

Installing R, Rstudio, and Incorporating them into your Path

All these instructions only ever need to be performed once!

I am using Windows 7, so you may need to tweek it a bit for new versions of the Windows OS. If you need help please just e-mail me and I can help you guys out :)

Install R

1. Googling “R” is the easiest way to find the R website but if it doesn’t pop up, here is the URL:
<https://www.r-project.org>

2. Press download R link.



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The R Project for Statistical Computing

Getting Started

R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and Mac OS. To [download R](#), please choose your preferred CRAN mirror.

If you have questions about R like how to [download and install the software](#), or what the license terms are, please read our [answers to frequently asked questions](#) before you send an email.

News

- [R version 3.4.3 \(Kite-Eating Tree\)](#) has been released on 2017-11-30.
- [The R Journal Volume 9/1](#) is available.
- [R version 3.3.3 \(Another Canoe\)](#) has been released on Monday 2017-03-06.
- [The R Journal Volume 8/2](#) is available.
- [useR! 2017](#) (July 4 - 7 in Brussels) has opened registration and more at <http://user2017.brussels/>
- Tomas Kalibera has joined the R core team.
- The R Foundation welcomes five new ordinary members: Jennifer Bryan, Dianne Cook, Julie Josse, Tomas Kalibera, and Balasubramanian Narasimhan.
- [The R Journal Volume 8/1](#) is available.
- The [useR! 2017](#) conference will take place in Brussels, July 4 - 7, 2017.
- [R version 3.2.5 \(Very, Very Secure Dishes\)](#) has been released on 2016-04-14. This is a rebranding of the quick-fix release 3.2.4-revised.
- [Notice XQuartz users \(Mac OS X\)](#) A security issue has been detected with the Sparkle update mechanism used by XQuartz. Avoid updating over insecure channels.
- The [R Logo](#) is available for download in high-resolution PNG or SVG formats.
- [useR! 2016](#), has taken place at Stanford University, CA, USA, June 27 - June 30, 2016.
- [The R Journal Volume 7/2](#) is available.
- [R version 3.2.3 \(Wooden Christmas-Tree\)](#) has been released on 2015-12-10.

3. Select a CRAN mirror. I usually pick a https located in the USA. I am going to use Berkeley's mirror:

UK	http://cran.pau.edu.tr/ https://cran.ncc.metu.edu.tr/ http://cran.ncc.metu.edu.tr/	Pamukkale University, Denizli Middle East Technical University Northern Cyprus Campus, Mersin Middle East Technical University Northern Cyprus Campus, Mersin
USA	https://www.stats.bris.ac.uk/R/ http://www.stats.bris.ac.uk/R/ https://mirrors.ebi.ac.uk/CRAN http://mirrors.ebi.ac.uk/CRAN/ https://cran.ma.imperial.ac.uk/ http://cran.ma.imperial.ac.uk/ https://cran.cnr.berkeley.edu/ https://cran.r-project.org/bin/windows/base/ http://cran.stat.ucla.edu/ https://mirror.las.iastate.edu/CRAN/ http://mirror.las.iastate.edu/CRAN/ https://ftp.usgs.iu.edu/CRAN/ http://ftp.usgs.iu.edu/CRAN/ https://rweb.crmda.ku.edu/cran/ http://rweb.crmda.ku.edu/cran/ https://cran.mtu.edu/ http://cran.mtu.edu/ http://cran.wustl.edu/ http://archive.linux.duke.edu/cran/ http://cran.case.edu/ https://ftp.osuosl.org/pub/cran/ http://ftp.rcentral.org/mwh/cran/	University of Bristol University of Bristol EMBL-EBI (European Bioinformatics Institute) EMBL-EBI (European Bioinformatics Institute) Imperial College London Imperial College London University of California, Berkeley, CA University of California, Berkeley, CA University of California, Los Angeles, CA Iowa State University, Ames, IA Iowa State University, Ames, IA Indiana University Indiana University University of Kansas, Lawrence, KS University of Kansas, Lawrence, KS Michigan Technological University, Houghton, MI Michigan Technological University, Houghton, MI Washington University, St. Louis, MO Duke University, Durham, NC Case Western Reserve University, Cleveland, OH Oregon State University Oregon State University

4. Select your OS. In this case, I am going to select Windows:

The Comprehensive R Archive Network

Download and Install R

Precompiled binary distributions of the base system and contributed packages, **Windows** and **Mac** users most likely want one of these versions of R:

- [Download R for Linux](#)
- [Download R for \(Mac\) OS X](#)
- [Download R for Windows](#)

R is part of many [Linux distributions](#), you should check with your Linux package management system in addition to the link above.

Source Code for all Platforms

Windows and Mac users most likely want to download the precompiled binaries listed in the upper box, not the source code. The sources have to be compiled before you can use them. If you do not know what this means, you probably do not want to do it!

- The latest release (2017-11-30, Kite-Eating Tree) [R-3.4.3.tar.gz](#), read [what's new](#) in the latest version.

5. Next, install the R base directory:

R for Windows

Subdirectories:

- [base](#) Binaries for base distribution. This is what you want to [install R for the first time](#).
- [contrib](#) Binaries of contributed CRAN packages (for R >= 2.13 x; managed by Uwe Ligges). There is also information on [third party software](#) available for CRAN Windows services and corresponding environment and make variables.
- [old_contrib](#) Binaries of contributed CRAN packages for outdated versions of R (for R < 2.13 x; managed by Uwe Ligges).
- [Rtools](#) Tools to build R and R packages. This is what you want to build your own packages on Windows, or to build R itself.

Please do not submit binaries to CRAN. Package developers might want to contact Uwe Ligges directly in case of questions / suggestions related to Windows binaries.

You may also want to read the [R_FAQ](#) and [R for Windows FAQ](#).

Note: CRAN does some checks on these binaries for viruses, but cannot give guarantees. Use the normal precautions with downloaded executables.

6. Click on “Download R 3.4.2 for Windows”. It shouldn’t matter if you have a 32 or 64-bit system since R is the same for both systems.



If you want to double-check that the package you have downloaded matches the package distributed by CRAN, you can compare the [md5sum](#) of the .exe to the [fingerprint](#) on the for windows: both [graphical](#) and [command line versions](#) are available.

Frequently asked questions

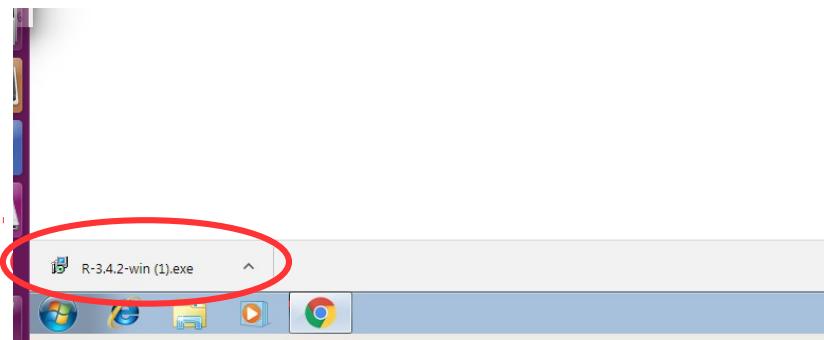
- [Does R run under my version of Windows?](#)
- [How do I update packages in my previous version of R?](#)
- [Should I run 32-bit or 64-bit R?](#)

Please see the [R FAQ](#) for general information about R and the [R Windows FAQ](#) for Windows-specific information.

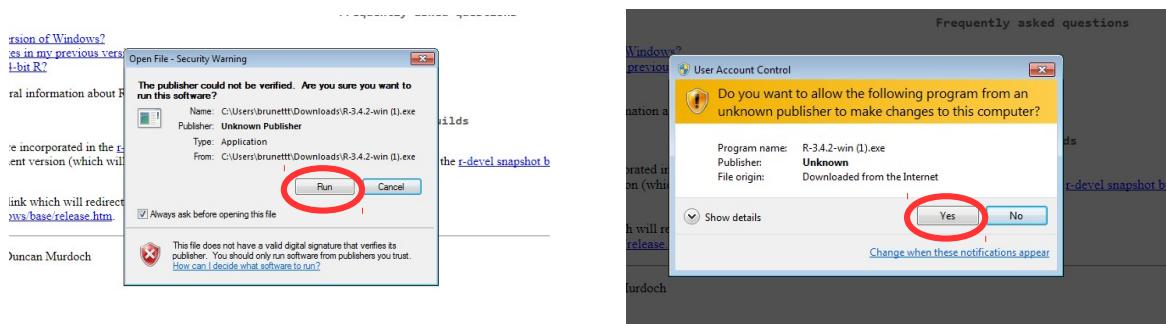
Other builds

- Patches to this release are incorporated in the [r-patched snapshot build](#).
- A build of the development version (which will eventually become the next major release of R) is available in the [r-devel snapshot build](#).
- [Previous releases](#)

7. Once it finishes downloading press the .exe download. For windows 7 on Chrome, the download shows up at the bottom left corner of the web browser. On some browsers it may be located in the top right corner of the page.



8. This should launch 2 window/security warnings. Press “Run” and “Yes”.



9. This will launch the R installation GUI. Do not change anything from what is selected or written in from the Default. Keep pressing “Next” until you press “Finish” on the last page of the installation GUI.

• [Source](#)-Check that the package you have downloaded matches the package distributed by CRAN, you can compare the [MD5 sum](#) or both [graphical](#) and [command line versions](#) are available.

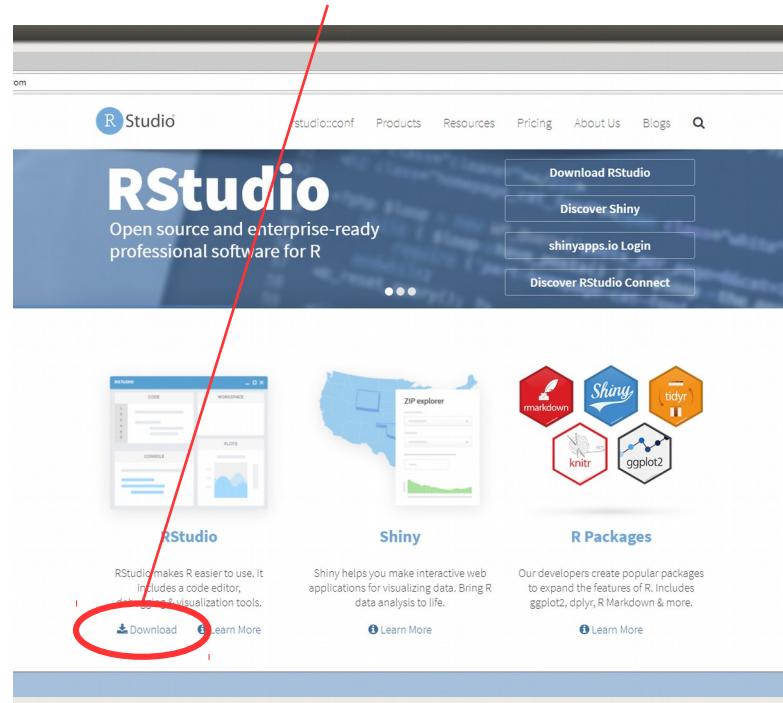


Install Rstudio (You must successfully install R first!)

1. Googling “Rstudio” is the easiest way to find the Rstudio website but if it doesn’t pop up, here is the URL:

<https://www.rstudio.com>

Then press the Download icon under the Rstudio image:



2. Download the free Rstudio Desktop Open Source License. Scroll down to the very bottom of the webpage and select the Windows Vista/7/8/10 under Installers for Supported Platforms. Do not download the Zip/Tarballs version or you will have to build and compile Rstudio manually!

Installers for Supported Platforms

	Size	Date	MD5
RStudio 1.1.383 - Windows Vista/7/8/10	85.9 MB	2017-10-09	450755b853dcdba60be641552ef3c0f
RStudio 1.1.383 - Ubuntu 12.04-15.10/Debian 8 (32-bit)	74.5 MB	2017-10-09	e121f9abc0b17ddcc85d71a5988e3
RStudio 1.1.383 - Ubuntu 12.04-15.10/Debian 8 (64-bit)	89.2 MB	2017-10-09	9588bce746f2a5e8da299c4a8b35d4fa
RStudio 1.1.383 - Ubuntu 12.04-15.10/Debian 8 (64-bit)	97.4 MB	2017-10-09	3eede231b7206a7eebbf090f4991358f
RStudio 1.1.383 - Ubuntu 16.04+/Debian 9+ (64-bit)	65 MB	2017-10-09	fcccc7cbf773c3464ea6ccb91fc2ec28
RStudio 1.1.383 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	88.1 MB	2017-10-09	36b4d00c6ec5c6a39194287b468ceb44
RStudio 1.1.383 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	90.6 MB	2017-10-09	aed00e2504ec9c5862343c24fe3cd61d

Zip/Tarballs

	Size	Date	MD5
Zip/tar archives			
RStudio 1.1.383 - Windows Vista/7/8/10	122.9 MB	2017-10-09	abfc9ac40cbc59fc141ede7ef33000be
RStudio 1.1.383 - Ubuntu 12.04-15.10/Debian 8 (32-bit)	90 MB	2017-10-09	b4277c6422a51d05376f6ab3c0f6adc8
RStudio 1.1.383 - Ubuntu 12.04-15.10/Debian 8 (64-bit)	98.3 MB	2017-10-09	370fe6b565b8371f0adff943cef56ba44
RStudio 1.1.383 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	88.8 MB	2017-10-09	4e81a3242bc3e672061c74e388ec902b
RStudio 1.1.383 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	91.4 MB	2017-10-09	a1ce682f868fd7cfcb7b4a6011d17e43d

Source Code

A tarball containing source code for RStudio v1.1.383 can be downloaded from here

250 Northern Ave, Boston, MA 02210
844-448-1212
info@rstudio.com

R Studio

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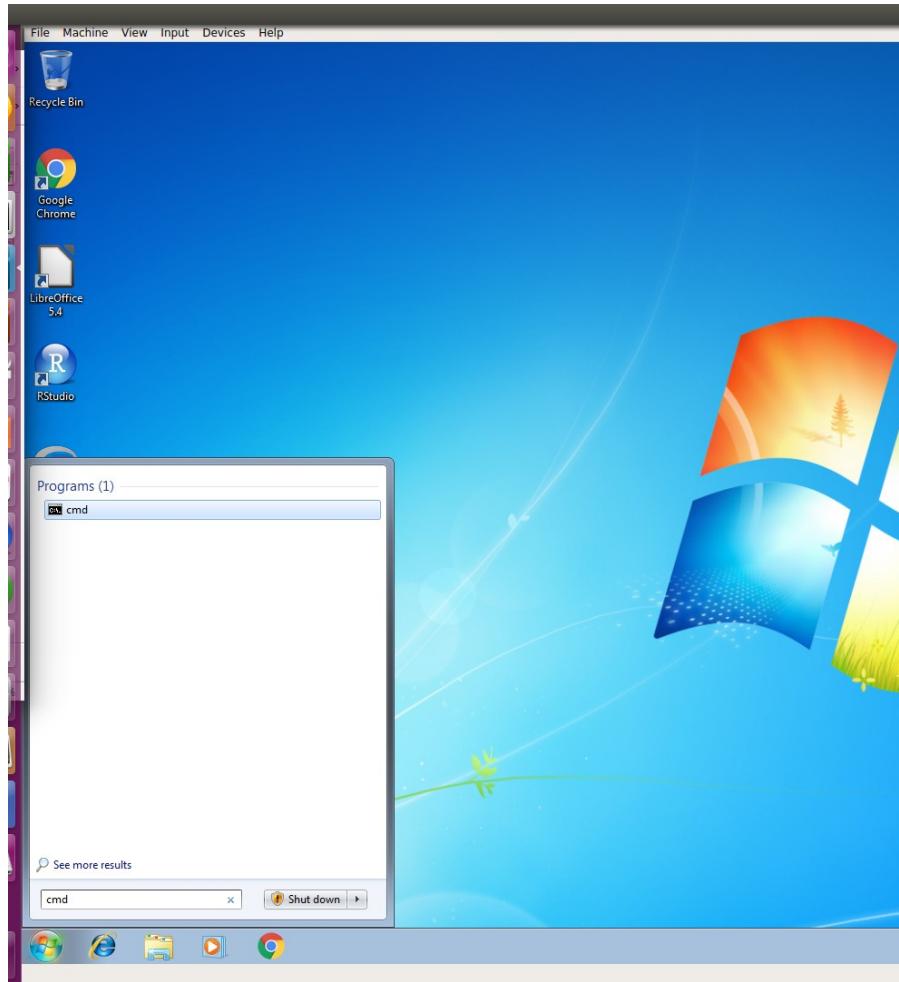
Congratulations to @AtomE and @code, who are joining RStudio Server Pro in the rare collaborative, real-ti...
twitter.com/i/web/status/9..
2 weeks ago

3. Now follow the same installation instructions from steps 7-9 from the R installation instructions listed above.

4. R and Rstudio should now both be installed.

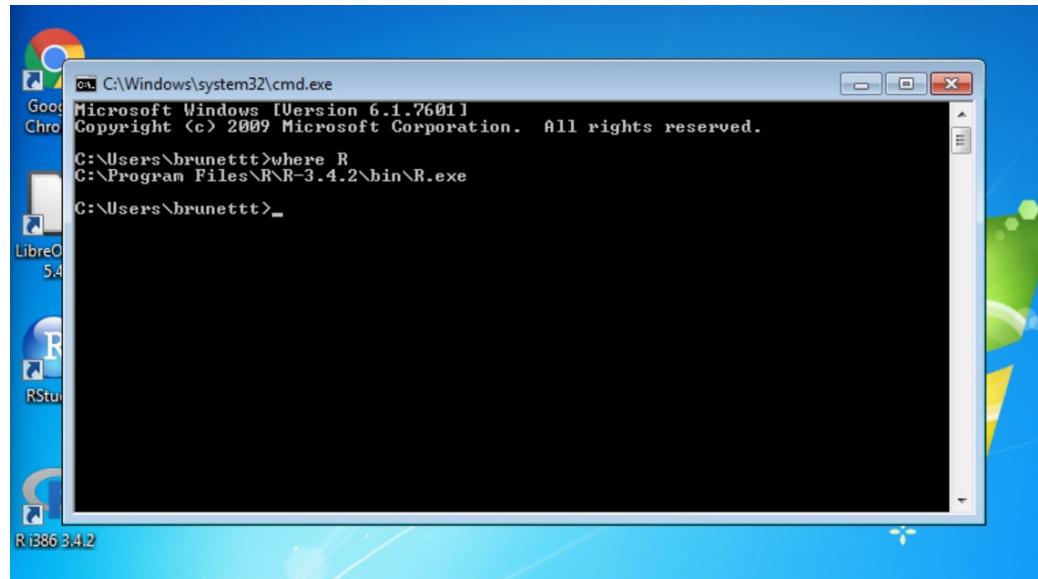
Put R and Rstudio Executables in your path

1. Go back to your Windows Desktop and in the start menu type in “cmd” in your search.



2. Press the black cmd program from the start menu to open a terminal with a command prompt.

3. Next type in: where R and press enter in the command prompt:



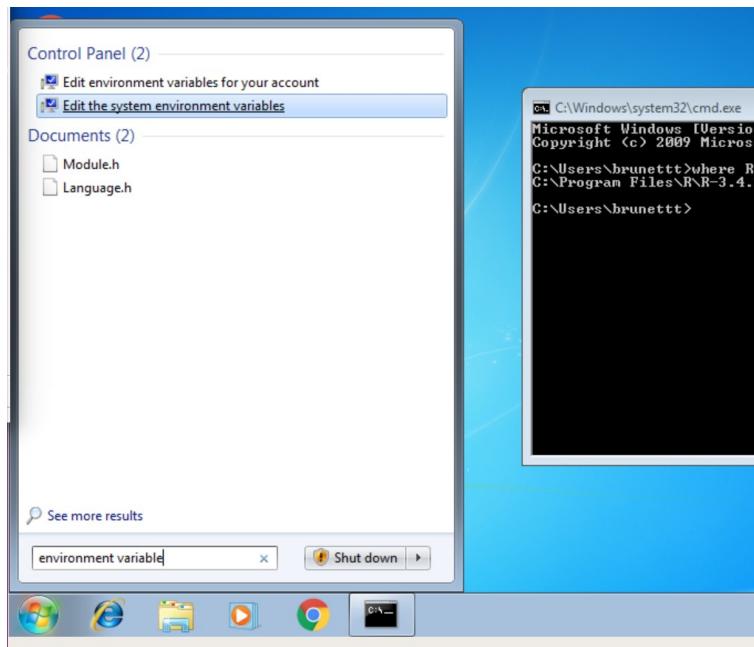
4. You will see the full path to where Windows automatically installed R. For me it is:

C:\Program Files\R\R-3.4.2\bin\R.exe

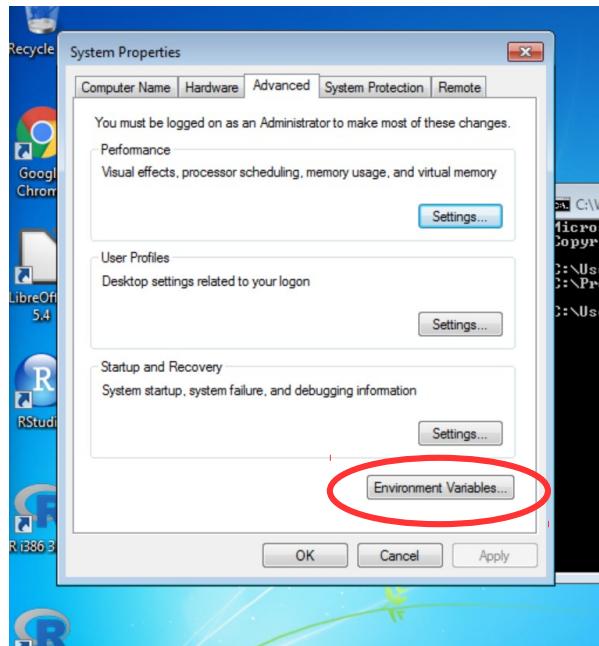
5. Copy this path exactly up through the last backslash but do not include the R.exe part! So everything highlighted in yellow:

C:\Program Files\R\R-3.4.2\bin\R.exe

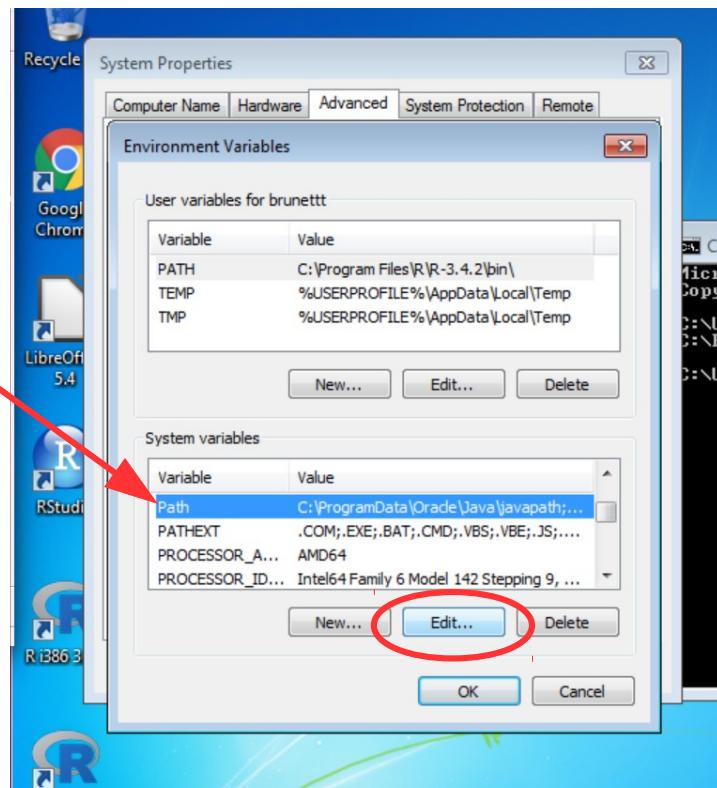
6. Now you are going to paste this path into your Windows environmental variables path. To get to the environmental variables path, go to the start menu and search “environment variable”. You should see something similar to the following and select “Edit the system environment variables”:



7. This should open a page that looks similar to the following image below. Press “Environmental Variables...”

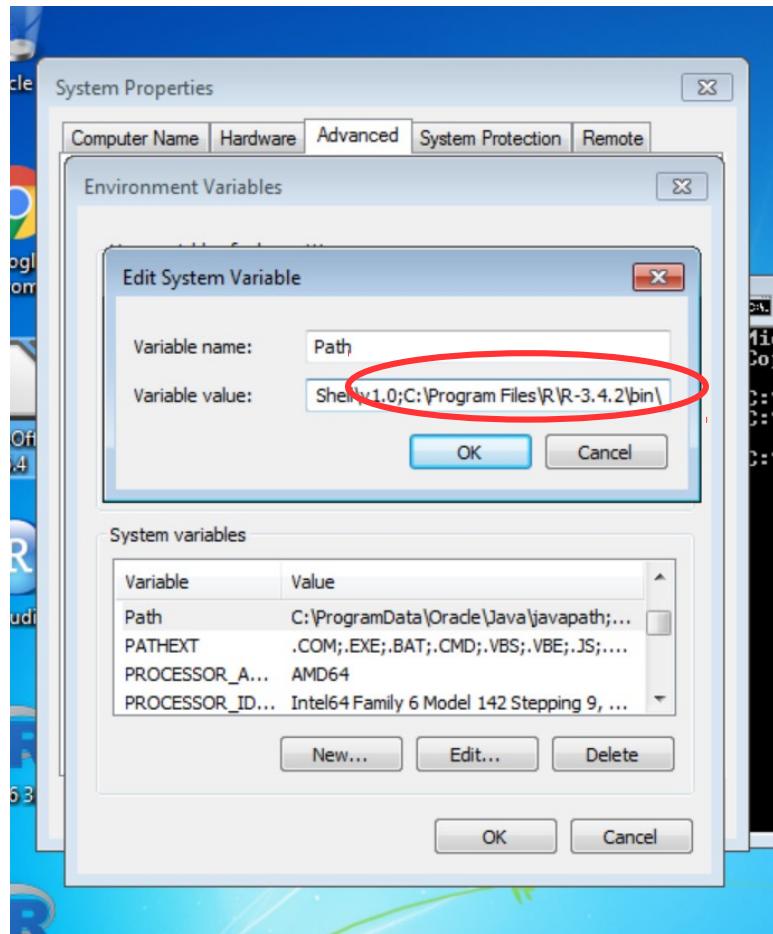


8. This will open a new window that looks similar to the following image below. Under System Variables highlight “Path” and select “Edit...”



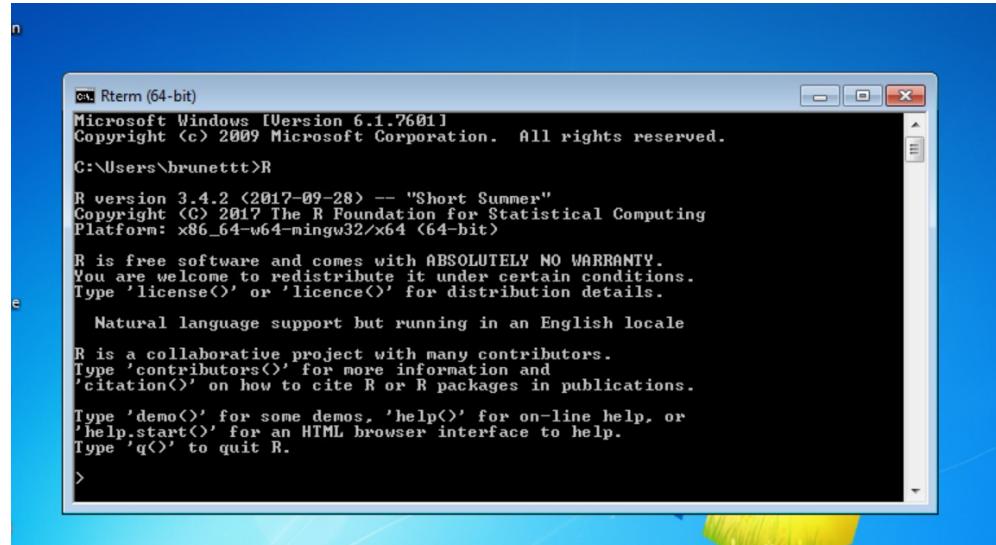
9. It will open a window, “Edit System Variable”. Scroll to the very end of the Variable value. Be careful, do not modify to erase anything that is already existing in the Variable value field. You just want to append to the end of it! If you modify something, just cancel out and go back in to the Edit button again.

After you reach the end of the variable value field, place a semicolon (;) at the end with NO SPACE! Then immediately following the semicolon (no space following it!) paste the file path you copied from step 5. It should look similar to the image below. Then press “OK”.



10. After pressing “OK” press “OK” on again on the previous window to save changes. Continue to press “OK” until all the Windows disappear and you have exited the Environmental Variables windows.

11. Exit out of the black terminal/command prompt screen. Now open a new terminal by repeating step 1 and 2. Type in “R” (no quotes) at the command prompt. You should see the following listed in the terminal output:



```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\brunnett>R

R version 3.4.2 (2017-09-28) -- "Short Summer"
Copyright (C) 2017 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

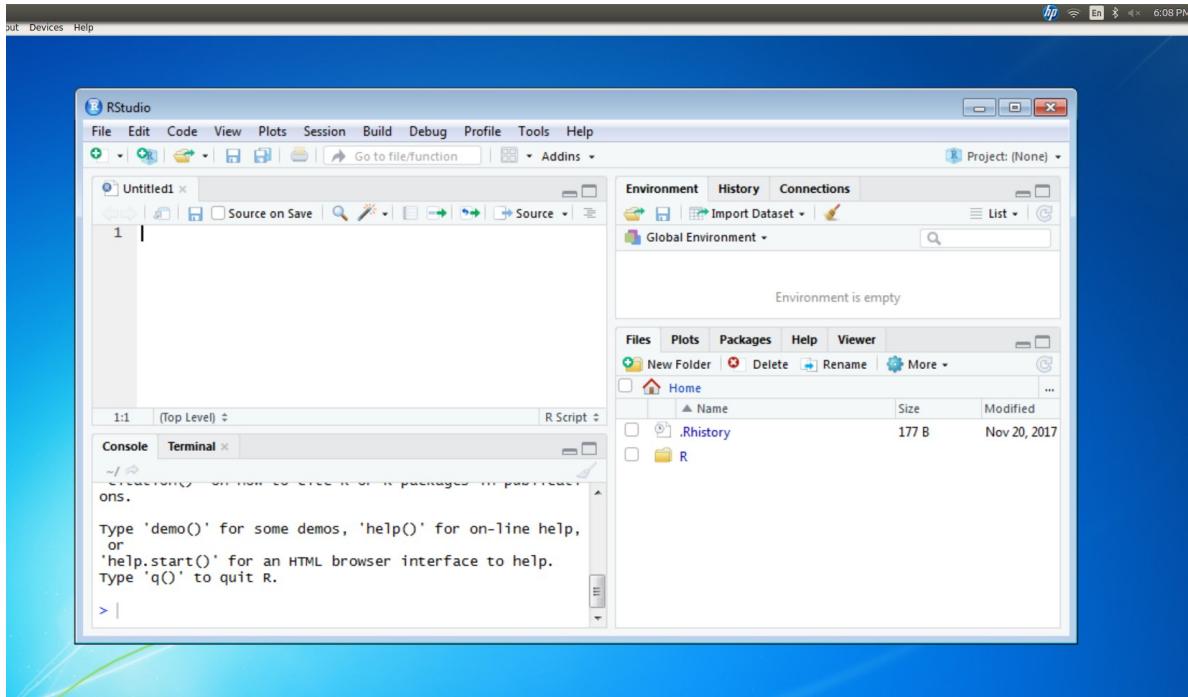
Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

>
```

If you see this page, you have successfully installed R system-wide! You should never have to do this again unless you get a new computer or wipe this one clean. To exit, you can press the “x” in the upper right corner or type q() followed by enter and it will exit R for you.

Installing R libraries for scripts

1. Open/Start Rstudio either from the Desktop Icon or from the Start menu. It should open a GUI like the image below:



2. In the box on the bottom labeled “Console” you are going to type in the following and then press enter: (do not copy and paste the line into the R console because the characters do not always translate properly in R)

```
install.packages("XLConnect", dependencies=T)
```

You should see a lot of red writing indicating it is installing it. Once this is done. Continue to repeat step 2 for the next 3 install.packages() lines:

```
install.packages("readxl", dependencies=T)
```

```
install.packages("gtools", dependencies=T)
```

```
install.packages("stringr", dependencies=T)
```

3. You should now have all the packages installed that are required for the scripts! You can close the Rstudio GUI.

Congratulations! You are finished!