# Getting and Cleaning Data Project

This repository contains the final submission for the Coursera course project: \*Getting and Cleaning Data\*. The purpose of the project is to demonstrate the ability to collect, clean, and create a tidy dataset from raw data.

## Dataset

The data linked to from the course website represents data collected from the accelerometers from the Samsung Galaxy S smartphone. The experiments have been carried out with a group of 30 volunteers within an age bracket of 19–48 years. Each person performed six activities (walking, walking upstairs, walking downstairs, sitting, standing, lying) wearing a smartphone on the waist.

Source:

[Human Activity Recognition Using Smartphones Dataset](https://archive.ics.uci.edu/ml/datasets/Human+Activity+Recognition+Using+Smartphones)

## Files

- `run\_analysis.R` – R script used to download, clean, and process the data.

- `secTidySet.txt` – Final tidy dataset.

- `CodeBook.md` – Describes the variables and transformations applied.

## Steps Performed

The script `run\_analysis.R` performs the following:

1. Downloads and unzips the dataset.

2. Merges the training and test datasets to create one data set.

3. Extracts only measurements on the mean and standard deviation for each measurement.

4. Uses descriptive activity names to name the activities in the dataset.

5. Appropriately labels the dataset with descriptive variable names.

6. Creates a tidy dataset with the average of each variable for each activity and subject.

7. Writes the result to `secTidySet.txt`.

## Dependencies

- R (≥ 3.6)

- `dplyr` package

You can run the analysis with:

```r

source("run\_analysis.R")