

**MAST 467/667: Introduction to Polar Oceanography (Fall 2021)**  
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**Workshop/Homework-4:** Installing and Testing RStudio

**Data:** Ocean Melts Greenland (OMG) at <https://omg.jpl.nasa.gov/portal/>

**Introduction.** For our fourth workshop we will install the RStudio software on our individual Windows or Apple computers.

**Goal.** Install and configure complex community software packages.

**Assignment.** Install and configure RStudio and start a project that follows commands (and results) posted at

<http://muenchow.cms.udel.edu/classes/Arctic/Test.html>

The following steps may aid to accomplish this, but it probably is a nonlinear process, because different elements may require new internet downloads of additional packages, configurations, and tools not found on your computer:

1\_Visit the site

<https://www.rstudio.com/products/rstudio/download/>

to select a free installation for your computer. The Windows installation is about 160 MB while the Apple installation is about 200 MB.

2\_Start the RStudio application which will open a fully integrated windowing system; lets discuss the different options.

3\_Start a new R Markdown project OMG00 and hit the “Knit” button which will create an .html or .pdf file of your R-code. On my Apple there are three “chunks” that all start and end with ``` Code snippets that can be executed individually

```
```${r setup, include=FALSE}
  knitr::opts_chunk$set(echo = TRUE)
```
```

4\_Remove all additional “chunks” that for me are labeled `{r cars}` and `{r pressure}`

5\_Start a new “chunk” that includes the following libraries and loads them

```
```{r}
library(dplyr)
library(tidyr)
library(ggplot2)
library(leaflet)
```
```

6\_Analyze the error messages that you get and add for missing packages (say “leaflet” by adding before you load

```
install.packages(“leaflet”)
```

7\_Run your command line script nasa0.cmd (Windows) or nasa.csh (Apple) which may require elements of trial and error, but here is what worked for me on my Windows machine; note the VERY explicit directory path on my machine

```
```{r}
shell("c:/Users/Andreas/class/NASA/nasa0.cmd", translate=TRUE)
```
```

or on my Apple machine

```
```{csh}
explicit_path_to_files/nasa0.csh
```
```

8\_Load the data file previously created by the nasa0.cmd or nasa0.csh code

```
```{r}
Omg <- read.csv("c:/Users/Andreas/class/NASA/output.dat", sep=",")
```
```

9\_If you reach this far, then you are ready to now plot and play with your data that is referenced as “omg” in all subsequent R code chunks.