Getting and Cleaning Data Final Project Codebook

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Description of Output

Description of the final_output.txt file is shown below. Variables are described in detail later in this document.

```
ncol(data)
```

```
## [1] 4
```

```
nrow(data)
```

```
## [1] 30960
```

```
summary(data)
```

```
##    subject_ID     activity           variable             mean          
##  Min.   : 1.0   Length:30960       Length:30960       Min.   :-0.99767  
##  1st Qu.: 8.0   Class :character   Class :character   1st Qu.:-0.94485  
##  Median :15.5   Mode  :character   Mode  :character   Median :-0.29465  
##  Mean   :15.5                                         Mean   :-0.38429  
##  3rd Qu.:23.0                                         3rd Qu.:-0.01599  
##  Max.   :30.0                                         Max.   : 0.97451
```

```
variable.names(data)
```

```
## [1] "subject_ID" "activity"   "variable"   "mean"
```

DESCRIPTION OF VARIABLES

subject_ID

This variable is pulled directly from the original dataset. Each ID corresponds to a unique individual. Because a given individual will have completed multiple activities, these numbers repeat.

Information including the class, levels, and unit of measurement is described below.

```
class(data$subject_ID)
```

```
## [1] "integer"
```

```
unique(data$subject_ID)
```

```
##  [1]  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
## [26] 26 27 28 29 30
```

There is no unit of measurement. Instead, each value represents a unique individual.

activity

These lables are sourced from the activity_labels.txt file found in the original dataset and matched with the numeric id from the X_test.txt, Y_test.txt, X_train.txt, and Y_train.txt files. Each label represents a given activity carried out by the subject when measurments were taken.

Information including the class, levels, and unit of measurement is described below.

```
class(data$activity)
```

```
## [1] "character"
```

```
unique(data$activity)
```

```
## [1] "LAYING"             "SITTING"            "STANDING"
## [4] "WALKING"            "WALKING_DOWNSTAIRS" "WALKING_UPSTAIRS"
```

There is no unit of measurement. Instead, each value represents a unique activity.

variable

These variable names are sourced from the original dataset and each corresponds to a given gyroscopic measure associated with the smartphone for a given activity. Only the data representing a mean or standard deviation were retained.

The naming convention and more information can be found in the features_info.txt file.

Information including the class, levels, and unit of measurement is described below.

```
class(data$variable)
```

```
## [1] "character"
```

```
unique(data$variable)
```

```
##   [1] "tBodyAcc.mean...X.x"
##   [2] "tBodyAcc.mean...Y.x"
##   [3] "tBodyAcc.mean...Z.x"
##   [4] "tBodyAcc.std...X.x"
##   [5] "tBodyAcc.std...Y.x"
##   [6] "tBodyAcc.std...Z.x"
##   [7] "tGravityAcc.mean...X.x"
##   [8] "tGravityAcc.mean...Y.x"
##   [9] "tGravityAcc.mean...Z.x"
##  [10] "tGravityAcc.std...X.x"
##  [11] "tGravityAcc.std...Y.x"
##  [12] "tGravityAcc.std...Z.x"
##  [13] "tBodyAccJerk.mean...X.x"
##  [14] "tBodyAccJerk.mean...Y.x"
##  [15] "tBodyAccJerk.mean...Z.x"
##  [16] "tBodyAccJerk.std...X.x"
##  [17] "tBodyAccJerk.std...Y.x"
##  [18] "tBodyAccJerk.std...Z.x"
##  [19] "tBodyGyro.mean...X.x"
##  [20] "tBodyGyro.mean...Y.x"
##  [21] "tBodyGyro.mean...Z.x"
##  [22] "tBodyGyro.std...X.x"
##  [23] "tBodyGyro.std...Y.x"
##  [24] "tBodyGyro.std...Z.x"
##  [25] "tBodyGyroJerk.mean...X.x"
##  [26] "tBodyGyroJerk.mean...Y.x"
##  [27] "tBodyGyroJerk.mean...Z.x"
##  [28] "tBodyGyroJerk.std...X.x"
##  [29] "tBodyGyroJerk.std...Y.x"
##  [30] "tBodyGyroJerk.std...Z.x"
```

```
##  [31] "tBodyAccMag.mean...x"
##  [32] "tBodyAccMag.std...x"
##  [33] "tGravityAccMag.mean...x"
##  [34] "tGravityAccMag.std...x"
##  [35] "tBodyAccJerkMag.mean...x"
##  [36] "tBodyAccJerkMag.std...x"
##  [37] "tBodyGyroMag.mean...x"
##  [38] "tBodyGyroMag.std...x"
##  [39] "tBodyGyroJerkMag.mean...x"
##  [40] "tBodyGyroJerkMag.std...x"
##  [41] "fBodyAcc.mean...X.x"
##  [42] "fBodyAcc.mean...Y.x"
##  [43] "fBodyAcc.mean...Z.x"
##  [44] "fBodyAcc.std...X.x"
##  [45] "fBodyAcc.std...Y.x"
##  [46] "fBodyAcc.std...Z.x"
##  [47] "fBodyAcc.meanFreq...X.x"
##  [48] "fBodyAcc.meanFreq...Y.x"
##  [49] "fBodyAcc.meanFreq...Z.x"
##  [50] "fBodyAccJerk.mean...X.x"
##  [51] "fBodyAccJerk.mean...Y.x"
##  [52] "fBodyAccJerk.mean...Z.x"
##  [53] "fBodyAccJerk.std...X.x"
##  [54] "fBodyAccJerk.std...Y.x"
##  [55] "fBodyAccJerk.std...Z.x"
##  [56] "fBodyAccJerk.meanFreq...X.x"
##  [57] "fBodyAccJerk.meanFreq...Y.x"
##  [58] "fBodyAccJerk.meanFreq...Z.x"
##  [59] "fBodyGyro.mean...X.x"
##  [60] "fBodyGyro.mean...Y.x"
##  [61] "fBodyGyro.mean...Z.x"
##  [62] "fBodyGyro.std...X.x"
##  [63] "fBodyGyro.std...Y.x"
##  [64] "fBodyGyro.std...Z.x"
##  [65] "fBodyGyro.meanFreq...X.x"
##  [66] "fBodyGyro.meanFreq...Y.x"
##  [67] "fBodyGyro.meanFreq...Z.x"
##  [68] "fBodyAccMag.mean...x"
##  [69] "fBodyAccMag.std...x"
##  [70] "fBodyAccMag.meanFreq...x"
##  [71] "fBodyBodyAccJerkMag.mean...x"
##  [72] "fBodyBodyAccJerkMag.std...x"
##  [73] "fBodyBodyAccJerkMag.meanFreq...x"
##  [74] "fBodyBodyGyroMag.mean...x"
##  [75] "fBodyBodyGyroMag.std...x"
##  [76] "fBodyBodyGyroMag.meanFreq...x"
##  [77] "fBodyBodyGyroJerkMag.mean...x"
##  [78] "fBodyBodyGyroJerkMag.std...x"
##  [79] "fBodyBodyGyroJerkMag.meanFreq...x"
##  [80] "angle.tBodyAccMean.gravity..x"
##  [81] "angle.tBodyAccJerkMean..gravityMean..x"
##  [82] "angle.tBodyGyroMean.gravityMean..x"
##  [83] "angle.tBodyGyroJerkMean.gravityMean..x"
##  [84] "angle.X.gravityMean..x"
```

```
##  [85] "angle.Y.gravityMean..x"
##  [86] "angle.Z.gravityMean..x"
##  [87] "tBodyAcc.mean...X.y"
##  [88] "tBodyAcc.mean...Y.y"
##  [89] "tBodyAcc.mean...Z.y"
##  [90] "tBodyAcc.std...X.y"
##  [91] "tBodyAcc.std...Y.y"
##  [92] "tBodyAcc.std...Z.y"
##  [93] "tGravityAcc.mean...X.y"
##  [94] "tGravityAcc.mean...Y.y"
##  [95] "tGravityAcc.mean...Z.y"
##  [96] "tGravityAcc.std...X.y"
##  [97] "tGravityAcc.std...Y.y"
##  [98] "tGravityAcc.std...Z.y"
##  [99] "tBodyAccJerk.mean...X.y"
## [100] "tBodyAccJerk.mean...Y.y"
## [101] "tBodyAccJerk.mean...Z.y"
## [102] "tBodyAccJerk.std...X.y"
## [103] "tBodyAccJerk.std...Y.y"
## [104] "tBodyAccJerk.std...Z.y"
## [105] "tBodyGyro.mean...X.y"
## [106] "tBodyGyro.mean...Y.y"
## [107] "tBodyGyro.mean...Z.y"
## [108] "tBodyGyro.std...X.y"
## [109] "tBodyGyro.std...Y.y"
## [110] "tBodyGyro.std...Z.y"
## [111] "tBodyGyroJerk.mean...X.y"
## [112] "tBodyGyroJerk.mean...Y.y"
## [113] "tBodyGyroJerk.mean...Z.y"
## [114] "tBodyGyroJerk.std...X.y"
## [115] "tBodyGyroJerk.std...Y.y"
## [116] "tBodyGyroJerk.std...Z.y"
## [117] "tBodyAccMag.mean...y"
## [118] "tBodyAccMag.std...y"
## [119] "tGravityAccMag.mean...y"
## [120] "tGravityAccMag.std...y"
## [121] "tBodyAccJerkMag.mean...y"
## [122] "tBodyAccJerkMag.std...y"
## [123] "tBodyGyroMag.mean...y"
## [124] "tBodyGyroMag.std...y"
## [125] "tBodyGyroJerkMag.mean...y"
## [126] "tBodyGyroJerkMag.std...y"
## [127] "fBodyAcc.mean...X.y"
## [128] "fBodyAcc.mean...Y.y"
## [129] "fBodyAcc.mean...Z.y"
## [130] "fBodyAcc.std...X.y"
## [131] "fBodyAcc.std...Y.y"
## [132] "fBodyAcc.std...Z.y"
## [133] "fBodyAcc.meanFreq...X.y"
## [134] "fBodyAcc.meanFreq...Y.y"
## [135] "fBodyAcc.meanFreq...Z.y"
## [136] "fBodyAccJerk.mean...X.y"
## [137] "fBodyAccJerk.mean...Y.y"
## [138] "fBodyAccJerk.mean...Z.y"
```

```
## [139] "fBodyAccJerk.std...X.y"
## [140] "fBodyAccJerk.std...Y.y"
## [141] "fBodyAccJerk.std...Z.y"
## [142] "fBodyAccJerk.meanFreq...X.y"
## [143] "fBodyAccJerk.meanFreq...Y.y"
## [144] "fBodyAccJerk.meanFreq...Z.y"
## [145] "fBodyGyro.mean...X.y"
## [146] "fBodyGyro.mean...Y.y"
## [147] "fBodyGyro.mean...Z.y"
## [148] "fBodyGyro.std...X.y"
## [149] "fBodyGyro.std...Y.y"
## [150] "fBodyGyro.std...Z.y"
## [151] "fBodyGyro.meanFreq...X.y"
## [152] "fBodyGyro.meanFreq...Y.y"
## [153] "fBodyGyro.meanFreq...Z.y"
## [154] "fBodyAccMag.mean...y"
## [155] "fBodyAccMag.std...y"
## [156] "fBodyAccMag.meanFreq...y"
## [157] "fBodyBodyAccJerkMag.mean...y"
## [158] "fBodyBodyAccJerkMag.std...y"
## [159] "fBodyBodyAccJerkMag.meanFreq...y"
## [160] "fBodyBodyGyroMag.mean...y"
## [161] "fBodyBodyGyroMag.std...y"
## [162] "fBodyBodyGyroMag.meanFreq...y"
## [163] "fBodyBodyGyroJerkMag.mean...y"
## [164] "fBodyBodyGyroJerkMag.std...y"
## [165] "fBodyBodyGyroJerkMag.meanFreq...y"
## [166] "angle.tBodyAccMean.gravity..y"
## [167] "angle.tBodyAccJerkMean..gravityMean..y"
## [168] "angle.tBodyGyroMean.gravityMean..y"
## [169] "angle.tBodyGyroJerkMean.gravityMean..y"
## [170] "angle.X.gravityMean..y"
## [171] "angle.Y.gravityMean..y"
## [172] "angle.Z.gravityMean..y"
```

There is no unit of measurement. Instead, each value represents a variable from the original dataset.

mean

These values were computed by calculating the mean of variable values for a given subject and a given activity (that is to say, the mean of the mean and the mean of the standard deviation)

Information including the class, levels, and unit of measurement is described below.

```
class(data$mean)
```

```
## [1] "numeric"
```

```
summary(data$mean)
```

```
##     Min.  1st Qu.   Median     Mean  3rd Qu.     Max.
## -0.99767 -0.94485 -0.29465 -0.38429 -0.01599  0.97451
```

The unit of measurement is the original unit of measurement for the given variable.

For more information please consult the readme