

Lab 01 - Hello R!

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Learning goals

- Get acquainted with R and RStudio, which we will be using throughout the course to analyze data as well as to learn the statistical concepts discussed in the course.
- Appreciate the value of visualization in exploring the relationship between variables.
- Start using R for building plots and calculating summary statistics.

Terminology

We've already thrown around a few new terms, so let's define them before we proceed. - **R**: Name of the programming language we will be using throughout the course. - **RStudio**: An integrated development environment for R. In other words, a convenient interface for writing and running R code. I like to think of R as the engine of the car, and RStudio is the dashboard.

Starting slow

As the labs progress, you are encouraged to explore beyond what the labs dictate; a willingness to experiment will make you a much better programmer. Before we get to that stage, however, you need to build some basic fluency in R. Today we begin with the fundamental building blocks of R and RStudio: the interface, reading in data, and basic commands.

And to make versioning simpler, this is a solo lab. Additionally, we want to make sure everyone gets a significant amount of time at the steering wheel.

Getting started

Download R

If you don't have R installed

Go to the CRAN and download R, make sure you get the version that matches your operating system.

If you have R installed

If you have R installed run the following code

```
R.version
```

```
##  
## platform      _  
## arch          x86_64-apple-darwin17.0  
## os            x86_64  
## os            darwin17.0
```

```
## system      x86_64, darwin17.0
## status
## major       4
## minor       0.2
## year        2020
## month       06
## day         22
## svn rev     78730
## language    R
## version.string R version 4.0.2 (2020-06-22)
## nickname    Taking Off Again
```

This should tell you what version of R you are currently using. If your R version is lower than 3.6.0 I would strongly recommend updating. In general it is a good idea to update your R version, unless you have a project right now that depend on a specific version of R.

Download RStudio

We recommend using RStudio as your IDE if you don't already have it installed. You can go to the RStudio website to download and install the software.

Launch RStudio

You can also open the RStudio application first and then create a project by going `file -> new project...`