

Section 0: Setting up R

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Before our first section, please run make sure you have working and up-to-date installations of R and RStudio. We will make use both extensively in this course/section, so it is definitely worth doing right.

1 Installation

If you do not already have R and RStudio running on your computer, then you should install them both:

1. Download R.
2. Download RStudio.

RStudio is a super helpful IDE (integrated development environment) for R—it's very helpful for both learning and using R.

If you already have R and RStudio on your computer, then you should make sure they are up to date. The current R version is 3.4.3 (a.k.a. *Kite-Eating Tree*). You can check your version of R by typing `version` into the R console. The current version of RStudio is 1.1.383.

I would also recommend making sure you have a working installation of LaTeX (ShareLaTeX is another nice tool that also has a lot of LaTeX help/tutorials). Pandoc is also helpful.

2 Does it work?

Open RStudio. Type `1 + 1` in the console. Do you get 2? If so, it looks like things are working.

3 Resources for R

I've compiled a pretty large set of resources for R. You probably don't need them right now, but know they are there. However, the best resources for learning R are:

- Google (which will probably lead to StackOverflow)
- Time
- Your classmates

- Me

4 Basic suggestions

0. Nearly everything you do should be in an R script, as opposed to the command line. You will want to return to your code at some point, an R script makes this possible (plus you have to turn in your R script with your assignments).
1. Comment your code.
2. Be consistent with your coding conventions (especially naming).
3. Be smart when naming files, folders, *etc.*. First, use names that are actually descriptive (*e.g.*, `Census-CountyDemographics.csv` vs. `cbn18319ddg890-7a.csv`). Second, I'd suggest choosing either camelcase (`WhatAGreatName.txt`) or replacing spaces with underscores (`what_a_great_name.txt`).
4. Make your life easier by organizing your files, directories, and using R's `paste0()` (or `paste()`). See examples in Section 1.