# Homework Reading & Exercises in preparation for ***Week 2, Foundations***

**Reading:**

* 2 PDFs in “BCS519\_stats\Presentations\Week\_2\_Foundations”
* Section 2.1 – 2.2 (“An Introduction to Statistical Learning”)
* https://bookdown.org/egarpor/PM-UC3M/intro-what-is.html
* https://bookdown.org/egarpor/PM-UC3M/lm-i-assumps.html

**Exercises:**

For the next class, open the dataset in “Scripts/Week\_2\_Foundations/data.mat” containing the variables ***x*** and ***y***. Each column represents one data set (9 data sets total) For each regression y1 ~ x1, …, y9 ~ x9:

* Check whether the assumptions of the linear model are being satisfied (make a scatterplot with a regression line).
* State which assumption(s) are violated and justify your answer.
* Create a pdf using MatLab editor containing code and figures. Push to GitHub before next class, 09/10/2020.