**CodeBook**

This is a code book that describes the variables, the data, and any transformations or work that you performed to clean up the data.

**Human Activity Recognition Using Smartphones Data Set** .

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| Human Activity Recognition database built from the recordings of 30 subjects performing activities of daily living (ADL) while carrying a waist-mounted smartphone with embedded inertial sensors. |  |

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| Data Set Characteristics: | Multivariate, Time-Series | Number of Instances: | 10299 | Area: | Computer |
| Attribute Characteristics: | N/A | Number of Attributes: | 561 | Date Donated | 2012-12-10 |
| Associated Tasks: | Classification, Clustering | Missing Values? | N/A | Number of Web Hits: | 574308 |

About the data:

For each record in the dataset it is provided:   
- Triaxial acceleration from the accelerometer (total acceleration) and the estimated body acceleration.   
- Triaxial Angular velocity from the gyroscope.   
- A 561-feature vector with time and frequency domain variables.   
- Its activity label.   
- An identifier of the subject who carried out the experiment.

**Source:**

Jorge L. Reyes-Ortiz(1,2), Davide Anguita(1), Alessandro Ghio(1), Luca Oneto(1) and Xavier Parra(2)  
1 - Smartlab - Non-Linear Complex Systems Laboratory  
DITEN - Università degli Studi di Genova, Genoa (I-16145), Italy.   
2 - CETpD - Technical Research Centre for Dependency Care and Autonomous Living  
Universitat Politècnica de Catalunya (BarcelonaTech). Vilanova i la Geltrú (08800), Spain  
activityrecognition '@' smartlab.ws

The dataset includes the following files:

* 'README.txt'
* 'features\_info.txt': Shows information about the variables used on the feature vector.
* 'features.txt': List of all features.
* 'activity\_labels.txt': Links the class labels with their activity name.
* 'train/X\_train.txt': Training set.
* 'train/y\_train.txt': Training labels.
* 'test/X\_test.txt': Test set.
* 'test/y\_test.txt': Test labels.

**Transformations Used**

There are 5 parts:

1. Merging the training and the test sets to create one data set.
2. Extracting only the measurements on the mean and standard deviation for every measurement.
3. Using descriptive activity names to name the activities in the data set
4. Appropriately labels the data set with descriptive activity names.
5. Creates a second, independent tidy data set with the average of each variable for each activity and each subject.