Codebook for run\_analysis.R. Getting and Cleaning Data R Course

## Summary

This is a codebook for the final project for Getting and Cleaning Data.

## Data source

<https://d396qusza40orc.cloudfront.net/getdata%2Fprojectfiles%2FUCI%20HAR%20Dataset.zip>

## Full description of the data

<http://archive.ics.uci.edu/ml/datasets/Human+Activity+Recognition+Using+Smartphones>

## library needed

* library(reshape2)
* library(dplyr)

## Dataset

* Files need to be combined to merge test and train files: 1) “train/X\_train.txt”, 2) “train/y\_train.txt”, 3)“train/subject\_train.txt”, 4) “test/x\_test.txt”, 5) “test/y\_test.txt” , 6) “test/subject\_test.txt”, 7) “features.txt”
* number of observations in the dataframe: 10299
* number of variables in the dataframe: 563
* number of variables with mean and sd: 81
* There are 6 level of activities with their mean and sd for each subject.

## [1] standing sitting laying walking   
## [5] walking\_downstairs walking\_upstairs   
## 6 Levels: walking walking\_upstairs walking\_downstairs sitting ... laying

## Creating tidy dataset

* An independent tidy dataset was created with the average of each variable for each activity and each subject:
* number of observations: 180
* numbre of variables : 81

## [1] "subjectID" "activity"   
## [3] "tBodyAcc.mean...X" "tBodyAcc.mean...Y"   
## [5] "tBodyAcc.mean...Z" "tBodyAcc.std...X"   
## [7] "tBodyAcc.std...Y" "tBodyAcc.std...Z"   
## [9] "tGravityAcc.mean...X" "tGravityAcc.mean...Y"   
## [11] "tGravityAcc.mean...Z" "tGravityAcc.std...X"   
## [13] "tGravityAcc.std...Y" "tGravityAcc.std...Z"   
## [15] "tBodyAccJerk.mean...X" "tBodyAccJerk.mean...Y"   
## [17] "tBodyAccJerk.mean...Z" "tBodyAccJerk.std...X"   
## [19] "tBodyAccJerk.std...Y" "tBodyAccJerk.std...Z"   
## [21] "tBodyGyro.mean...X" "tBodyGyro.mean...Y"   
## [23] "tBodyGyro.mean...Z" "tBodyGyro.std...X"   
## [25] "tBodyGyro.std...Y" "tBodyGyro.std...Z"   
## [27] "tBodyGyroJerk.mean...X" "tBodyGyroJerk.mean...Y"   
## [29] "tBodyGyroJerk.mean...Z" "tBodyGyroJerk.std...X"   
## [31] "tBodyGyroJerk.std...Y" "tBodyGyroJerk.std...Z"   
## [33] "tBodyAccMag.mean.." "tBodyAccMag.std.."   
## [35] "tGravityAccMag.mean.." "tGravityAccMag.std.."   
## [37] "tBodyAccJerkMag.mean.." "tBodyAccJerkMag.std.."   
## [39] "tBodyGyroMag.mean.." "tBodyGyroMag.std.."   
## [41] "tBodyGyroJerkMag.mean.." "tBodyGyroJerkMag.std.."   
## [43] "fBodyAcc.mean...X" "fBodyAcc.mean...Y"   
## [45] "fBodyAcc.mean...Z" "fBodyAcc.std...X"   
## [47] "fBodyAcc.std...Y" "fBodyAcc.std...Z"   
## [49] "fBodyAcc.meanFreq...X" "fBodyAcc.meanFreq...Y"   
## [51] "fBodyAcc.meanFreq...Z" "fBodyAccJerk.mean...X"   
## [53] "fBodyAccJerk.mean...Y" "fBodyAccJerk.mean...Z"   
## [55] "fBodyAccJerk.std...X" "fBodyAccJerk.std...Y"   
## [57] "fBodyAccJerk.std...Z" "fBodyAccJerk.meanFreq...X"   
## [59] "fBodyAccJerk.meanFreq...Y" "fBodyAccJerk.meanFreq...Z"   
## [61] "fBodyGyro.mean...X" "fBodyGyro.mean...Y"   
## [63] "fBodyGyro.mean...Z" "fBodyGyro.std...X"   
## [65] "fBodyGyro.std...Y" "fBodyGyro.std...Z"   
## [67] "fBodyGyro.meanFreq...X" "fBodyGyro.meanFreq...Y"   
## [69] "fBodyGyro.meanFreq...Z" "fBodyAccMag.mean.."   
## [71] "fBodyAccMag.std.." "fBodyAccMag.meanFreq.."   
## [73] "fBodyBodyAccJerkMag.mean.." "fBodyBodyAccJerkMag.std.."   
## [75] "fBodyBodyAccJerkMag.meanFreq.." "fBodyBodyGyroMag.mean.."   
## [77] "fBodyBodyGyroMag.std.." "fBodyBodyGyroMag.meanFreq.."   
## [79] "fBodyBodyGyroJerkMag.mean.." "fBodyBodyGyroJerkMag.std.."   
## [81] "fBodyBodyGyroJerkMag.meanFreq.."