Software Installation Checklist: R Course

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On Wednesday January 24 at 1pm ET I will be teaching a course in the Census CAT lab titled *Mapping State ACS Data in R with Choroplethr*. In my experience, the biggest obstacle to people completing R courses involves software installation. It is often time consuming and error-prone. This results in the course not being able to start on time, and some people not being able to work through the exercises during the course.

To that end, I hope that we can pre-install the software on the machines that people will be using for the course. There are 5 steps for this.

1. Installing R
The course will use the free programming language R. It can be downloaded here: https://cloud.r-project.org/

2. Installing RStudio
RStudio is a free Integrated Development Environment (IDE) that makes it much easier to program in R. It can be downloaded here: https://www.rstudio.com/products/rstudio/download/#download

3. Installing R Packages
R is a small programming language that has a large ecosystem of free packages. I will be teaching people to use two packages in particular: **choroplethr** and **choroplethrMaps**. Once RStudio is installed, these packages can be installed by typing the following command verbatim:

```
install.packages(c("choroplethr", "choroplethrMaps"))
```

This command should be typed into the **console** tab in RStudio, which is highlighted below:
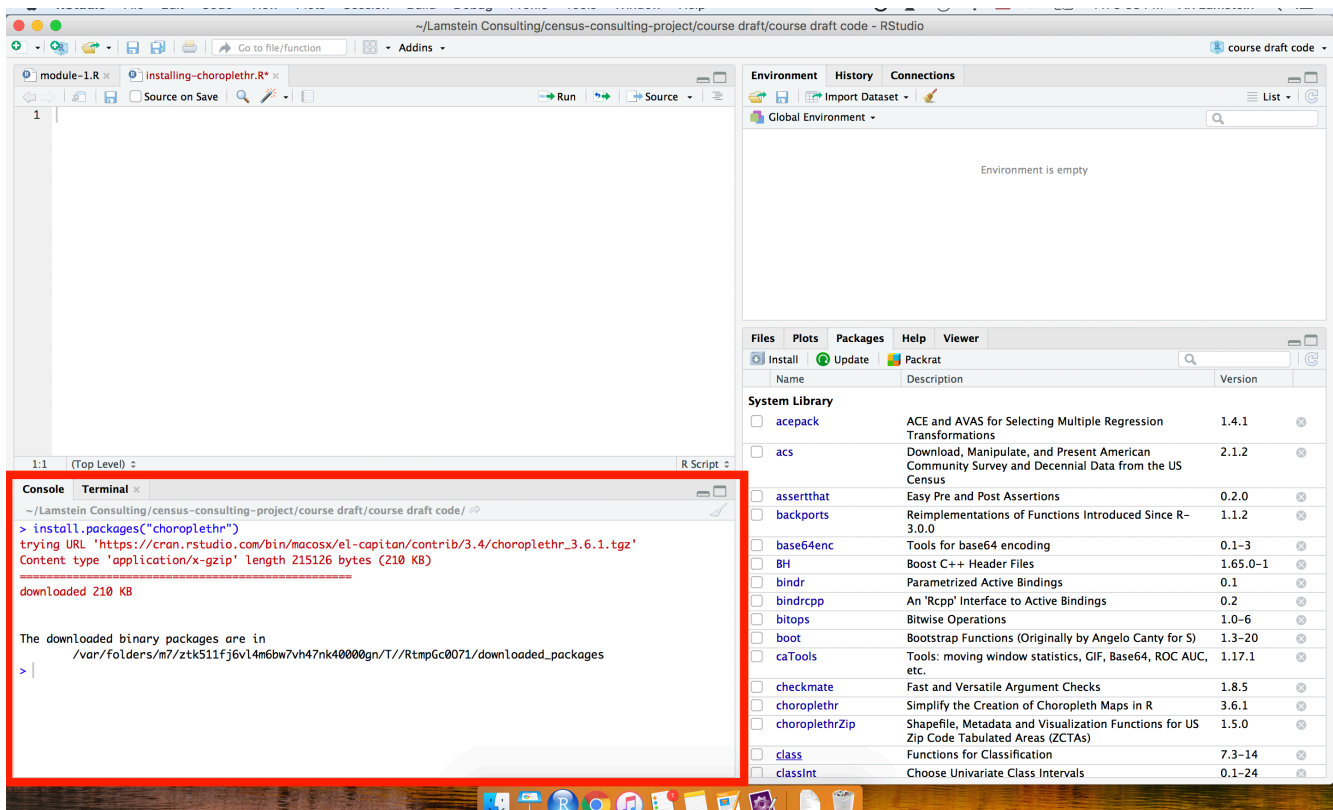
4. Verify the Package Installation

Sometimes package installation fails. To verify that the packages installed correctly, you should be able to find the packages **choroplethr** and **choroplethrMaps** listed in the "Packages" tab, which is highlighted below
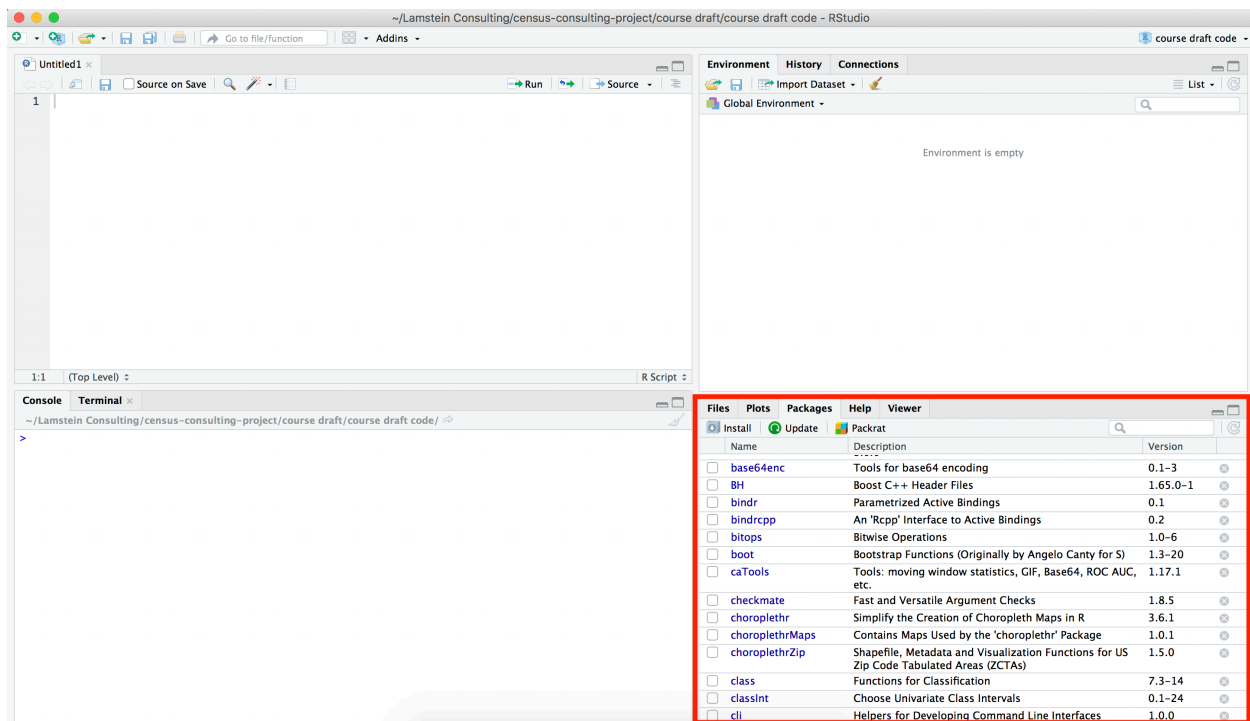
5. Test that everything works

The best way to test that everything works is by writing a short program. Type the following program, verbatim, into the **console** window:

```
library(choroplethr)
data(df_pop_state)
state_choropleth(df_pop_state)
```

This program should cause a map to appear in the **plots** window, which is highlighted below: