

# Introduction to R, RStudio and Deducer

SPPH567 Tutorial 1



You are welcome to use any other statistical software of your choice.

But support from instructor and TA will likely be limited – we can't possibly know all statistical software...

The statistical tool we cover in tutorials is composed of three parts:



**R** is the actual software environment that all the data analysis is operated.



**RStudio** is an integrated development environment (IDE) for R.



**Deducer** is a Graphical User Interface (GUI) for R.

They have different functions and features:



Fundamental but non-intuitive.



Studio<sup>®</sup> Makes programming easier.



Replaces programming with mouse clicks.

Check out the links for more information:



<https://www.r-project.org/>



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



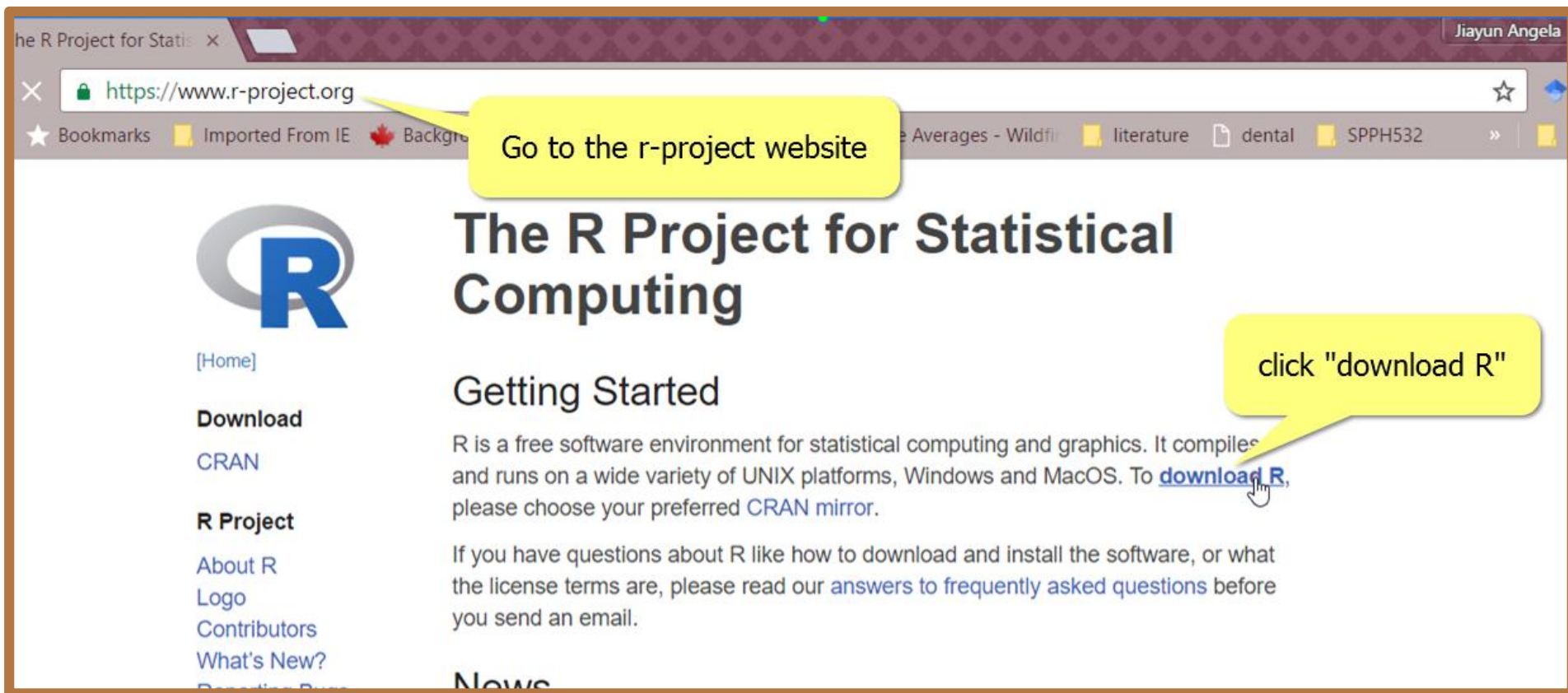
<http://www.deducer.org/pmwiki/pmwiki.php?n=Main.DeducerManual?from=Main.HomePage>

Now we will go through  
downloading and installing  
R, RStudio and Deducer.





# Download and Install R -- 1



The screenshot shows a web browser window with the URL <https://www.r-project.org>. The page title is "The R Project for Statistical Computing". The main heading is "Getting Started". The text below the heading reads: "R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To [download R](#), please choose your preferred [CRAN mirror](#)." A yellow callout bubble points to the "download R" link with the text "click 'download R'". Another yellow callout bubble points to the address bar with the text "Go to the r-project website". The browser's address bar also shows "https://www.r-project.org". The browser's name is "The R Project for Statistics". The browser's user is "Jiayun Angela". The browser's bookmarks bar shows "Bookmarks", "Imported From IE", "Background", "Averages - Wildfi", "literature", "dental", and "SPPH532". The browser's sidebar shows "Download", "CRAN", "R Project", "About R", "Logo", "Contributors", and "What's New?".

Go to the r-project website

click "download R"

# Download and Install R -- 2

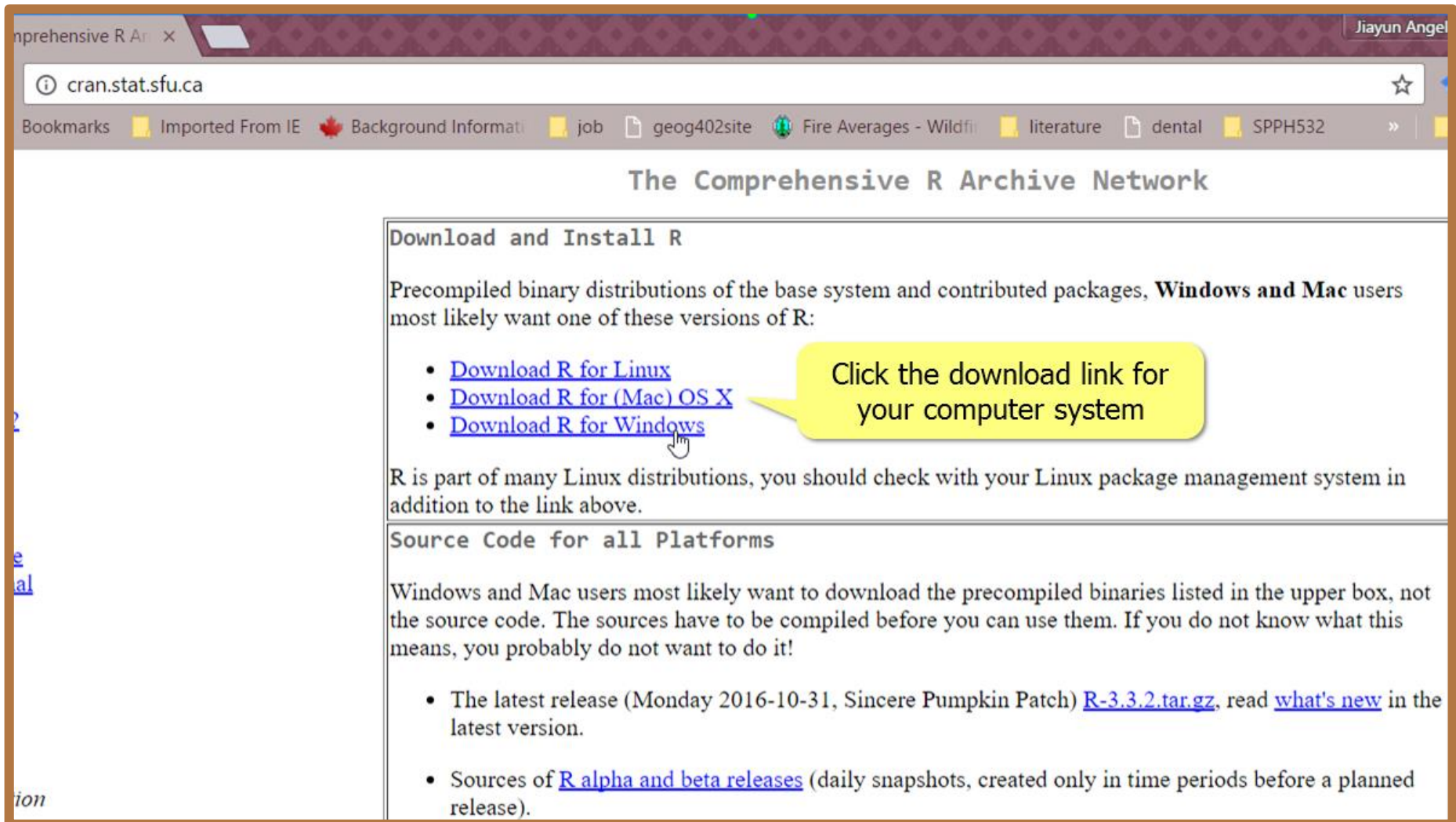


The screenshot shows a web browser window titled "R CRAN - Mirrors" with the URL <https://cran.r-project.org/mirrors.html>. The browser's address bar and tabs are visible. The page content is organized by country, with a yellow callout bubble highlighting the Simon Fraser University (SFU) mirror site. The callout bubble contains the text "Select the SFU mirror site".

Country	Mirror URL	Organization
Bulgaria	<a href="http://brieger.esalq.usp.br/CRAN/">http://brieger.esalq.usp.br/CRAN/</a>	University of Sao Paulo, Piracicaba
Bulgaria	<a href="https://ftp.uni-sofia.bg/">https://ftp.uni-sofia.bg/</a>	Sofia University
	<a href="http://ftp.uni-sofia.bg/">http://ftp.uni-sofia.bg/</a>	Sofia University
Canada	<a href="http://cran.stat.sfu.ca/">http://cran.stat.sfu.ca/</a>	Simon Fraser University, Burnaby
	<a href="https://muug.ca/mirror/cran/">https://muug.ca/mirror/cran/</a>	Manitoba Unix User Group
	<a href="http://muug.ca/mirror/cran/">http://muug.ca/mirror/cran/</a>	Manitoba Unix User Group
	<a href="http://mirror.its.dal.ca/cran/">http://mirror.its.dal.ca/cran/</a>	Dalhousie University, Halifax
	<a href="http://cran.utstat.utoronto.ca/">http://cran.utstat.utoronto.ca/</a>	University of Toronto
Chile	<a href="https://dirichlet.mat.puc.cl/">https://dirichlet.mat.puc.cl/</a>	Pontificia Universidad Catolica de Chile, Santiago
	<a href="http://dirichlet.mat.puc.cl/">http://dirichlet.mat.puc.cl/</a>	Pontificia Universidad Catolica de Chile, Santiago
	<a href="https://cran.dcc.uchile.cl/">https://cran.dcc.uchile.cl/</a>	Departamento de Ciencias de la Computación, Universidad de Chile
China	<a href="https://mirrors.tuna.tsinghua.edu.cn/CRAN/">https://mirrors.tuna.tsinghua.edu.cn/CRAN/</a>	TUNA Team, Tsinghua University



# Download and Install R -- 3



comprehensive R Ar x

cran.stat.sfu.ca

Bookmarks Imported From IE Background Informat job geog402site Fire Averages - Wildfi literature dental SPPH532

## 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](#)

Click the download link for your computer system

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

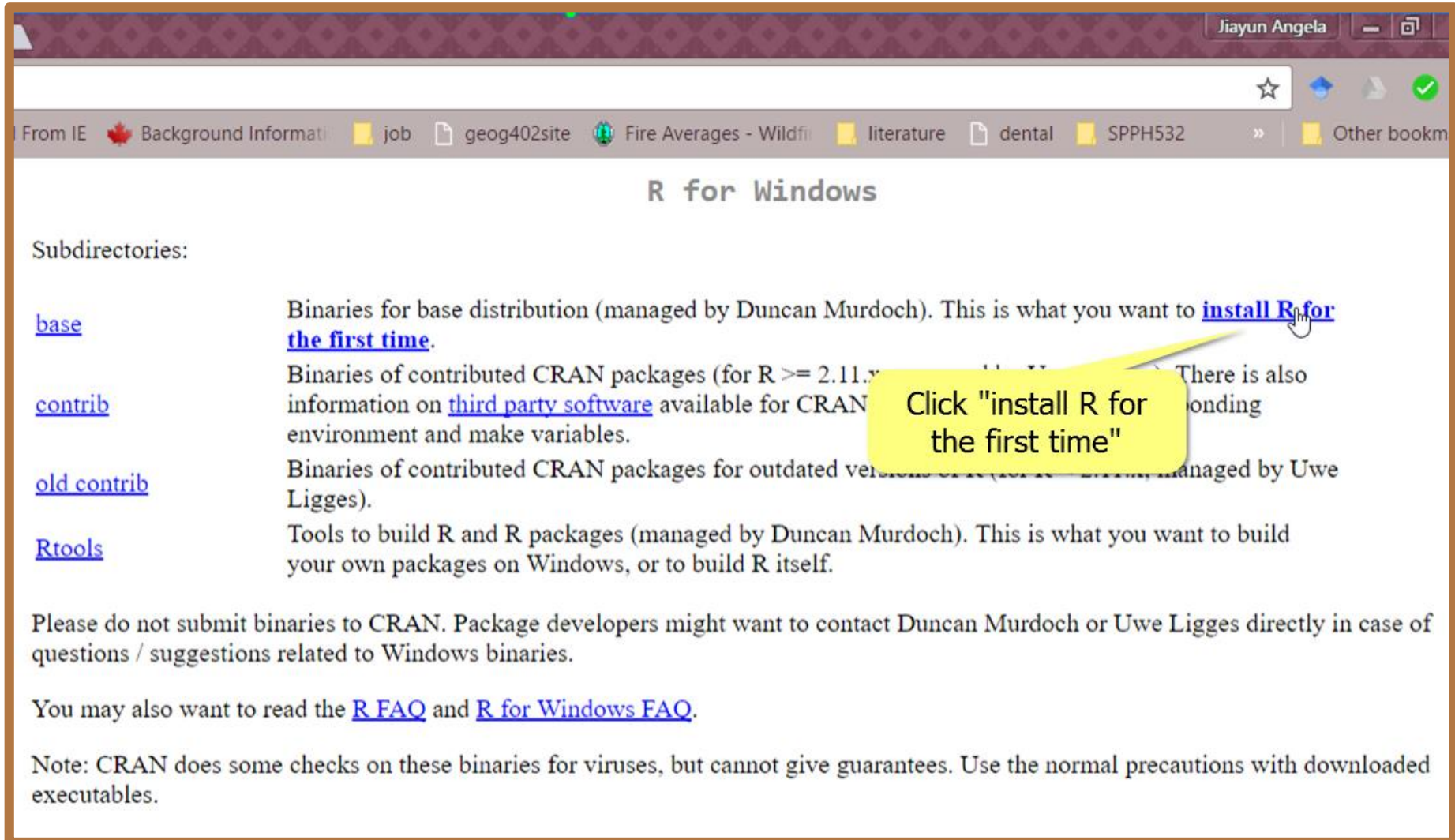
### Source Code for all Platforms

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 (Monday 2016-10-31, Sincere Pumpkin Patch) [R-3.3.2.tar.gz](#), read [what's new](#) in the latest version.
- Sources of [R alpha and beta releases](#) (daily snapshots, created only in time periods before a planned release).

ion

# Download and Install R -- 4



The screenshot shows a web browser window with the title "R for Windows". The browser's address bar and bookmark bar are visible. The main content area lists subdirectories: "base", "contrib", "old contrib", and "Rtools". A yellow callout box with a pointer highlights the text "install R for the first time" in the "base" subdirectory description.

Subdirectories:

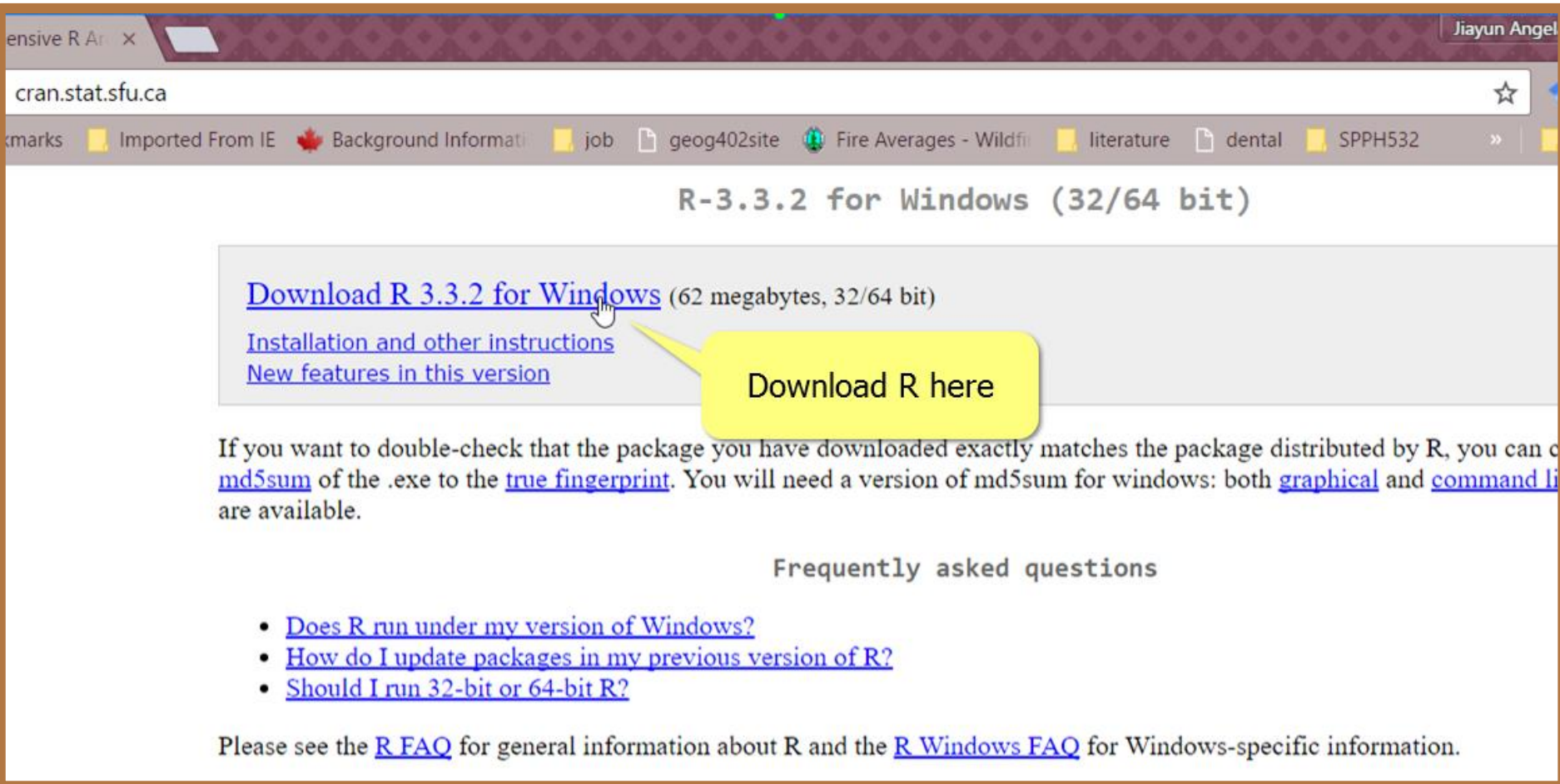
- [base](#) Binaries for base distribution (managed by Duncan Murdoch). This is what you want to [install R for the first time](#).
- [contrib](#) Binaries of contributed CRAN packages (for R >= 2.11.x). There is also information on [third party software](#) available for CRAN environment and make variables.
- [old contrib](#) Binaries of contributed CRAN packages for outdated versions (managed by Uwe Ligges).
- [Rtools](#) Tools to build R and R packages (managed by Duncan Murdoch). 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 Duncan Murdoch or 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.

# Download and Install R -- 5



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R-3.3.2 for Windows (32/64 bit)

[Download R 3.3.2 for Windows](#) (62 megabytes, 32/64 bit)

[Installation and other instructions](#)

[New features in this version](#)

Download R here

If you want to double-check that the package you have downloaded exactly matches the package distributed by R, you can check the [md5sum](#) of the .exe to the [true fingerprint](#). You will need a version of md5sum for windows: both [graphical](#) and [command line](#) 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.

Then install R, accepting all defaults.

# Download and Install Rstudio -- 1

The screenshot shows the RStudio website's download page. A yellow callout bubble points to the URL in the browser's address bar, and another points to the first row of the installer table. The page includes the RStudio logo, navigation links, and a table of installers for various operating systems.

**Go to Rstudio Download page**

**Select the installer for your system**

**RStudio Desktop 1.0.136 — Release Notes**

RStudio requires R 2.11.1+. If you don't already have R, download it [here](#).

**Installers for Supported Platforms**

Installers	Size	Date	MD5
<a href="#">RStudio 1.0.136 - Windows Vista/7/8/10</a>	81.9 MB	2016-12-21	93b3f307f567c33f7a4db4c114099b3e
<a href="#">RStudio 1.0.136 - Mac OS X 10.6+ (64-bit)</a>	71.2 MB	2016-12-21	12d6d6ade0203a2fce6f6fe3dea65c1ae
<a href="#">RStudio 1.0.136 - Ubuntu 12.04+/Debian 8+ (32-bit)</a>	85.5 MB	2016-12-21	0a20fb89d8aaeb39b329a640ddadd2c5
<a href="#">RStudio 1.0.136 - Ubuntu 12.04+/Debian 8+ (64-bit)</a>	92.1 MB	2016-12-21	2a73b88a12a9fbaf96251cecf8b41340
<a href="#">RStudio 1.0.136 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)</a>	84.7 MB	2016-12-21	fa6179a7855bff0f939a34c169da45fd
<a href="#">RStudio 1.0.136 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)</a>	85.7 MB	2016-12-21	2b3a148ded380b704e58496befb55545



# Download and Install Rstudio -- 2

**RStudio Desktop 1.0.136**

RStudio requires R 2.11

### Installers for Support

Installers

- RStudio 1.0.136 - Windows Vista
- RStudio 1.0.136 - Mac OS X 10.6+
- RStudio 1.0.136 - Ubuntu 12.04+
- RStudio 1.0.136 - Ubuntu 12.04+
- RStudio 1.0.136 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)
- RStudio 1.0.136 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)

### Zip/Tarballs

Zip/tar archives

RStudio 1.0.136 - Windows Vista/7/8/10	117.5 MB	2016-12-21	f415939bf5012c0ab127c7c7c9600be
RStudio 1.0.136 - Ubuntu 12.04+/Debian 8+ (32-bit)	86.2 MB	2016-12-21	fca75f953dd425694b7fd4335bd29165
RStudio 1.0.136 - Ubuntu 12.04+/Debian 8+ (64-bit)	93.2 MB	2016-12-21	7cf0092653aa44fc76325a8f1325fb1f
RStudio 1.0.136 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	85.4 MB	2016-12-21	30c89299d30ec03b38098e51e9bf49b8
RStudio 1.0.136 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	86.6 MB	2016-12-21	ea2a262f650e92f568f48edc1c093902

**RStudio Setup**

## Welcome to the RStudio Setup Wizard

This wizard will guide you through the installation of RStudio.

It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.

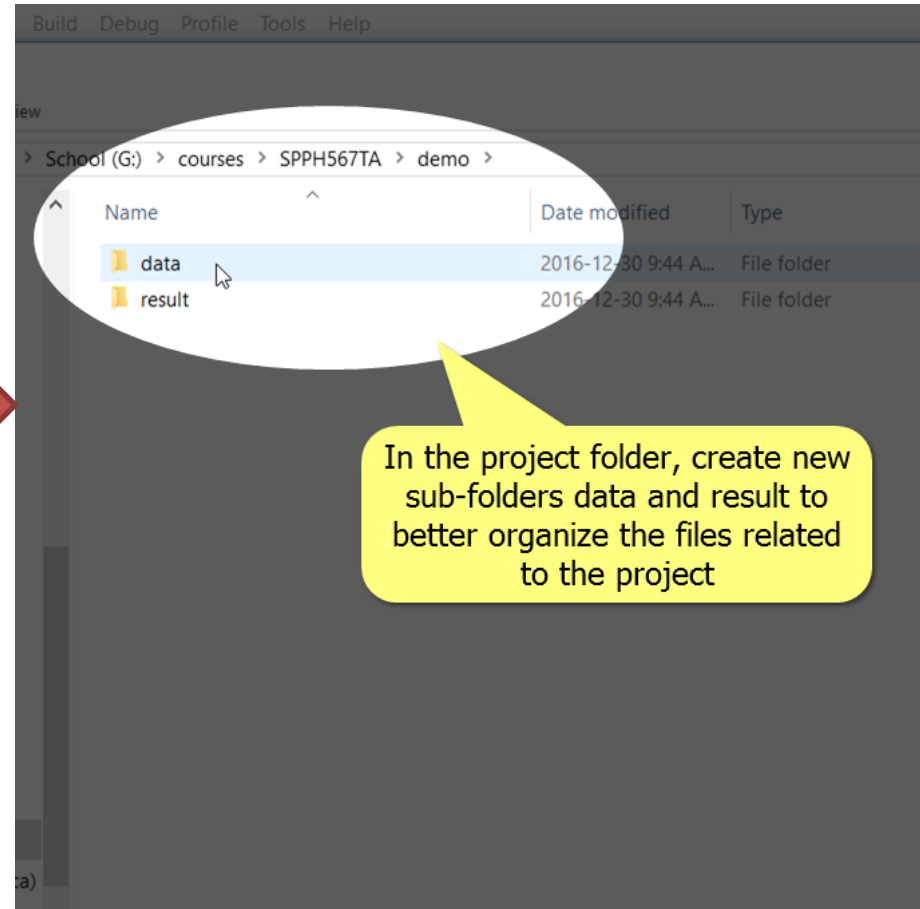
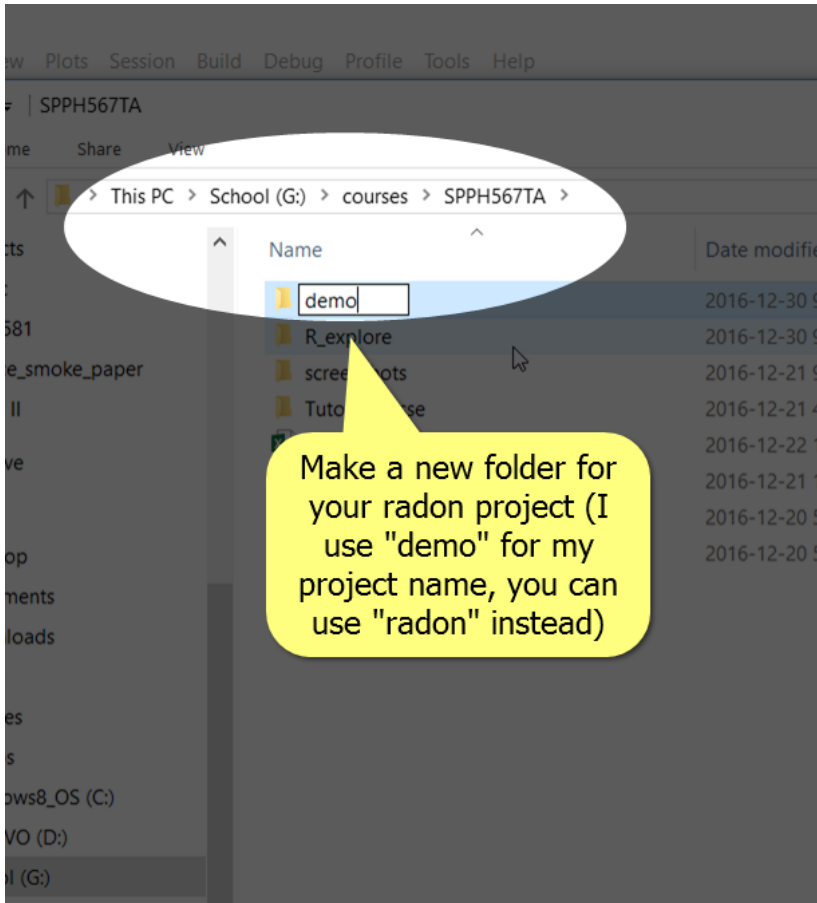
Click Next to continue.

**Next >** **Cancel**

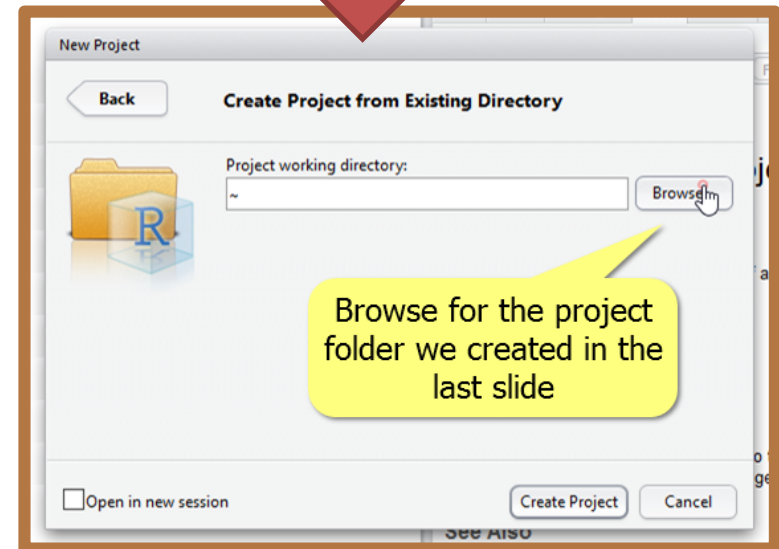
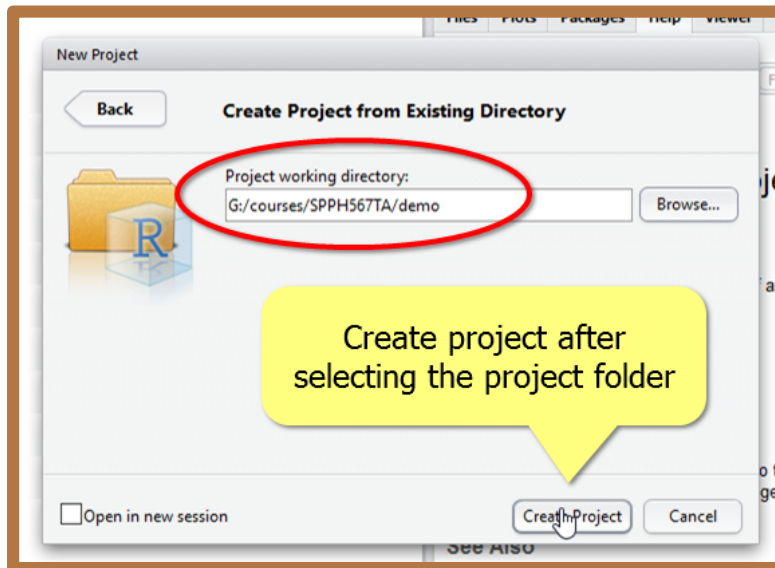
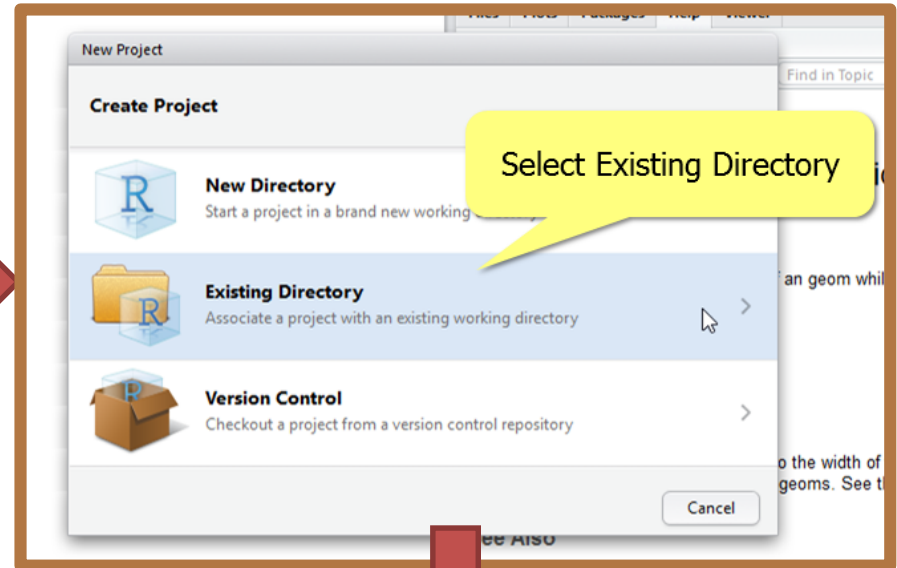
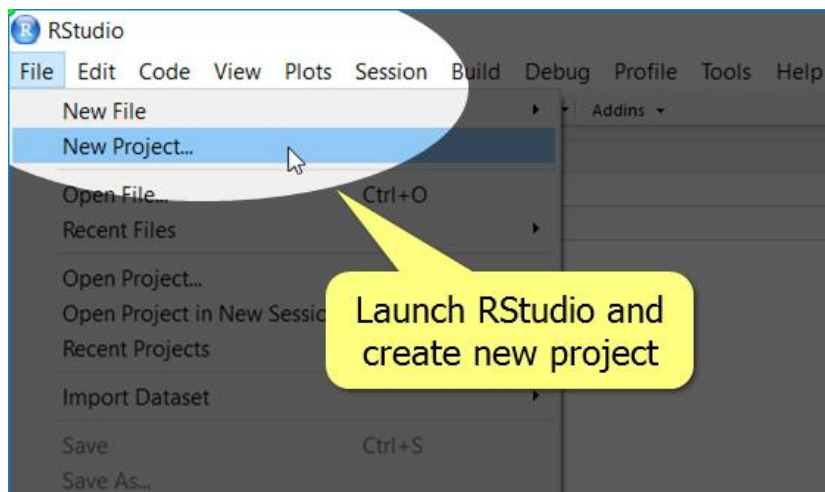
Install R studio, accepting all defaults



# Set up folders for the project



# Launch Rstudio and Create a Project - 1



# Launch Rstudio and Create a Project - 2

The screenshot shows the RStudio interface with the following components:

- Console:** Displays the R version 3.3.2 (2016-10-31) -- "Sincere Pumpkin Patch" and copyright information. It also shows the R logo and a prompt `> |`.
- Environment:** Shows the Global Environment, which is currently empty.
- Files:** Shows the file explorer for the project folder `G:\courses\SPPH567TA\demo`. The files listed are `data`, `demo.Rproj` (highlighted with a red circle), and `result`.

**Annotations:**

- A yellow speech bubble points to the `demo.Rproj` file in the Files pane, containing the text: "You should see a new .Rproj file added to your project folder, with the name as your project folder name".
- A yellow rectangular box at the bottom of the image contains the text: "From now on, every time you want to continue working on this project, you should open this .Rproj file."

# Install Deducer

G:/courses/SPPH567TA/demo - RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

demo — SPPH567TA

Console G:/courses/SPPH567TA/demo/

```
> install.packages(c("JGR", "Deducer", "DeducerExtras"))
Installing packages into 'C:/Users/Angela/Documents/R/win-library/3.1'
(as 'lib' is unspecified)
trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/JGR_1.7-1.zip'
Content type 'application/zip' length 1126642 bytes (1.1 MB)
downloaded 1.1 MB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/Deducer_0.7-9.zip'
Content type 'application/zip' length 3123002 bytes (3.0 MB)
downloaded 3.0 MB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/DeducerExtras_1.7.zip'
Content type 'application/zip' length 28095 bytes (27 KB)
downloaded 27 KB

package 'JGR' successfully unpacked and MD5 sums checked
package 'Deducer' successfully unpacked and MD5 sums checked
package 'DeducerExtras' successfully unpacked and MD5 sums checked

The downloaded binary packages are in
C:\Users\Angela\AppData\Local\Temp\Rtmpy8JtEj\downloaded_packages
> |
```

Environment History

Import Dataset

List

Files Plots Packages Help Viewer

New Folder Delete Rename More

G: > courses > SPPH567TA > demo

Name	Size	Modified
..		
data		
demo.Rproj	218 B	Dec 30, 2016, 9:45 AM
result		

Copy and paste the following line to the Console and press Enter:

```
install.packages(c("JGR", "Deducer", "DeducerExtras"))
```

You should see similar messages here to suggest successful installation. If so, close Rstudio.

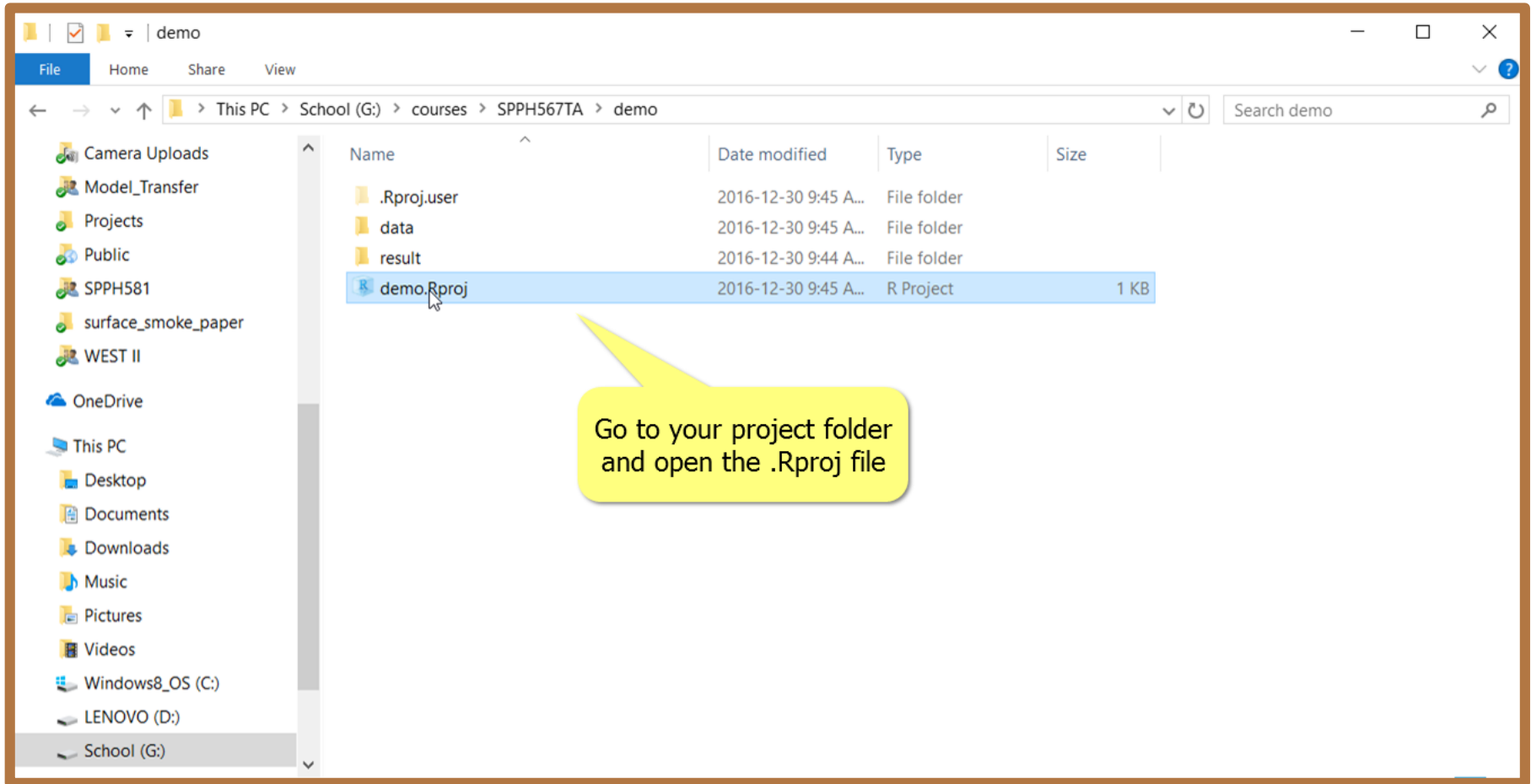
Now we have all the necessary elements installed in our system.

Next we will talk about how to launch Deducer.





# Launch Deducer - 1



# Launch Deducer – 2

G:/courses/SPPH567TA/demo - RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

Environment History

Global Environment

Files Plots Packages Help Viewer

New Folder Delete Rename More

G: > courses > SPPH567TA > demo

Name	Size	Modified
..		
data		
demo.Rproj	218 B	Dec 30, 2016, 9:45 AM
result		

```
G:/courses/SPPH567TA/demo/
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.

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.

> library(JGR)
Loading required package: rJava
Loading required package: JavaC9
Loading required package: iplots

Please type JGR() to launch console. Platform specific launchers (.exe and .app) can al
so be obtained at http://www.rforge.net/JGR/files/.

> JGR()

SET "PATH=C:\Users\Angela\Documents\R\win-library\3.1\rJava\jri\x64;C:\Program Files\RStu
dio\bin\x64;C:\WINDOWS\Sun\Java\bin;C:\WINDOWS\system32;C:\WINDOWS;C:\Users\Angela\Do
cuments\R\win-library\3.1\rJava\libs\x64;C:\Program Files\Java\jre1.8.0_111\bin;C:\Prog
ram Files\Java\jre1.8.0_111\bin\server;C:\Program Files\Java\jre1.8.0_111\bin\server;C:
\Program Files\R\R-3.2\bin\x64;C:\ProgramData\Oracle\Java\javapath;C:\Program Files (
x86)\NVIDIA Corporation\PhysX\Common;C:\Program Files (x86)\Intel\iCLS Client\;C:\Prog
ram Files\Intel\iCLS Client\;C:\windows\system32;C:\windows;C:\windows\system32\wbem;C:\
windows\System32\WindowsPowerShell\v1.0\;C:\Program Files\Intel\Intel(R) Management Eng
ine Components\DAL;C:\Program Files\Intel\Intel(R) Management Engine Components\IPT;C:\
Program Files (x86)\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files (x
86)\Intel\Intel(R) Management Engine Components\IPT;C:\Program Files\Intel\WiFi\bin\;C:
\Program Files\Common Files\Intel\WirelessC... <truncated>
SET "R_HOME=C:/PROGRA~1/R/R-33~1.2"
SET "R_ARCH=/x64"
SET "R_LIBS=C:/Users/Angela/Documents/R/win-library/3.1;C:/Program Files/R/R-3.2/libr
ary/"
SET "R_LIBS_USER=C:\Users\Angela\Documents\R\win-library\3.1"
"C:\Program Files\Java\jre1.8.0_111\bin\java.exe" -cp "C:\Users\Angela\Documents\R\win-
library\3.1\rJava\java\boot" -Drjava.class.path="C:\Users\Angela\Documents\R\win-librar
y\3.1\rJava\jri\JRI.jar;C:\Users\Angela\Documents\R\win-library\3.1\iplots\java\iplots.
jar;C:\Users\Angela\Documents\R\win-library\3.1\JGR\java\JGR.jar;C:\PROGRA~1\R\R-33~1.2
\etc\classes;C:\PROGRA~1\R\R-33~1.2\etc\classes\classes.jar" -Drjava.path="C:\Users\Ang
ela\Documents\R\win-library\3.1\rJava" -Dmain.class=org.rosuda.JGR.JGR -Djgr.load.pkgs
=yes -Dr.arch=/x64 -Xss3m RJavaClassLoader
>
```

For Mac user, you may be prompted with a message to install a specific version of JAVA, follow the instruction in the message.

Enter these two lines.

# Launch Deducer – 3

The screenshot shows the RStudio interface with the 'Package Manager' menu option highlighted under the 'Packages & Data' menu. A yellow callout bubble points to this menu option with the text: "Click 'Package Manager' under the menu of 'Packages & Data'".

Another yellow callout bubble points to the 'Console' window, which is open and displaying the R command prompt. The text in the callout bubble is: "Now you should see this new window (also called Console)".

The console window shows the following output:

```
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.

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.

> library(JGR)
Loading required package:
Loading required package:
Loading required package:
Please type JGR() to launch
so be obtained at http://w

> JGR()

SET "PATH=C:\Users\Angela\
udio\bin\x64;C:\WINDOWS\S
cuments\R\win-library\3.1\
ram Files\Java\jre1.8.0_11
\Program Files\R\R-3.3.2\b
x86)\NVIDIA Corporation\Ph
am Files\Intel\ICLS Client
windows\system32\windowsPo
ine Components\DAL;C:\Prog
Program Files (x86)\Intel\
86)\Intel\Intel(R) Managem
\Program Files\Common File
SET "R_HOME=C:/PROGRA~1/R/
SET "R_ARCH=/x64"
SET "R_LIBS=C:/Users/Angel
ary"
SET "R_LIBS_USER=C:\Users\
"C:\Program Files\Java\jre
library\3.1\rJava\java\boo
y\3.1\rJava\jri\JRI.jar;c:\Users\Angela\Documents\R\win-library\3.1\plots\java\plots.
jar;c:\Users\Angela\Documents\R\win-library\3.1\JGR\java\JGR.jar;c:\PROGRA~1\R\R-33-1.2
\etc\classes;c:\PROGRA~1\R\R-33-1.2\etc\classes\classes.jar" -Drjava.path="C:\Users\Ang
ela\Documents\R\win-library\3.1\rJava" -Dmain.class=org.rosuda.JGR.JGR -Djgr.load.pkgs
=yes -Dr.arch=/x64 -Xss3m RJavaClassLoader
>
```





# Launch Deducer – 5

The screenshot displays the RStudio environment. On the left, the Console window shows the following R session output:

```
G:/courses/SPPH567TA/demo - RStudio
File Edit Code View Plots Session Bu
G
Console
G:/courses/SPPH567TA/demo
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.
R is a collaborative project. Many thanks to the 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.

> library(JGR)
Loading required package: JGR
Loading required package: JGR
Loading required package: JGR

Please type JGR() to launch JGR.
so be obtained at http://www.jgr.com/

> JGR()

SET "PATH=C:\Users\Angela\
tud.io\bin\x64;c:\windows\s
cuments\R\win-library\3.1\
ram Files\Java\jre1.8.0_11
\Program Files\R\R-3.3.2\b
x86)\NVIDIA Corporation\Ph
am Files\Intel\iCLS client
windows\System32\windowsPo
ine Components\DAL;C:\Prog
Program Files (x86)\Intel\
86)\Intel\Intel(R) Managem
\Program Files\Common File
SET "R_HOME=C:/PROGRA~1/R/
SET "R_ARCH=/x64"
SET "R_LIBS=C:/Users/Angel
ary"
SET "R_LIBS_USER=C:\Users\
"C:\Program Files\Java\jre
library\3.1\rJava\java\boo
y\3.1\rJava\jri\JRI.jar;C:\Users\Angel
jar;C:\Users\Angela\Documents\R\win-li
\etc\classes;C:\PROGRA~1\R\R-33-1.2\et
ela\Documents\R\win-library\3.1\rJava
=yes -Dr.arch=/x64 -xss3m RJavaClass
>
```

The Data Viewer window is open, showing a 'Get Started' tab with four icons: 'New Data', 'Open Data', 'Tutorial Video', and 'Online Manual'. A yellow speech bubble points to the 'Open Data' icon with the text: "Now you should see this Data Viewer window." The background shows a file explorer window with a table of files:

Size	Modified
218 B	Dec 30, 2016, 9:45 AM

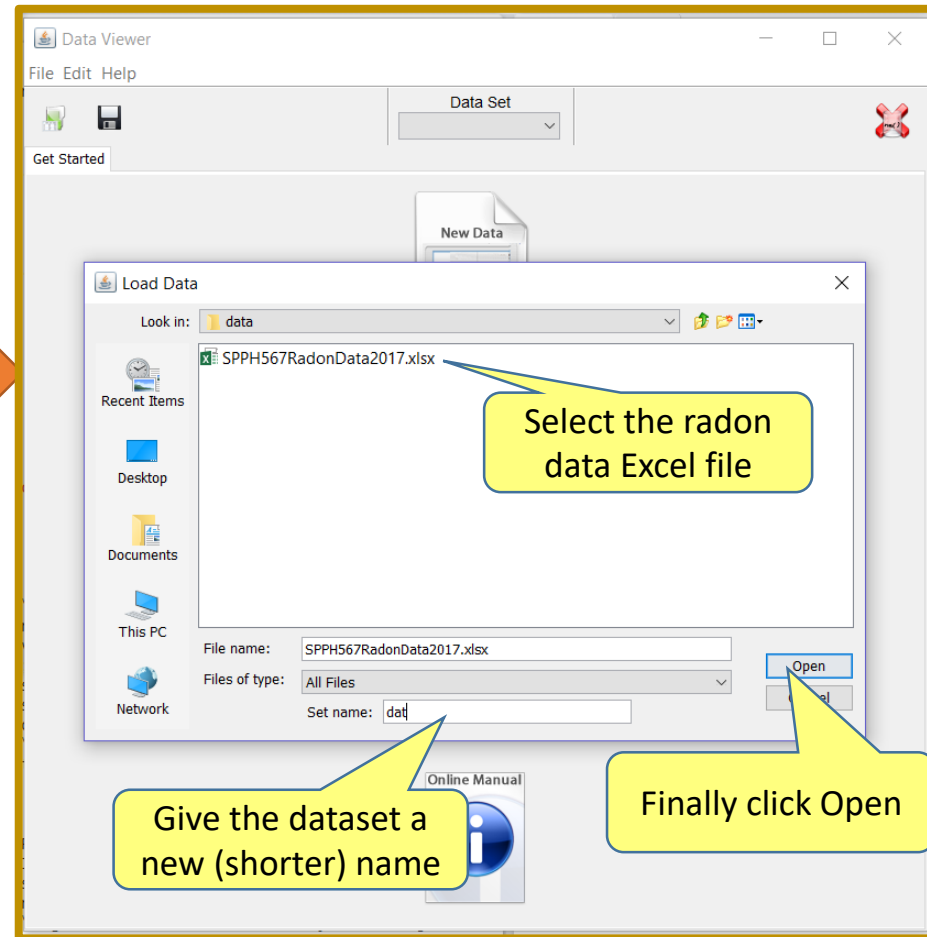
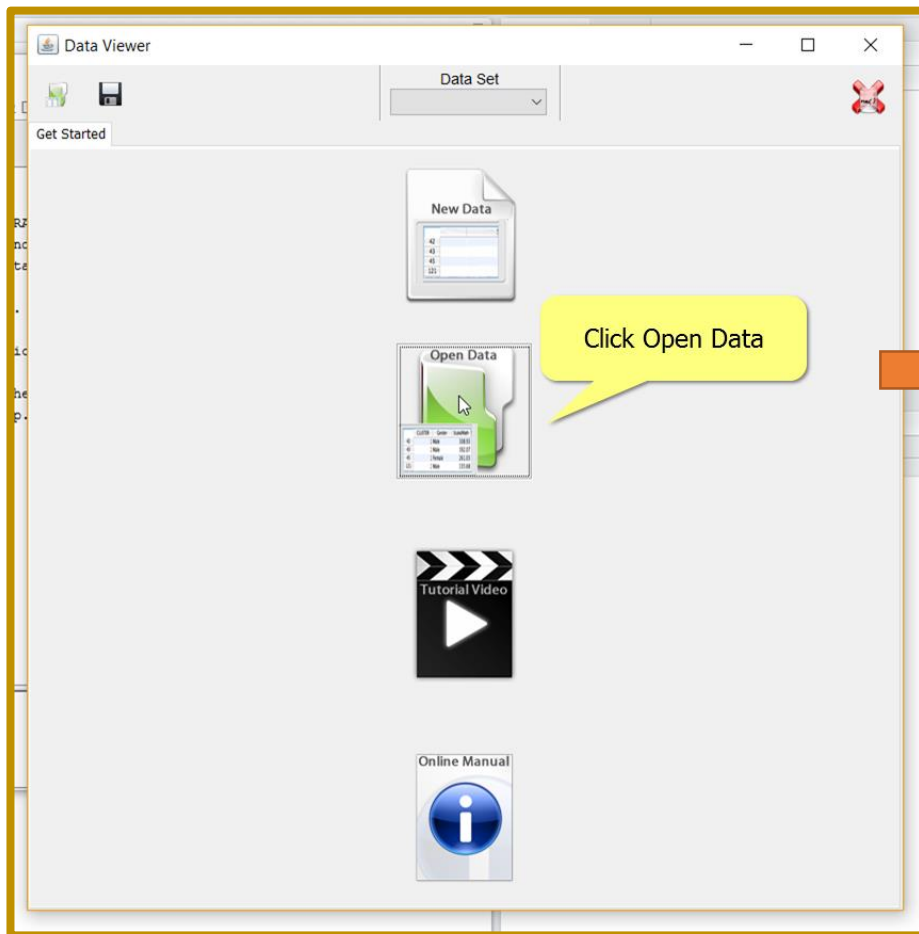


Next we will talk about how to import data to Deducer and save workspace.

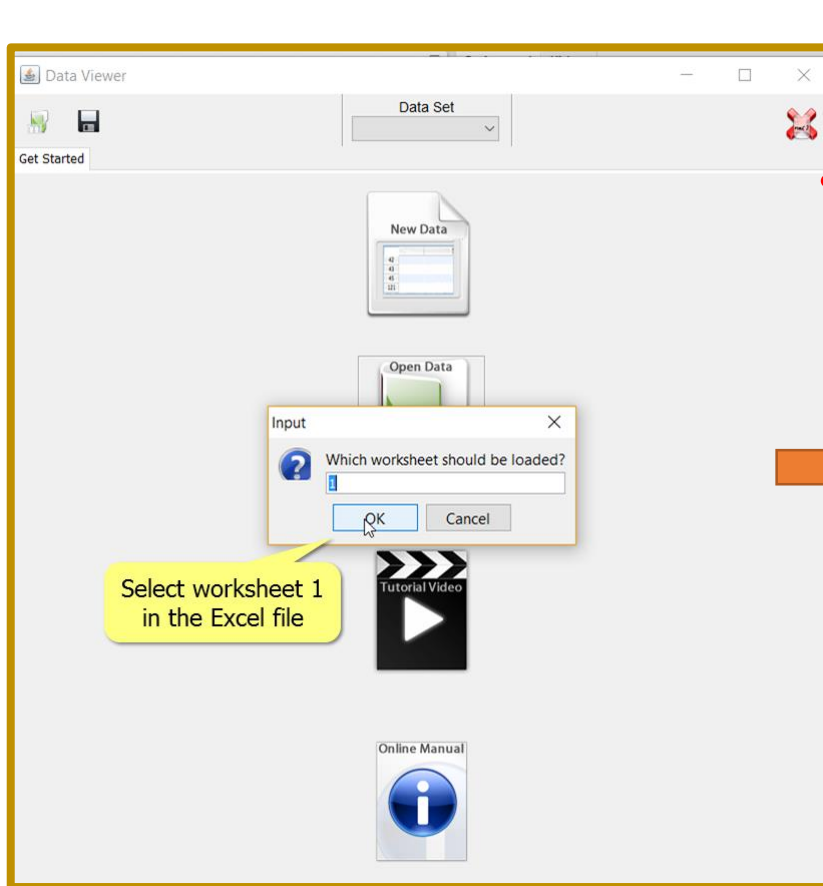


# Import data – 1

First download the radon data file from the SPPH567 website and put it in your data folder in the project folder. Then do the following:



# Import data – 2



Data Viewer

File Edit Help

Data Set (df) dat

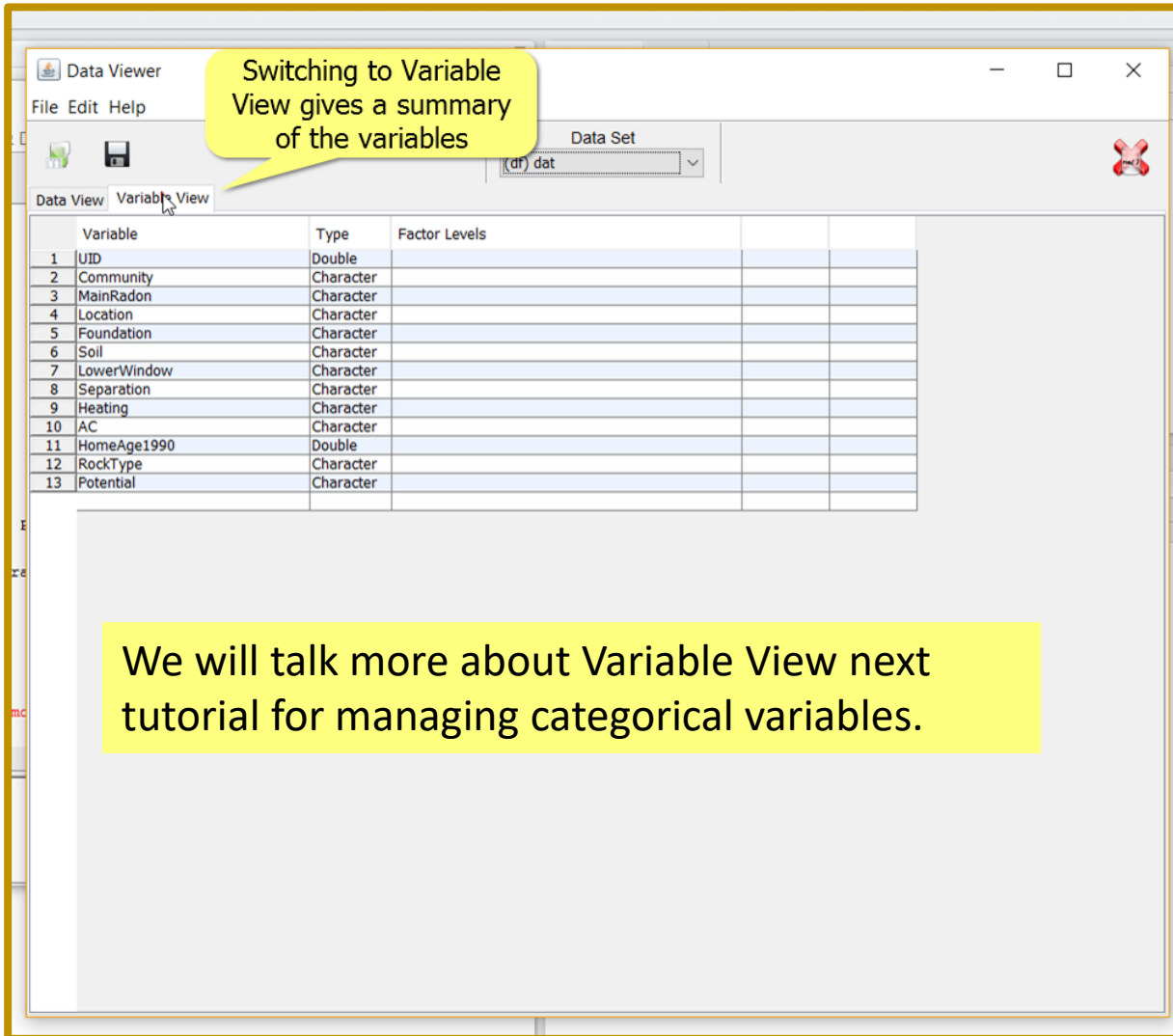
Data View Variable View

	Community	MainRadon	Location	Foundation	Soil	LowerWi...	Separation	Heating	AC
1	1 ATLIN ...	967.7	Bedroom	Other	Loam	Closed	Door	Electric	No
2	2 ATLIN ...	33.6	Bedroom	Poured	Loam	Closed	Door	Hot Water	No
3	3 ATLIN ...	22.4	Bedroom	Other	Clay	Open	No Door	Forced Air	No
4	4 ATLIN ...	483.6	Bedroom	Poured	Clay	Closed	No Door	Electric	No
5	5 ATLIN ...	42.4	Bedroom	Other	Loam	Open	No Door	Forced Air	No
6	6 ATLIN ...	483.6	Bedroom	Other	Clay	Open	No Door	Forced Air	No
7	7 ATLIN ...	483.6	Bedroom	Other	Clay	Open	No Door	Hot Water	No
8	8 ATLIN ...	483.6	Bedroom	Other	Clay	Open	NA	Forced Air	No
9	9 ATLIN ...	483.6	Bedroom	Other	Loam	Open	Door	Electric	No
10	10 ATLIN ...	483.6	Bedroom	Other	Loam	Closed	No Door	Forced Air	No
11	11 ATLIN ...	483.6	Bedroom	Other	Loam	Open	Door	Electric	No
12	12 ATLIN ...	483.6	Bedroom	Other	Loam	Open	No Door	Forced Air	No
13	13 ATLIN ...	483.6	Bedroom	Other	Clay	Closed	No Door	Forced Air	No
14	14 ATLIN ...	483.6	Bedroom	Other	Loam	Closed	No Door	Forced Air	No
15	15 ATLIN ...	22.5	Other	Other	Clay	NA	NA	Electric	No
16	16 BARRIERE...	85.8	Bedroom	Poured	Clay	Closed	No Door	Forced Air	No
17	17 BARRIERE...	110.3	Bedroom	Poured	Loam	Open	Door	Other	No
18	18 BARRIERE...	79.3	Living	Poured	Loam	Open	No Door	Forced Air	No
19	19 BARRIERE...	425.4	Bedroom	Poured	Loam	Open	No Door	Forced Air	No
20	20 BARRIERE...	137.8	Bedroom	Poured	Loam	Closed	No Door	Forced Air	No
21	21 BARRIERE...	31.4	Bedroom	Other	Loam	Open	Door	Forced Air	No
22	22 BARRIERE...	162.9	Bedroom	Poured	Loam	Open	No Door	Forced Air	No
23	23 BARRIERE...	105.8	Bedroom	Poured	Clay	Open	No Door	Forced Air	No
24	24 BARRIERE...	195.5	Bedroom	Poured	Loam	Open	No Door	Forced Air	No
25	25 BARRIERE...	205.4	Bedroom	Poured	Loam	Open	No Door	Forced Air	No
26	26 BARRIERE...	459.3	Bedroom	Poured	Loam	Open	No Door	Forced Air	No
27	27 BARRIERE...	128.2	Bedroom	Other	Loam	Open	No Door	Forced Air	No
28	28 BARRIERE...	72.9	Bedroom	Poured	Loam	Open	No Door	Electric	No
29	29 BARRIERE...	108.7	Bedroom	Poured	Loam	Closed	No Door	Forced Air	No
30	30 BARRIERE...	590.8	Bedroom	Poured	Loam	Open	No Door	Forced Air	No
31	31 BARRIERE...	399.7	Bedroom	Poured	Loam	Open	No Door	Forced Air	No
32	32 BARRIERE...	79.4	Bedroom	Poured	Loam	Open	No Door	Forced Air	No
33	33 BARRIERE...	98.2	Bedroom	Poured	Loam	Open	No Door	Forced Air	No
34	34 BARRIERE...	34.3	Bedroom	Poured	Clay	Open	NA	Forced Air	No
35	35 BARRIERE...	327.6	Bedroom	Other	Clay	Open	NA	Hot Water	No
36	36 BARRIERE...	30.4	Bedroom	Poured	Loam	Open	NA	Forced Air	No
37	37 BARRIERE...	141.7	Kitchen	Other	Loam	Open	No Door	Forced Air	No
38	38 BARRIERE...	65.2	Living	Poured	Loam	Open	NA	Forced Air	No
39	39 BARRIERE...	207	Living	Poured	Loam	Open	Door	Forced Air	No
40	40 BARRIERE...	1402.5	Living	Poured	Loam	Open	No Door	Forced Air	No

The data can be viewed with Data View and Variable View.

Wait a bit and the dataset should show up

# Import data – 3



Switching to Variable View gives a summary of the variables

	Variable	Type	Factor Levels		
1	UID	Double			
2	Community	Character			
3	MainRadon	Character			
4	Location	Character			
5	Foundation	Character			
6	Soil	Character			
7	LowerWindow	Character			
8	Separation	Character			
9	Heating	Character			
10	AC	Character			
11	HomeAge1990	Double			
12	RockType	Character			
13	Potential	Character			

We will talk more about Variable View next tutorial for managing categorical variables.



