**Coursera *Getting and Cleaning data* course project**

This repository contains the following files:

* README.md: this file, which provides an overview of the repository and how it works.
* CodeBook.md: data code book, which describes the contents of the data set.
* run\_analysis.R: the R script of the project.
* tidy\_data.txt: the resulting data set of the run\_analysis script.

**Project development**

The project can be executed running run\_analysis.R script in the same directory where the input data is.

The script is divided into 8 different sections. First section loads environment packages, second and third sections load data, and the following steps fulfill project requirements. In the following lines there is a description of each code section.

* **Section 1:** Load needed R specific packages
* **Section 2:** Read data from provided .txt files using read.table() function
* **Section 3:** Set data-set column names using the features read in the previous section
* **Section 4:** Merges the training and the test sets for x, y and subject sets. It corresponds to the first requirement of the project.
* **Section 5:** Select only columns with mean or standard deviation data. It corresponds to the second requirement of the project.
* **Section 6:** Replace the activity numbers (1,2,3,4,5,6) with their corresponding activity name. It corresponds to the third requirement of the project.
* **Section 7:** Set some normalization in column names; removes duplicated dots, remove dots at the end of the name and separates names with dots, e.g: instead of ThisIs..An.Example..., This.Is.An.Example. It corresponds to the fourth requirement of the project.
* **Section 8:** Calculate average of each variable for each activity and each subject. Then, save this data set in a .txt file with "tidy\_data" name. This corresponds to the fifth and last requirement of the project.