

# Getting and Cleaning Data Project *Code Book*

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## 1 Introduction

This document contains a full description of all the variables in the tidy dataset resulting from merging the train and test data sets. The dataset contains the averages of some measurments (which in turn are means and standard deviations of initial measurments in the original two datasets from Human Activity Recognition Using Smartphones Dataset Version 1.0) for each subject for each activity. There are 68 columns in the dataset which will be fully described in the next section. The dataset also contains column names, and columns are separated by a space.

## 2 Variables

### 2.1 subject\_id

#### 2.1.1 Type

Integer

#### 2.1.2 Description

Identifier of the subject. It ranges from 1 to 30.

### 2.2 activity\_name

#### 2.2.1 Type

Character

#### 2.2.2 Description

Activity name which can be one of the following values

-WALKING -WALKING\_UPSTAIRS -WALKING\_DOWNSTAIRS -SITTING -STANDING -LAYING

### 2.3 tBodyAcc.mean.X

#### 2.3.1 Type

Numeric

### **2.3.2 Description**

The average of mean of body acceleration velocity in x axes measured in time domain.

## **2.4 tBodyAcc.mean.Y**

### **2.4.1 Type**

Numeric

### **2.4.2 Description**

The average of mean of body acceleration velocity in y axes measured in time domain.

## **2.5 tBodyAcc.mean.Z**

### **2.5.1 Type**

Numeric

The average of mean of body acceleration velocity in z axes measured in time domain.

### **2.5.2 Description**

## **2.6 tBodyAcc.std.X**

### **2.6.1 Type**

Numeric

### **2.6.2 Description**

The average of standard deviation of body acceleration velocity in x axes measured in time domain.

## **2.7 tBodyAcc.std.Y**

### **2.7.1 Type**

Numeric

### **2.7.2 Description**

The average of standard deviation of body acceleration velocity in y axes measured in time domain.

## **2.8 tBodyAcc.std.Z**

### **2.8.1 Type**

Numeric

### **2.8.2 Description**

The average of standard deviation of body acceleration velocity in z axes measured in time domain.

## **2.9 tGravityAcc.mean.X**

### **2.9.1 Type**

Numeric

### **2.9.2 Description**

The average of mean of gravity acceleration velocity in x axes measured in time domain.

## **2.10 tGravityAcc.mean.Y**

### **2.10.1 Type**

Numeric

### **2.10.2 Description**

The average of mean of gravity acceleration velocity in y axes measured in time domain.

## **2.11 tGravityAcc.mean.Z**

### **2.11.1 Type**

Numeric

### **2.11.2 Description**

The average of mean of gravity acceleration velocity in z axes measured in time domain.

## **2.12 tGravityAcc.std.X**

### **2.12.1 Type**

Numeric

### **2.12.2 Description**

The average of standard deviation of gravity acceleration velocity in x axes measured in time domain.

## **2.13 tGravityAcc.std.Y**

### **2.13.1 Type**

Numeric

### **2.13.2 Description**

The average of standard deviation of gravity acceleration velocity in y axes measured in time domain.

## **2.14 tGravityAcc.std.Z**

### **2.14.1 Type**

Numeric

### **2.14.2 Description**

The average of standard deviation of gravity acceleration velocity in z axes measured in time domain.

## **2.15 tBodyAccJerk.mean.X**

### **2.15.1 Type**

Numeric

### **2.15.2 Description**

The average of mean of the Jerk signals of body acceleration velocity in x axes measured in time domain.

## **2.16 tBodyAccJerk.mean.Y**

### **2.16.1 Type**

Numeric

### **2.16.2 Description**

The average of mean of the Jerk signals of body acceleration velocity in y axes measured in time domain.

## **2.17 tBodyAccJerk.mean.Z**

### **2.17.1 Type**

Numeric

### **2.17.2 Description**

The average of mean of the Jerk signals of body acceleration velocity in z axes measured in time domain.

## **2.18 tBodyAccJerk.std.X**

### **2.18.1 Type**

Numeric

### **2.18.2 Description**

The average of standard deviation of the Jerk signals of body acceleration velocity in x axes measured in time domain.

## **2.19 tBodyAccJerk.std.Y**

### **2.19.1 Type**

Numeric

### **2.19.2 Description**

The average of standard deviation of the Jerk signals of body acceleration velocity in y axes measured in time domain.

## **2.20 tBodyAccJerk.std.Z**

### **2.20.1 Type**

Numeric

### **2.20.2 Description**

The average of standard deviation of the Jerk signals of body acceleration velocity in z axes measured in time domain.

## **2.21 tBodyGyro.mean.X**

### **2.21.1 Type**

Numeric

### **2.21.2 Description**

The average of mean of the angular velocity in x axes measured in time domain.

## **2.22 tBodyGyro.mean.Y**

### **2.22.1 Type**

Numeric

### **2.22.2 Description**

The average of mean of the angular velocity in y axes measured in time domain.

## **2.23 tBodyGyro.mean.Z**

### **2.23.1 Type**

Numeric

### **2.23.2 Description**

The average of mean of the angular velocity in z axes measured in time domain.

## **2.24 tBodyGyro.std.X**

### **2.24.1 Type**

Numeric

### **2.24.2 Description**

The average of standard deviation of the angular velocity in x axes measured in time domain.

## **2.25 tBodyGyro.std.Y**

### **2.25.1 Type**

Numeric

### **2.25.2 Description**

The average of standard deviation of the angular velocity in y axes measured in time domain.

## **2.26 tBodyGyro.std.Z**

### **2.26.1 Type**

Numeric



### **2.26.2 Description**

The average of standard deviation of the angular velocity in z axes measured in time domain.

## **2.27 tBodyGyroJerk.mean.X**

### **2.27.1 Type**

Numeric

### **2.27.2 Description**

The average of mean of the Jerk signals of angular velocity in x axes measured in time domain.

## **2.28 tBodyGyroJerk.mean.Y**

### **2.28.1 Type**

Numeric

### **2.28.2 Description**

The average of mean of the Jerk signals of angular velocity in y axes measured in time domain.

## **2.29 tBodyGyroJerk.mean.Z**

### **2.29.1 Type**

Numeric

### **2.29.2 Description**

The average of mean of the Jerk signals of angular velocity in z axes measured in time domain.

## **2.30 tBodyGyroJerk.std.X**

### **2.30.1 Type**

Numeric

### **2.30.2 Description**

The average of standard deviation of the Jerk signals of angular velocity in x axes measured in time domain.

## **2.31 tBodyGyroJerk.std.Y**

### **2.31.1 Type**

Numeric

### **2.31.2 Description**

The average of standard deviation of the Jerk signals of angular velocity in y axes measured in time domain.

## **2.32 tBodyGyroJerk.std.Z**

### **2.32.1 Type**

Numeric

### **2.32.2 Description**

The average of standard deviation of the Jerk signals of angular velocity in z axes measured in time domain.

## **2.33 tBodyAccMag.mean**

### **2.33.1 Type**

Numeric

### **2.33.2 Description**

The average of mean of the body acceleration magnitude measured in time domain.

## **2.34 tBodyAccMag.std**

### **2.34.1 Type**

Numeric

### **2.34.2 Description**

The average of standard deviation of the body acceleration magnitude measured in time domain.

## **2.35 tGravityAccMag.mean**

### **2.35.1 Type**

Numeric

### **2.35.2 Description**

The average of mean of the gravity acceleration magnitude measured in time domain.

## **2.36 tGravityAccMag.std**

### **2.36.1 Type**

Numeric

### **2.36.2 Description**

The average of standard deviation of the gravity acceleration magnitude measured in time domain.

## **2.37 tBodyAccJerkMag.mean**

### **2.37.1 Type**

Numeric

### **2.37.2 Description**

The average of mean of the body acceleration Jerk signals' magnitude measured in time domain.

## **2.38 tBodyAccJerkMag.std**

### **2.38.1 Type**

Numeric

### **2.38.2 Description**

The average of standard deviation of the body acceleration Jerk signals' magnitude measured in time domain.

## **2.39 tBodyGyroMag.mean**

### **2.39.1 Type**

Numeric

### **2.39.2 Description**

The average of mean of the angular velocity magnitude measured in time domain.

## **2.40 tBodyGyroMag.std**

### **2.40.1 Type**

Numeric

### **2.40.2 Description**

The average of standard deviation of the angular velocity magnitude measured in time domain.

## **2.41 tBodyGyroJerkMag.mean**

### **2.41.1 Type**

Numeric

### **2.41.2 Description**

The average of mean of the angular velocity Jerk signals' magnitude measured in time domain.

## **2.42 tBodyGyroJerkMag.std**

### **2.42.1 Type**

Numeric

### **2.42.2 Description**

The average of standard deviation of the angular velocity Jerk signals' magnitude measured in time domain.

## **2.43 fBodyAcc.mean.X**

### **2.43.1 Type**

Numeric

### **2.43.2 Description**

The average of mean of body acceleration velocity in x axes in frequency domain.

## **2.44 fBodyAcc.mean.Y**

### **2.44.1 Type**

Numeric

#### **2.44.2 Description**

The average of mean of body acceleration velocity in y axes in frequency domain.

### **2.45 fBodyAcc.mean.Z**

#### **2.45.1 Type**

Numeric

#### **2.45.2 Description**

The average of mean of body acceleration velocity in z axes in frequency domain.

### **2.46 fBodyAcc.std.X**

#### **2.46.1 Type**

Numeric

#### **2.46.2 Description**

The average of standard deviation of body acceleration velocity in x axes in frequency domain.

### **2.47 fBodyAcc.std.Y**

#### **2.47.1 Type**

Numeric

#### **2.47.2 Description**

The average of standard deviation of body acceleration velocity in y axes in frequency domain.

### **2.48 fBodyAcc.std.Z**

#### **2.48.1 Type**

Numeric

#### **2.48.2 Description**

The average of standard deviation of body acceleration velocity in z axes in frequency domain.

## **2.49 fBodyAccJerk.mean.X**

### **2.49.1 Type**

Numeric

### **2.49.2 Description**

The average of mean of body acceleration velocity Jerk signals in x axes in frequency domain.

## **2.50 fBodyAccJerk.mean.Y**

### **2.50.1 Type**

Numeric

### **2.50.2 Description**

The average of mean of body acceleration velocity Jerk signals in y axes in frequency domain.

## **2.51 fBodyAccJerk.mean.Z**

### **2.51.1 Type**

Numeric

### **2.51.2 Description**

The average of mean of body acceleration velocity Jerk signals in x axes in frequency domain.

## **2.52 fBodyAccJerk.std.X**

### **2.52.1 Type**

Numeric

### **2.52.2 Description**

The average of standard deviation of body acceleration velocity Jerk signals in x axes in frequency domain.

## **2.53 fBodyAccJerk.std.Y**

### **2.53.1 Type**

Numeric

### **2.53.2 Description**

The average of standard deviation of body acceleration velocity Jerk signals in y axes in frequency domain.

## **2.54 fBodyAccJerk.std.Z**

### **2.54.1 Type**

Numeric

### **2.54.2 Description**

The average of standard deviation of body acceleration velocity Jerk signals in z axes in frequency domain.

## **2.55 fBodyGyro.mean.X**

### **2.55.1 Type**

Numeric

### **2.55.2 Description**

The average of mean of angular velocity in x axes in frequency domain.

## **2.56 fBodyGyro.mean.Y**

### **2.56.1 Type**

Numeric

### **2.56.2 Description**

The average of mean of angular velocity in y axes in frequency domain.

## **2.57 fBodyGyro.mean.Z**

### **2.57.1 Type**

Numeric

### **2.57.2 Description**

The average of mean of angular velocity in z axes in frequency domain.

## **2.58 fBodyGyro.std.X**

### **2.58.1 Type**

Numeric

### **2.58.2 Description**

The average of standard deviation of angular velocity in x axes in frequency domain.

## **2.59 fBodyGyro.std.Y**

### **2.59.1 Type**

Numeric

### **2.59.2 Description**

The average of standard deviation of angular velocity in y axes in frequency domain.

## **2.60 fBodyGyro.std.Z**

### **2.60.1 Type**

Numeric

### **2.60.2 Description**

The average of standard deviation of angular velocity in z axes in frequency domain.

## **2.61 fBodyAccMag.mean**

### **2.61.1 Type**

Numeric

### **2.61.2 Description**

The average of mean of body acceleration velocity magnitude in frequency domain.

## **2.62 fBodyAccMag.std**

### **2.62.1 Type**

Numeric



### **2.62.2 Description**

The average of standard deviation of body acceleration velocity magnitude in frequency domain.

## **2.63 fBodyBodyAccJerkMag.mean**

### **2.63.1 Type**

Numeric

### **2.63.2 Description**

The average of mean of body acceleration velocity Jerk signals' magnitude in frequency domain.

## **2.64 fBodyBodyAccJerkMag.std**

### **2.64.1 Type**

Numeric

### **2.64.2 Description**

The average of standard deviation of body acceleration velocity Jerk signals' magnitude in frequency domain.

## **2.65 fBodyBodyGyroMag.mean**

### **2.65.1 Type**

Numeric

### **2.65.2 Description**

The average of mean of angular velocity magnitude in frequency domain.

## **2.66 fBodyBodyGyroMag.std**

### **2.66.1 Type**

Numeric

### **2.66.2 Description**

The average of standard deviation of angular velocity magnitude in frequency domain.

## **2.67 fBodyBodyGyroJerkMag.mean**

### **2.67.1 Type**

Numeric

### **2.67.2 Description**

The average of mean of angular velocity Jerk signals' magnitude in frequency domain.

## **2.68 fBodyBodyGyroJerkMag.std**

### **2.68.1 Type**

Numeric

### **2.68.2 Description**

The average of standard deviation of angular velocity Jerk signals' magnitude in frequency domain.