CodeBook for Course Project for the Course "Getting and Cleaning Data"

The newtidy_df is a data.frame containing the means of variables of calculated means and standard deviations broken out by "activity" (character variable of 6 types) and "subject" (integer variable of 30 individuals who participated in this analysis of smart phone movements when attached to the waist of the subjects). The dimensions of newtidy_df are 180 rows by 68 columns. The 68 variables consist of 66 numeric variables with descriptive names that are the means (calculated by the R code) of the means and standard deviations of the movement parameters. For each parameter, there were 6 different activities performed by each of the 30 subjects for data collection. Each of the 30 subjects performed each of the 6 activities during which 33 parameters were measured over very short time intervals. This code takes the means and standard deviations of these data.

6 * 30 * 33 * 2 = 11880 means

The descriptive variable names for the movement parameters are preceded by numbers because they were necessary for an earlier step in order to make the column names unique because three sets of 42 variable data were repeated. These repeated variables were not selected for the final data.frame because they were not mean or standard deviations.

VARIABLE	CLASS	NOTE
Activity	character	6 types: "WALKING", "WALKING_UPSTAIRS","WALKING_DOWNSTAIRS","SITTING","STANDING" and "LAYING"
subject	integer	Thirty subjects labeled 1 through 30
1-tBodyAcc-mean()-X	numeric	Mean for activity & subject
2-tBodyAcc-mean()-Y	numeric	Mean for activity & subject
3-tBodyAcc-mean()-Z	numeric	Mean for activity & subject
4-tBodyAcc-std()-X	numeric	Mean for activity & subject
5-tBodyAcc-std()-Y	numeric	Mean for activity & subject
6-tBodyAcc-std()-Z	numeric	Mean for activity & subject
41-tGravityAcc-mean()-X	numeric	Mean for activity & subject
42-tGravityAcc-mean()-Y	numeric	Mean for activity & subject
43-tGravityAcc-mean()-Z	numeric	Mean for activity & subject
44-tGravityAcc-std()-X	numeric	Mean for activity & subject

45-tGravityAcc-std()-Y	numeric	Mean for activity & subject
46-tGravityAcc-std()-Z	numeric	Mean for activity & subject
81-tBodyAccJerk-mean()-X	numeric	Mean for activity & subject
82-tBodyAccJerk-mean()-Y	numeric	Mean for activity & subject
83-tBodyAccJerk-mean()-Z	numeric	Mean for activity & subject
84-tBodyAccJerk-std()-X	numeric	Mean for activity & subject
85-tBodyAccJerk-std()-Y	numeric	Mean for activity & subject
86-tBodyAccJerk-std()-Z	numeric	Mean for activity & subject
121-tBodyGyro-mean()-X	numeric	Mean for activity & subject
122-tBodyGyro-mean()-Y	numeric	Mean for activity & subject
123-tBodyGyro-mean()-Z	numeric	Mean for activity & subject
124-tBodyGyro-std()-X	numeric	Mean for activity & subject
125-tBodyGyro-std()-Y	numeric	Mean for activity & subject
126-tBodyGyro-std()-Z	numeric	Mean for activity & subject
161-tBodyGyroJerk-mean()-X	numeric	Mean for activity & subject
162-tBodyGyroJerk-mean()-Y	numeric	Mean for activity & subject
163-tBodyGyroJerk-mean()-Z	numeric	Mean for activity & subject
164-tBodyGyroJerk-std()-X	numeric	Mean for activity & subject
165-tBodyGyroJerk-std()-Y	numeric	Mean for activity & subject
166-tBodyGyroJerk-std()-Z	numeric	Mean for activity & subject
201-tBodyAccMag-mean()	numeric	Mean for activity & subject
202-tBodyAccMag-std()	numeric	Mean for activity & subject
214-tGravityAccMag-mean()	numeric	Mean for activity & subject
215-tGravityAccMag-std()	numeric	Mean for activity & subject
227-tBodyAccJerkMag-mean()	numeric	Mean for activity & subject
228-tBodyAccJerkMag-std()	numeric	Mean for activity & subject
240-tBodyGyroMag-mean()	numeric	Mean for activity & subject
241-tBodyGyroMag-std()	numeric	Mean for activity & subject
253-tBodyGyroJerkMag-mean()	numeric	Mean for activity & subject
254-tBodyGyroJerkMag-std()	numeric	Mean for activity & subject

266-fBodyAcc-mean()-X	numeric	Mean for activity & subject
267-fBodyAcc-mean()-Y	numeric	Mean for activity & subject
268-fBodyAcc-mean()-Z	numeric	Mean for activity & subject
269-fBodyAcc-std()-X	numeric	Mean for activity & subject
270-fBodyAcc-std()-Y	numeric	Mean for activity & subject
271-fBodyAcc-std()-Z	numeric	Mean for activity & subject
345-fBodyAccJerk-mean()-X	numeric	Mean for activity & subject
346-fBodyAccJerk-mean()-Y	numeric	Mean for activity & subject
347-fBodyAccJerk-mean()-Z	numeric	Mean for activity & subject
348-fBodyAccJerk-std()-X	numeric	Mean for activity & subject
349-fBodyAccJerk-std()-Y	numeric	Mean for activity & subject
350-fBodyAccJerk-std()-Z	numeric	Mean for activity & subject
424-fBodyGyro-mean()-X	numeric	Mean for activity & subject
425-fBodyGyro-mean()-Y	numeric	Mean for activity & subject
426-fBodyGyro-mean()-Z	numeric	Mean for activity & subject
427-fBodyGyro-std()-X	numeric	Mean for activity & subject
428-fBodyGyro-std()-Y	numeric	Mean for activity & subject
429-fBodyGyro-std()-Z	numeric	Mean for activity & subject
503-fBodyAccMag-mean()	numeric	Mean for activity & subject
504-fBodyAccMag-std()	numeric	Mean for activity & subject
516-fBodyBodyAccJerkMag-mean()	numeric	Mean for activity & subject
517-fBodyBodyAccJerkMag-std()	numeric	Mean for activity & subject
529-fBodyBodyGyroMag-mean()	numeric	Mean for activity & subject
530-fBodyBodyGyroMag-std()	numeric	Mean for activity & subject
542-fBodyBodyGyroJerkMag-mean()	numeric	Mean for activity & subject
543-fBodyBodyGyroJerkMag-std()	numeric	Mean for activity & subject