NONDETECTS AND DATA ANALYSIS
a Practical Stats Course

Instructions for installing R software on Windows OS

NOTE: PLEASE DO ALL 4 STEPS. Even if R is already installed, the packages below will need to be added if not already installed. Installing new versions of packages with an older version of R may cause problems, so <u>it is best that the current version of R and packages are freshly installed</u> even if an older version already exists on your computer.

1. **Install R.** Go to http://cran.r-project.org/ . In the top box titled "Download and Install R", select "Download R for Windows". Then select "base" and on the new page, click the upper link "Download R 4.x.x for Windows" to download the installer. Click "Run" to start the installation.

2. **Download and install R Studio**. Go to http://www.rstudio.org/download/ and select RStudio Desktop. The website will determine what type of OS you are running and recommend the appropriate platform version. Once downloaded, install the software like any other on your system. If it doesn't automatically place a shortcut/alias on your desktop, place one there.

3. **Install additional R packages**. R is modular – you install what you need. Double-click the RStudio shortcut to start RStudio. It will open and show four 'window panes'.
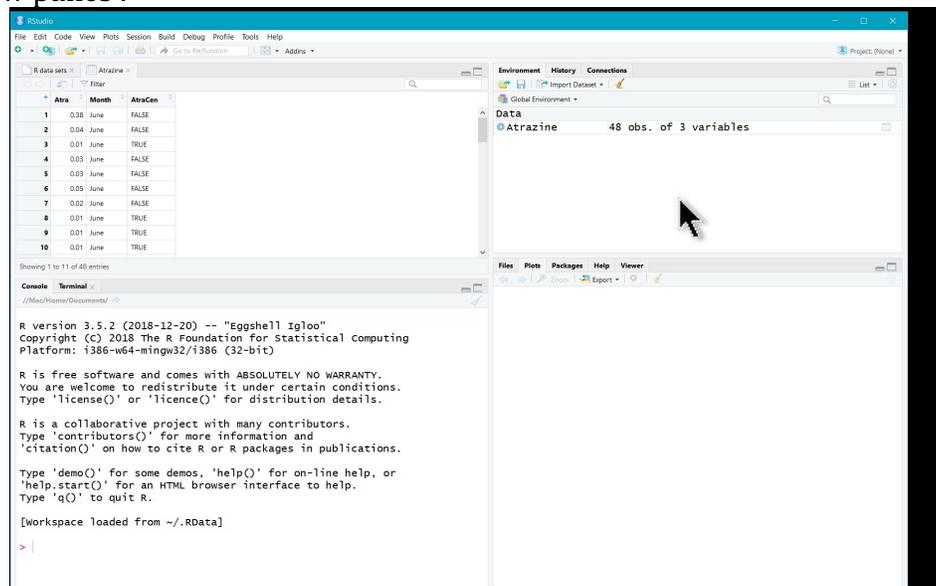
In the bottom right pane, click on the Packages tab. Click on "Install" under the tab row near the top of the window and enter the name of one of these packages.

bestglm	car	cenGAM	EnvStats
fitdistrplus	Kendall	mgcv,	multcomp
NADA	nlme	perm	rms
survminer	vegan	NADA2	
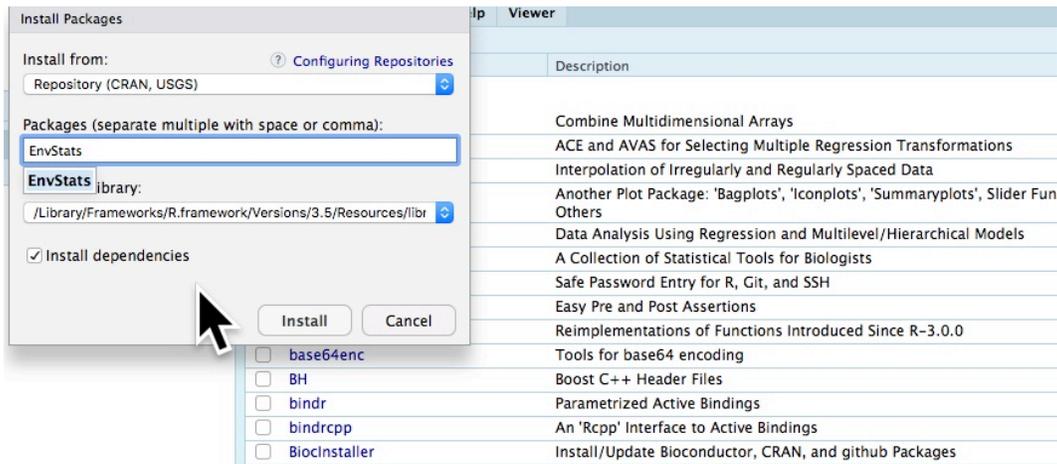
Make sure the "Install dependencies" checkbox is checked and click Install. Repeat for the other packages until each of the packages is installed. You may type more than 1 package at a time. Ignore any warnings in the lower-left console window that say that a package was previously installed. That's fine.

4. Check whether the installation is complete. You should see all of the packages in step 3 listed in the Packages tab. Click the checkboxes next to each of these packages. Those packages and the ones they depend on will then be loaded and ready to use.

Ignore any messages in the lower left RStudio window like "The following object is masked from ....". However, if a message in the lower left window states that a package was not found, such as

```
Warning in install.packages :
  dependency 'perm' is not available
```

install the missing package as per instructions in step 3 (it may not be one of the packages listed in step 3 above, but another package that these depend on. Install it because it is needed for these to run). Then start this step again until all of the packages in step 4 are checked without a missing package warning.

You're done, and the R and RStudio installations are set for the course.

Questions?   contact Dennis Helsel ask@practicalstats.com