

Assignment 1: Linear Models in R

In this assignment, we will install R, Rstudio and implement linear models. To complete the assignment, following the below instruction to run all the given codes.

Copy the codes and their results to Word and submit the Word document to Canvas.

Installation

Download and Install R at: <https://cran.r-project.org/bin/windows/base/R-4.3.2-win.exe>

Download and Install Rstudio at: <https://download1.rstudio.org/electron/windows/RStudio-2023.12.0-369.exe>

Implementing Linear Models [🔗](#)

We can run linear models as follows.

- Open Rstudio
- Import the `heart_disease` data using `read.csv` function: In the console, type:

```
d = read.csv('https://bryantstats.github.io/math461/slides/heart_data.csv')
```

- We run linear regression using `lm` function. We show the results using the `summary` function. This below codes will regress `heart_disease` on `biking`.

```
my_linear_model <- lm(heart_disease ~ biking, data = d)
summary(my_linear_model)
```

- We can do multiple linear regression as follows.

```
my_linear_model <- lm(heart_disease ~ biking + smoking, data = d)
summary(my_linear_model)
```