

Code Book

Data Source

The original data is "Human Activity Recognition Using Smartphones Dataset", downloadable from the following link:

<https://d396qusza40orc.cloudfront.net/getdata%2Fprojectfiles%2FUCI%20HAR%20Dataset.zip>

Experiment Information

1. subjects: 30 volunteers within an age bracket of 19-48 years.
2. activities: 6 activities (WALKING, WALKING_UPSTAIRS, WALKING_DOWNSTAIRS, SITTING, STANDING, LAYING)
3. features: signals that are measured and calculated
4. x: the values of the signals "features", normalized and bounded within [-1,1].
5. data sets: there are two separate data sets "test" and "train"

Transformation:

The following transformations were applied to the source data:

1. All data sets are combined together to create one data set.
2. Only the measurements on the mean and standard are extracted.
3. The activity levels as numbers [1-6] are replaced with descriptive activity labels.
4. The variable names (features) are edited by the following:
 - Characters "(" and "-" are removed,
 - "mean" and "std" are replaced by "Mean" and "Sd"
 - "t" and "f" are replaced by "Time" and "Freq"
 - "BodyBody" is replaced by "Body"
 - "Mag" is replaced by "Magnitude"
5. Finally, the average of each variable, for each subject and each activity, is calculated and the result extracted as a new tidy data set.