# "UCI Human Activity Recognition Using Smartphones Data Set"

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## Codebook on the Analysis Data - Variables & Summaries

This codebook lists down all the variables of the dataset found from running the run_analysis.R script. The values in the columns are MEAN values generated by grouping Subject-ID and activity names. Each value represent the mean values for the respected variables.

The resultant dataset has a dimension of 180 rows and 88 columns.

## Unique IDs

**Subject_ID** : Unique ID of the person who participated in the experiment.
**activity_name** : Name of the activity("Walking", "Walking-Upstairs" "Laying" etc.)

## Variables

**tBodyAcc-mean()-X** : Body Acceleration Mean value - X axis
**tBodyAcc-mean()-Y** : Body Acceleration Mean value - Y axis
**tBodyAcc-mean()-Z** : Body Acceleration Mean value - Z axis
**tBodyAcc-std()-X** : Body Acceleration Standard Deviation value - X axis
**tBodyAcc-std()-Y** : Body Acceleration Standard Deviation value - Y axis
**tBodyAcc-std()-Z** : Body Acceleration Standard Deviation value - Z axis
**tGravityAcc-mean()-X** : Gravity Acceleration Mean value - X Axis

### The rest of the variables have a similar pattern.

**tGravityAcc-mean()-Y**
**tGravityAcc-mean()-Z**
**tGravityAcc-std()-X**
**tGravityAcc-std()-Y**
**tGravityAcc-std()-Z**
**tBodyAccJerk-mean()-X**
**tBodyAccJerk-mean()-Y**
**tBodyAccJerk-mean()-Z**
**tBodyAccJerk-std()-X**
**tBodyAccJerk-std()-Y**
**tBodyAccJerk-std()-Z**
**tBodyGyro-mean()-X**
**tBodyGyro-mean()-Y**
**tBodyGyro-mean()-Z**
**tBodyGyro-std()-X**
**tBodyGyro-std()-Y**
**tBodyGyro-std()-Z**
**tBodyGyroJerk-mean()-X**
**tBodyGyroJerk-mean()-Y**
**tBodyGyroJerk-mean()-Z**
**tBodyGyroJerk-std()-X**
**tBodyGyroJerk-std()-Y**
**tBodyGyroJerk-std()-Z**
**tBodyAccMag-mean()**
**tBodyAccMag-std()**
**tGravityAccMag-mean()**
**tGravityAccMag-std()**
**tBodyAccJerkMag-mean()**
**tBodyAccJerkMag-std()**
**vtBodyGyroMag-mean()**
**tBodyGyroMag-std()**
**tBodyGyroJerkMag-mean()**
**tBodyGyroJerkMag-std()**
**fBodyAcc-mean()-X**
**fBodyAcc-mean()-Y**
**fBodyAcc-mean()-Z**
**fBodyAcc-std()-X**
**fBodyAcc-std()-Y**
**fBodyAcc-std()-Z**
**fBodyAcc-meanFreq()-X**
**fBodyAcc-meanFreq()-Y**
**fBodyAcc-meanFreq()-Z**
**fBodyAccJerk-mean()-X**
**fBodyAccJerk-mean()-Y**
**fBodyAccJerk-mean()-Z**
**fBodyAccJerk-std()-X**
**fBodyAccJerk-std()-Y**
**fBodyAccJerk-std()-Z**

fBodyAccJerk-meanFreq()-X
fBodyAccJerk-meanFreq()-Y
fBodyAccJerk-meanFreq()-Z
fBodyGyro-mean()-X
fBodyGyro-mean()-Y
fBodyGyro-mean()-Z
fBodyGyro-std()-X
fBodyGyro-std()-Y
fBodyGyro-std()-Z
fBodyGyro-meanFreq()-X
fBodyGyro-meanFreq()-Y
fBodyGyro-meanFreq()-Z
fBodyAccMag-mean()
fBodyAccMag-std()
fBodyAccMag-meanFreq()
fBodyBodyAccJerkMag-mean()
fBodyBodyAccJerkMag-std()
fBodyBodyAccJerkMag-meanFreq()
fBodyBodyGyroMag-mean()
fBodyBodyGyroMag-std()
fBodyBodyGyroMag-meanFreq()
fBodyBodyGyroJerkMag-mean()
fBodyBodyGyroJerkMag-std()
fBodyBodyGyroJerkMag-meanFreq()
angle(tBodyAccMean,gravity)
angle(tBodyAccJerkMean),gravityMean)
angle(tBodyGyroMean,gravityMean)
angle(tBodyGyroJerkMean,gravityMean)
angle(X,gravityMean)
angle(Y,gravityMean)
angle(Z,gravityMean)