9847000 -0.825400 -0.612100 -0.247500  0.476800

fBodyAccJerk-std()-Y            -0.99050 -0.9737000 -0.785200 -0.570700 -0.168500  0.349800

fBodyAccJerk-std()-Z            -0.99310 -0.9837000 -0.895100 -0.756500 -0.543800 -0.006236

fBodyAccJerk-meanFreq()-X       -0.57600 -0.2897000 -0.060910 -0.069100  0.176600  0.331400

fBodyAccJerk-meanFreq()-Y       -0.60200 -0.3975000 -0.232100 -0.228100 -0.047210  0.195700

fBodyAccJerk-meanFreq()-Z       -0.62760 -0.3087000 -0.091870 -0.137600  0.038580  0.230100

fBodyGyro-mean()-X              -0.99310 -0.9697000 -0.730000 -0.636700 -0.338700  0.475000

fBodyGyro-mean()-Y              -0.99400 -0.9700000 -0.814100 -0.676700 -0.445800  0.328800

fBodyGyro-mean()-Z              -0.98600 -0.9624000 -0.790900 -0.604400 -0.263500  0.492400

fBodyGyro-std()-X               -0.99470 -0.9750000 -0.808600 -0.711000 -0.481300  0.196600

fBodyGyro-std()-Y               -0.99440 -0.9602000 -0.796400 -0.645400 -0.415400  0.646200

fBodyGyro-std()-Z               -0.98670 -0.9643000 -0.822400 -0.657700 -0.391600  0.522500

fBodyGyro-meanFreq()-X          -0.39580 -0.2134000 -0.115500 -0.104600  0.002655  0.249200

fBodyGyro-meanFreq()-Y          -0.66680 -0.2943000 -0.157900 -0.167400 -0.042690  0.273100

fBodyGyro-meanFreq()-Z          -0.50750 -0.1548000 -0.050810 -0.057180  0.041520  0.377100

fBodyAccMag-mean()              -0.98680 -0.9560000 -0.670300 -0.536500 -0.162200  0.586600

fBodyAccMag-std()               -0.98760 -0.9452000 -0.651300 -0.621000 -0.365400  0.178700

fBodyAccMag-meanFreq()          -0.31230 -0.0147500  0.081320  0.076130  0.174400  0.435800

fBodyBodyAccJerkMag-mean()      -0.99400 -0.9770000 -0.794000 -0.575600 -0.187200  0.538400

fBodyBodyAccJerkMag-std()       -0.99440 -0.9752000 -0.812600 -0.599200 -0.266800  0.316300

fBodyBodyAccJerkMag-meanFreq()  -0.12520  0.0452700  0.172000  0.162500  0.275900  0.488100

fBodyBodyGyroMag-mean()         -0.98650 -0.9616000 -0.765700 -0.667100 -0.408700  0.204000

fBodyBodyGyroMag-std()          -0.98150 -0.9488000 -0.772700 -0.672300 -0.427700  0.236700

fBodyBodyGyroMag-meanFreq()     -0.45660 -0.1695000 -0.053520 -0.036030  0.082280  0.409500

fBodyBodyGyroJerkMag-mean()     -0.99760 -0.9813000 -0.877900 -0.756400 -0.583100  0.146600

fBodyBodyGyroJerkMag-std()      -0.99760 -0.9802000 -0.894100 -0.771500 -0.608100  0.287800

fBodyBodyGyroJerkMag-meanFreq() -0.18290  0.0542300  0.111600  0.125900  0.208100  0.426300