**Getting And Cleaning Data Week 4 Course Project Code Book**

**Original Experiment Information**

Detailed information on the experiment and the data can be found in the README.txt and features\_info.txt files in the [experiment data](https://d396qusza40orc.cloudfront.net/getdata%2Fprojectfiles%2FUCI%20HAR%20Dataset.zip)or Human Activity Recognition Using Smartphones [homepage](http://archive.ics.uci.edu/ml/datasets/Human+Activity+Recognition+Using+Smartphones).

**Analysis Steps**

The analysis script, run\_analysis.R reads in the experiment data and performs a number of steps :

* Test and training datasets are read in and merged into one data frame.
* Features data used to name columns.
* Mean and standard deviation measurements are taken from the dataset, the rest discarded from the rest of the analysis.
* Activity text labels are substituted for the activity label IDs.
* Column names are tidied for readability.
* The summary data set is formed by grouping the data by subject and activity and calculating the mean of each group.
* The summary dataset is written to an output data file, SubjectActivityAverages.txt

**Columns in output file**

The columns included in the output file are listed below:

* subjectid - The id of the experiment participant.
* activitylabel - The name of the activity.

The following fields measure the mean of recorded data points for the given subject and activity :

* tBodyAccmeanX
* tBodyAccmeanY
* tBodyAccmeanZ
* tBodyAccstdX
* tBodyAccstdY
* tBodyAccstdZ
* tGravityAccmeanX
* tGravityAccmeanY
* tGravityAccmeanZ
* tGravityAccstdX
* tGravityAccstdY
* tGravityAccstdZ
* tBodyAccJerkmeanX
* tBodyAccJerkmeanY
* tBodyAccJerkmeanZ
* tBodyAccJerkstdX
* tBodyAccJerkstdY
* tBodyAccJerkstdZ
* tBodyGyromeanX
* tBodyGyromeanY
* tBodyGyromeanZ
* tBodyGyrostdX
* tBodyGyrostdY
* tBodyGyrostdZ
* tBodyGyroJerkmeanX
* tBodyGyroJerkmeanY
* tBodyGyroJerkmeanZ
* tBodyGyroJerkstdX
* tBodyGyroJerkstdY
* tBodyGyroJerkstdZ
* tBodyAccMagmean
* tBodyAccMagstd
* tGravityAccMagmean
* tGravityAccMagstd
* tBodyAccJerkMagmean
* tBodyAccJerkMagstd
* tBodyGyroMagmean
* tBodyGyroMagstd
* tBodyGyroJerkMagmean
* tBodyGyroJerkMagstd
* fBodyAccmeanX
* fBodyAccmeanY
* fBodyAccmeanZ
* fBodyAccstdX
* fBodyAccstdY
* fBodyAccstdZ
* fBodyAccJerkmeanX
* fBodyAccJerkmeanY
* fBodyAccJerkmeanZ
* fBodyAccJerkstdX
* fBodyAccJerkstdY
* fBodyAccJerkstdZ
* fBodyGyromeanX
* fBodyGyromeanY
* fBodyGyromeanZ
* fBodyGyrostdX
* fBodyGyrostdY
* fBodyGyrostdZ
* fBodyAccMagmean
* fBodyAccMagstd
* fBodyAccJerkMagmean
* fBodyAccJerkMagstd
* fBodyGyroMagmean
* fBodyGyroMagstd
* fBodyGyroJerkMagmean
* fBodyGyroJerkMagstd