

Lab 5 - Linear Regression

For this lab, please work through the following sections from the *Introduction to Statistical Learning with Applications in R* (ISLR) book.

Please see <https://faculty.marshall.usc.edu/gareth-james/ISL/> .

A PDF copy of the ISLR book can be freely (and legally) downloaded from this website at <https://faculty.marshall.usc.edu/gareth-james/ISL/ISLR%20Seventh%20Printing.pdf>

PART A – Linear Regression

Lab 3 (page 109 – 120) covers Linear Regression. Please complete sections 3.6.1 – 3.6.6.

Note: it is not necessary to run the `fix(SomeDataset)` commands. Please replace the `fix` commands with data commands, e.g., run `data(Boston)` rather than `fix(Boston)`.

PART B – PCR and PLS Regression

Lab 3 (page 256 – 259) covers PCR and PLS Regression. Please complete sections 6.7.1 – 6.7.2.

PART C – kNN Regression

To illustrate kNN Regression, we will again use the Boston dataset.

Please see <https://davidalpiaz.github.io/r4sl/k-nearest-neighbors.html#regression> .

Note: Don't forget to install the KNN package into your R environment.