

These materials adapted by Amelia McNamara from the RStudio CC BY-SA materials Introduction to R (2014) and Master the Tidyverse (2017).

Introduction to R & RStudio:

deck 11: Going Forward

Amelia McNamara

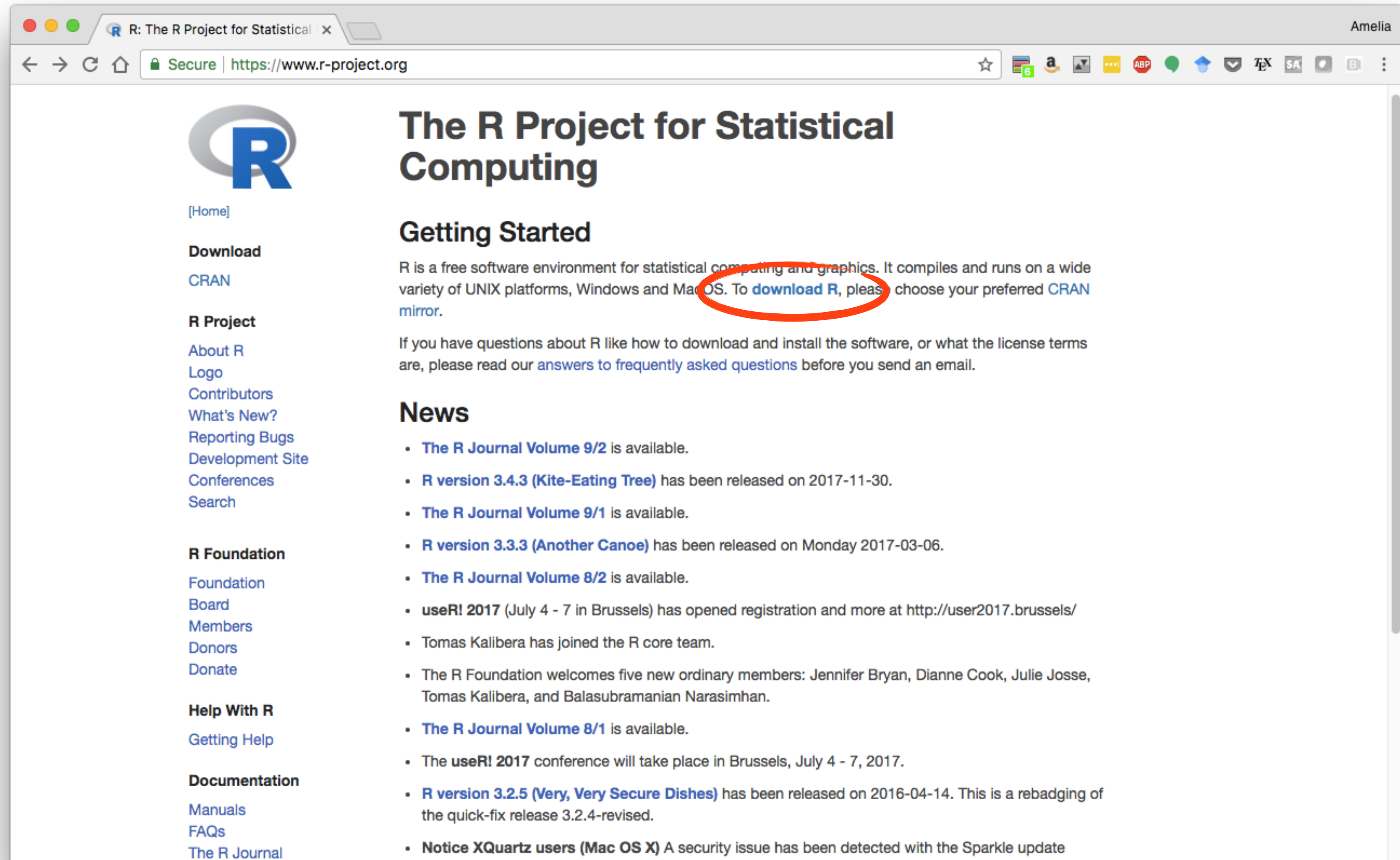
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Smith College

January 2018

Installing
locally

First, you will need to install R (the programming language).

1. Go to <https://www.r-project.org/>
2. Select your CRAN Mirror (pick a location geographically close to you)
3. Select your OS



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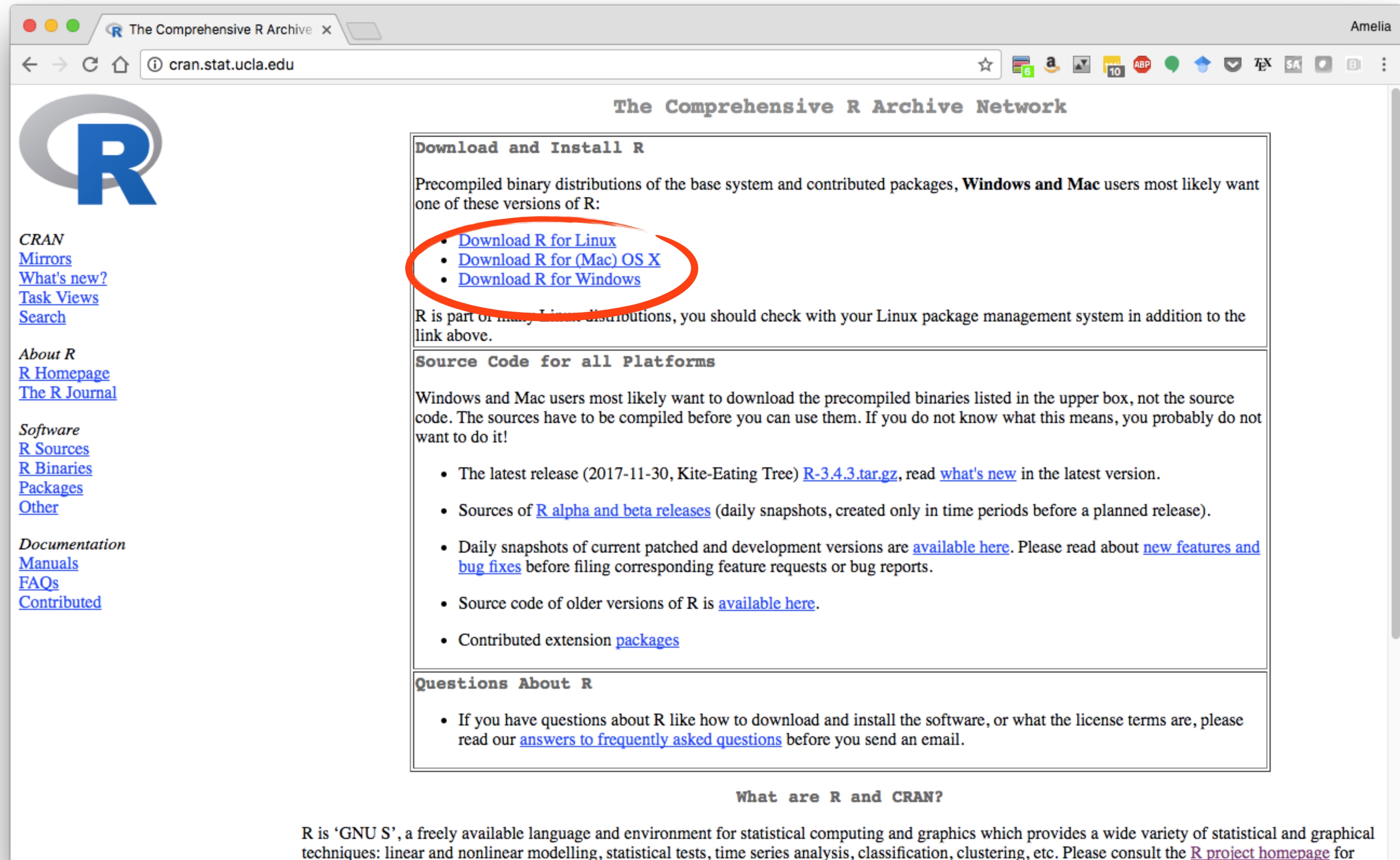


Scroll for US

A screenshot of a web browser showing the 'CRAN Mirrors' page. The browser's address bar shows 'https://cran.r-project.org/mirrors.html'. The page title is 'CRAN Mirrors'. The main text says: 'The Comprehensive R Archive Network is available at the following URLs, please choose a location close to you. Some statistics on the status of the mirrors can be found here: [main page](#), [windows release](#), [windows old release](#). If you want to host a new mirror at your institution, please have a look at the [CRAN Mirror HOWTO](#).' Below this, there is a list of mirrors organized by country. The visible countries are 0-Cloud, Algeria, Argentina, Australia, Austria, Belgium, and Brazil. Each country has a list of mirror URLs and the name of the hosting institution. For example, under '0-Cloud', there are two URLs: 'https://cloud.r-project.org/' and 'http://cloud.r-project.org/', both pointing to 'Automatic redirection to servers worldwide, currently sponsored by Rstudio'. Under 'Australia', there are four URLs pointing to 'CSIRO', 'AARNET', 'School of Mathematics and Statistics, University of Melbourne', and 'Curtin University of Technology'. The list continues with Austria (Wirtschaftsuniversität Wien), Belgium (K.U.Leuven Association, Ghent University Library), and Brazil (Center for Comp. Biol. at Universidade Estadual de Santa Cruz, Universidade Federal do Parana, Oswaldo Cruz Foundation, Rio de Janeiro, etc.). The browser's taskbar at the bottom shows various icons, including a green '6' icon, Amazon, and others. The browser's name 'Amelia' is visible in the top right corner.

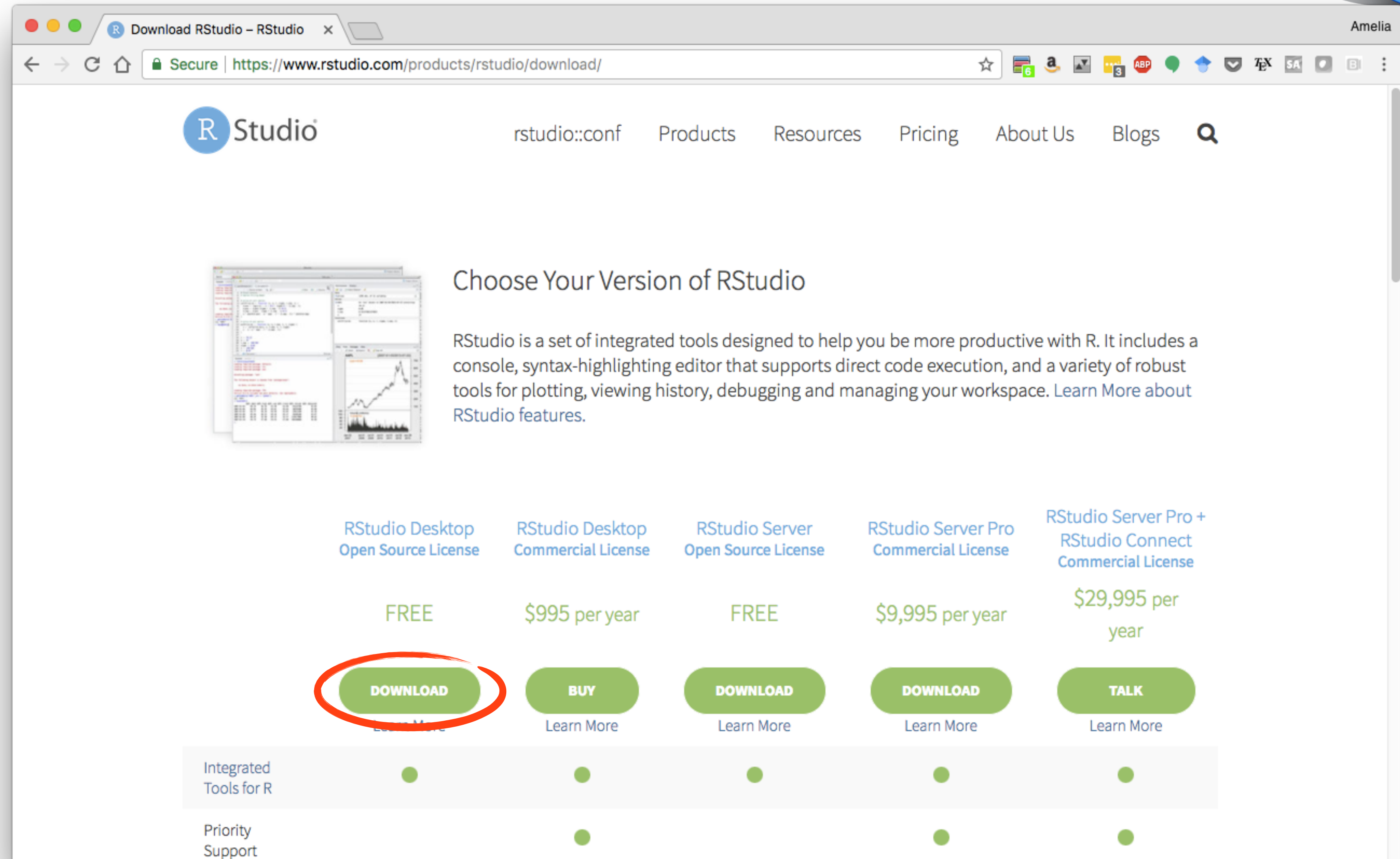
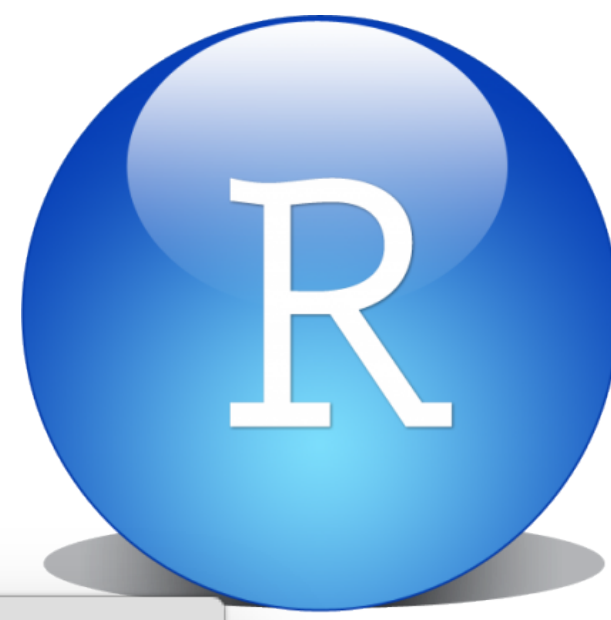
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A screenshot of the CRAN website (cran.stat.ucla.edu) in a web browser. The browser's address bar shows 'cran.stat.ucla.edu'. The page title is 'The Comprehensive R Archive Network'. On the left, there is a sidebar with links: 'CRAN', 'Mirrors', 'What's new?', 'Task Views', 'Search', 'About R', 'R Homepage', 'The R Journal', 'Software', 'R Sources', 'R Binaries', 'Packages', 'Other', 'Documentation', 'Manuals', 'FAQs', and 'Contributed'. The main content area has a section titled 'Download and Install R' which says 'Precompiled binary distributions of the base system and contributed packages, Windows and Mac users most likely want one of these versions of R:'. Below this, there are three links: 'Download R for Linux', 'Download R for (Mac) OS X', and 'Download R for Windows'. These three links are circled in red. Below this section is 'Source Code for all Platforms', which explains that source code needs to be compiled and lists several options like the latest release, alpha and beta releases, daily snapshots, and older versions. At the bottom, there is a 'Questions About R' section with a link to 'answers to frequently asked questions'. The footer contains the text 'What are R and CRAN?' and a paragraph about R being 'GNU S'.

Then, install RStudio (the application).

1. Go to <https://www.rstudio.com/products/rstudio/download/>
2. Select RStudio desktop
3. Select your OS

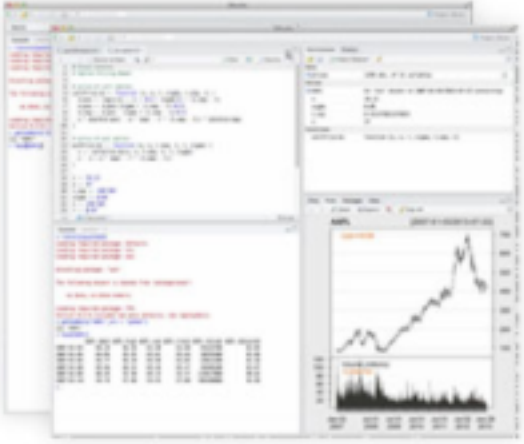
A screenshot of the RStudio website's download page. The browser window shows the URL 'https://www.rstudio.com/products/rstudio/download/'. The page features the RStudio logo and navigation links. A section titled 'Choose Your Version of RStudio' describes the application. Below this, five product options are listed with their respective prices and download buttons. The 'RStudio Desktop Open Source License' option is highlighted with a red circle around its 'DOWNLOAD' button. A comparison table at the bottom shows features like 'Integrated Tools for R' and 'Priority Support' across the different license types.

Download RStudio – RStudio

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

R Studio

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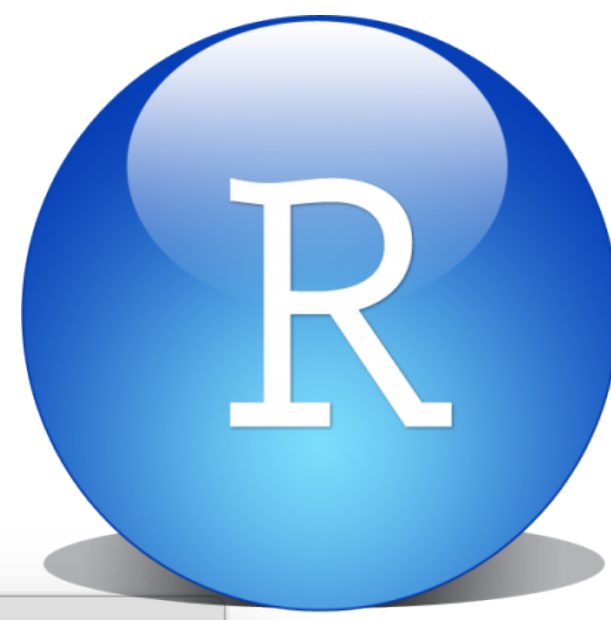
 Choose Your Version of RStudio

RStudio is a set of integrated tools designed to help you be more productive with R. It includes a console, syntax-highlighting editor that supports direct code execution, and a variety of robust tools for plotting, viewing history, debugging and managing your workspace. [Learn More about RStudio features.](#)

RStudio Desktop Open Source License	RStudio Desktop Commercial License	RStudio Server Open Source License	RStudio Server Pro Commercial License	RStudio Server Pro + RStudio Connect Commercial License
FREE	\$995 per year	FREE	\$9,995 per year	\$29,995 per year
DOWNLOAD	BUY	DOWNLOAD	DOWNLOAD	TALK
Learn More	Learn More	Learn More	Learn More	Learn More
Integrated Tools for R	●	●	●	●
Priority Support	●		●	●

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RStudio Desktop 1.1.419 — Release Notes

RStudio requires R 3.0.1+. If you don't already have R, download it [here](#).

Installers for Supported Platforms

Installers	Size	Date	MD5
RStudio 1.1.419 - Windows Vista/7/8/10	85.8 MB	2018-01-24	7f71f68fb45a6c8d3d2898096ca6fe91
RStudio 1.1.419 - Mac OS X 10.6+ (64-bit)	74.5 MB	2018-01-24	92f16f2d5b95e178a78fab1a0e606e3d
RStudio 1.1.419 - Ubuntu 12.04-15.10/Debian 8 (32-bit)	89.3 MB	2018-01-24	12bf107ef92b2fcab418263519b4bf6d
RStudio 1.1.419 - Ubuntu 12.04-15.10/Debian 8 (64-bit)	97.4 MB	2018-01-24	830f5e5954e802d1b93515c8dffcea05
RStudio 1.1.419 - Ubuntu 16.04+/Debian 9+ (64-bit)	64.9 MB	2018-01-24	a090284b0401c7d8bbc474f227342932
RStudio 1.1.419 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	88.1 MB	2018-01-24	4b6949c0f55d7d1f1c741a19aa089064
RStudio 1.1.419 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	90.6 MB	2018-01-24	f660a6d2f2540a7bb2a823cadb8f9bbd

Zip/Tarballs

Zip/tar archives	Size	Date	MD5
RStudio 1.1.419 - Windows Vista/7/8/10	122.9 MB	2018-01-24	18fec780a05560df2b50af6c7c883649
RStudio 1.1.419 - Ubuntu 12.04-15.10/Debian 8 (32-bit)	90 MB	2018-01-24	df8a98b238b98e13eba09d3f19e4cce4
RStudio 1.1.419 - Ubuntu 12.04-15.10/Debian 8 (64-bit)	98.3 MB	2018-01-24	9a862b426123d88b2009ad2ade382b17
RStudio 1.1.419 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	88.8 MB	2018-01-24	49be9e9eee1b040a107886e52fd9aacb
RStudio 1.1.419 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	91.4 MB	2018-01-24	8f1d1f7616f295780816cc6e7d027d5b

Source Code

A tarball containing source code for RStudio v1.1.419 can be downloaded from [here](#)

Installing packages

Shortcut to install

- [ggplot2](#), for data visualisation.
- [dplyr](#), for data manipulation.
- [tidyr](#), for data tidying.
- [readr](#), for data import.
- [purrr](#), for functional programming.
- [tibble](#), for tibbles, a modern re-imagining of data frames.

And more

```
install.packages(c("tidyverse", "fivethirtyeight",  
"babynames", "nycflights", "skimr"))
```

Getting our
code

RStudio Cloud

Secure | <https://rstudio.cloud/project/13632>

Your Workspace / Intro to R & RStudio (day 2)

Amelia McNamara

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins R 3.4.2

nimbus GSS GSS1 band

Filter

	Year	ID	LaborStatus	MaritalStatus	NumChildren	Age	HighestSchoolCompleted	Sex
1	2014	1	Working fulltime	Divorced	0	53.000000		16
2	2014	2	Working fulltime	Married	0	26.000000		16
3	2014	3	Unempl, laid off	Divorced	1	59.000000		13
4	2014	4	Working parttime	Married	2	56.000000		16
5	2014	5	Retired	Married	3	74.000000		17
6	2014	6	Working fulltime	Married	1	56.000000		17
7	2014	7	No answer	Married	2	63.000000		12
8	2014	8	Working fulltime	Married	2	74.000000		17

Showing 1 to 8 of 2,540 entries

Console Terminal

```
The downloaded source packages are in
  '/tmp/RtmpbwU0xs/downloaded_packages'
> library(readr)
> band <- read_csv("project/data/band.csv")
Parsed with column specification:
cols(
  name = col_character(),
  band = col_character()
)
> View(band)
> |
```

Environment History Connections

Import Dataset List

Global Environment

band	3 obs. of 2 variables
GSS	2540 obs. of 15 variables
GSS1	2540 obs. of 15 variables
nimbus	18963 obs. of 4 variables

Files Plots Packages Help Viewer

New Folder Upload Delete Rename More

Home

Name

project

R

Copy...

Copy To...

Move...

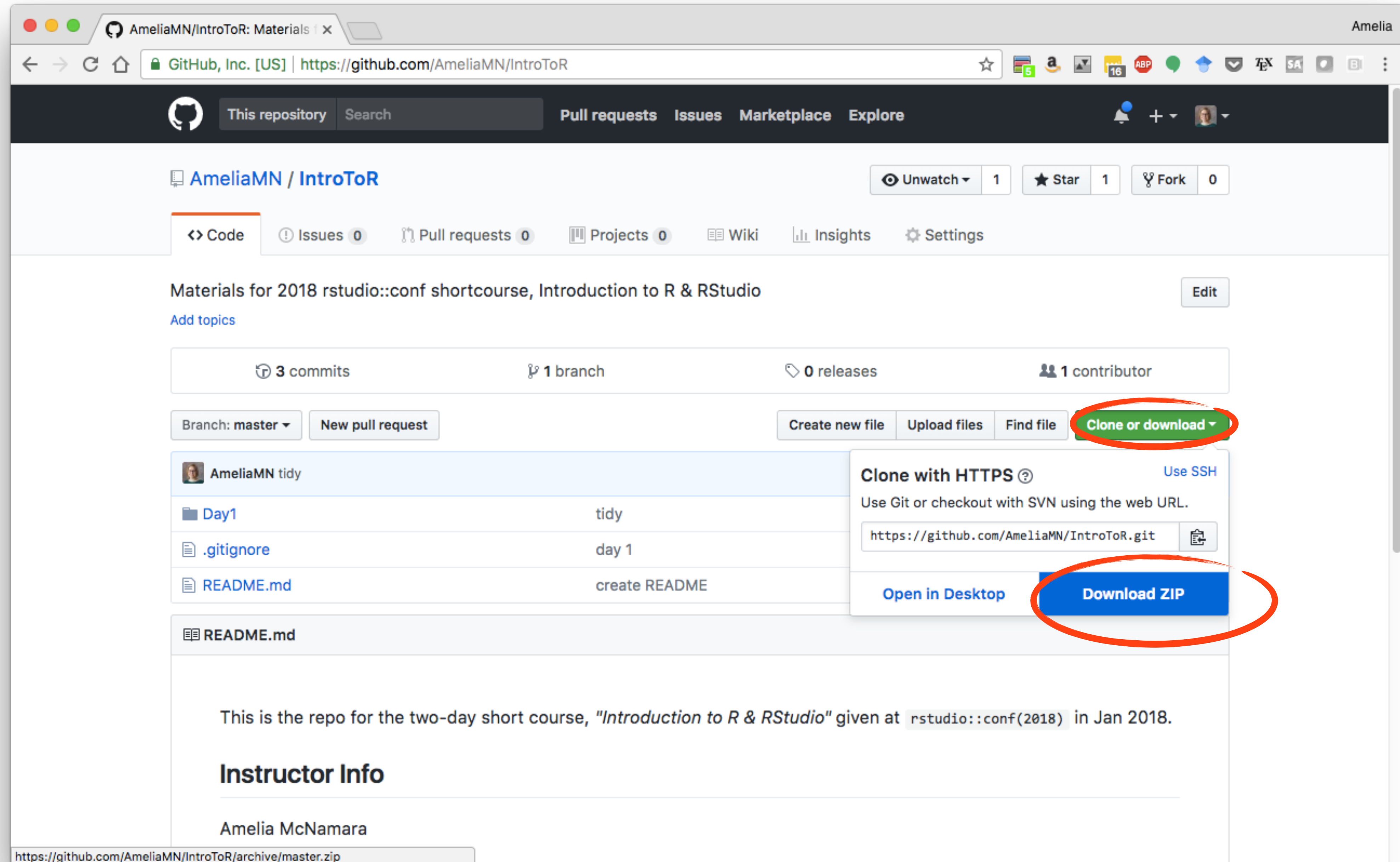
Export...

Set As Working Directory

Go To Working Directory

You can export an entire directory from RStudio cloud

Or, download another clean version from <https://github.com/AmeliaMN/IntroToR>



The screenshot shows the GitHub repository page for `AmeliaMN/IntroToR`. The repository is titled "Materials for 2018 rstudio::conf shortcourse, Introduction to R & RStudio". It has 3 commits, 1 branch, 0 releases, and 1 contributor. The repository is currently on the `master` branch. A red circle highlights the "Clone or download" button, which has a dropdown menu open. The dropdown menu shows the option to "Clone with HTTPS" using the URL `https://github.com/AmeliaMN/IntroToR.git`. Another red circle highlights the "Download ZIP" button in the dropdown menu.

AmeliaMN / IntroToR

Materials for 2018 rstudio::conf shortcourse, Introduction to R & RStudio

3 commits 1 branch 0 releases 1 contributor

Branch: master New pull request Create new file Upload files Find file Clone or download

AmeliaMN tidy

File	Author
Day1	tidy
.gitignore	day 1
README.md	create README

README.md

This is the repo for the two-day short course, "Introduction to R & RStudio" given at `rstudio::conf(2018)` in Jan 2018.

Instructor Info

Amelia McNamara

<https://github.com/AmeliaMN/IntroToR/archive/master.zip>