## NEFAC NEGRI INSTITUTE – INTRO TO R PREP SESSION – OCT. 15, 2025



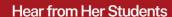
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15th Annual

# FIRST AMENDMENT INSTITUTE

Journalists from a variety of media and all six New England states will attend local workshops, view online lessons and receive in-person instruction at Boston University.

They will learn the latest investigative and database reporting techniques and public records access skills. The fellows chosen for this 15th annual Negri Institute will reflect today's diverse news media and come from daily and weekly newspapers, television and radio stations and online publications. Learn more about previous institutes here.



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News Coverage

#### **MAGGIE MULVIHILL**

Investigative Journalist. Journalism Professor. Data Journalism Trainer. First Amendment Advocate. Journalism Mentor. News Entrepreneur. Attorney.

Contact







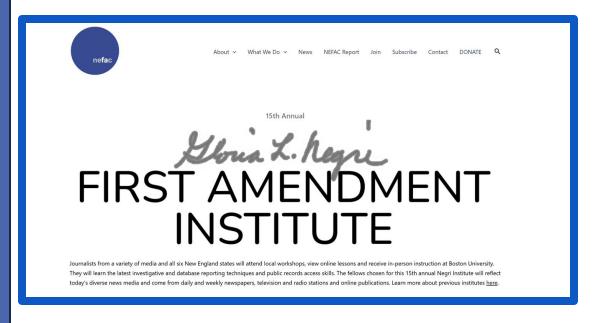


#### **About**

Maggie Mulvihill is a Boston-based investigative reporter and journalism teacher who has

## Today's Review

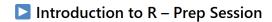
- What is R?
- Why Should Young Journalists Learn It?
- What You Will Need for Our Oct. 26, 2025 Lesson
  - I will be providing new data and scripts for you to work with







## Materials for Our Lesson



**Mandatory for Fellows Attending Introduction to R Class** 

Fellows will have the option of attending either Basic Database Analysis or Introduction to R during the Institute. Those choosing Introduction to R must attend this prep session prior to the Institute.

Oct. 15 | 11:30 a.m. | Zoom Link to Be Provided

Maggie Mulvihill | Boston University

#### Required:

- Install Base R and R Studio prior to class
- Review Introduction to R and Getting to Know the R Environment
- Download "babynames" (<u>xlsx</u> / <u>.csv</u>) and "<u>Intro to R with Baby Names</u>
   <u>Data Student Version</u>"



#### BASE R – Needs to be Installed before R Studio

#### R-4.5.1 for Windows

Download R-4.5.1 for Windows (86 megabytes, 64 bit)

README on the Windows binary distribution

New features in this version

This build requires UCRT, which is part of Windows since Windows 10 and Windows Server 2016. On older systems, UCRT has to be installed manually from here.

If you want to double-check that the package you have downloaded matches the package distributed by CRAN, you can compare the <a href="md5sum">md5sum</a> of the .exe to the <a href="fingerprint">fingerprint</a> on the master server.

#### Frequently asked questions

- Does R run under my version of Windows?
- How do I update packages in my previous version of R?

Please see the R FAQ for general information about R and the R Windows FAQ for Windows-specific information.

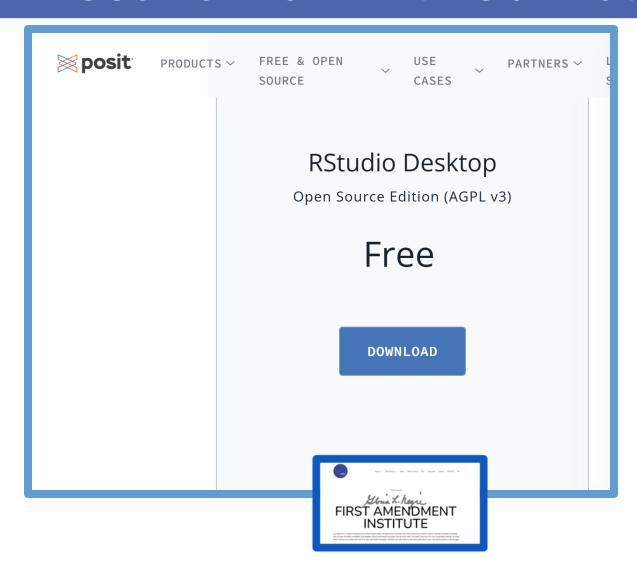
#### Other builds

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

Note to webmasters: A stable link which will redirect to the current Windows binary release is <a href="https://exammer.com/creative-new-release.html">CRAN MIRROR</a>/bin/windows/base/release.html.



## Download R Studio – This Is the Environment We Will Use To Work With Our Data



#### Difference Between Base R and R Studio



Base R is an open source statistical programming language

You download the software from a CRAN – Comprehensive R Archive Network

A global network of servers storing R "packages" so you can work with data

Base R allows you to run code on the command line



R built in 1990's



Used by researchers, data scientists, statisticians



Can handle large datasets and do sophisticated statistical analysis



Can use as much memory in your computer as you allow; sometimes causes crashes with very large datasets

#### CRAN is a network of ftp and web servers around the world that store identical, up-to-date, versions of code and documentation for R. Please use the CRAN mirror nearest to you to



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Manuals <u>FAQs</u>

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**CRAN Mirrors** 

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 <u>CRAN Mirror HOWTO</u>.

0-Cloud

https://cloud.r-project.org/

Argentina

http://mirror.fcaglp.unlp.edu.ar/CRAN/

Australia

https://cran.csiro.au/ https://mirror.aarnet.edu.au/pub/CRAN/

https://cran.ms.unimelb.edu.au/

Austria

https://cran.wu.ac.at/

Belgium

https://www.freestatistics.org/cran/

https://ftp.belnet.be/mirror/CRAN/

Brazil

https://cran-r.c3sl.ufpr.br/ https://vps.fmvz.usp.br/CRAN/ https://brieger.esalq.usp.br/CRAN/

Bulgaria

https://ftp.uni-sofia.bg/CRAN/

Canada

https://muug.ca/mirror/cran/

https://mirror.csclub.uwaterloo.ca/CRAN/ https://oron mirror rofol oo/

Automatic redirection to servers worldwide, currently sponsored by

**Posit** 

Universidad Nacional de La Plata

**CSIRO** 

**AARNET** 

School of Mathematics and Statistics, University of Melbourne

Wirtschaftsuniversität Wien

Patrick Wessa

Belnet, the Belgian research and education network

Universidade Federal do Parana University of Sao Paulo, Sao Paulo University of Sao Paulo, Piracicaba

Sofia University

Manitoba Unix User Group University of Waterloo Dafal Danaskawali





PRODUCTS ~ FREE & OPEN SOURCE ~ USE CASES ∨

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DOWNLOAD

## RStudio Desktop

Used by millions of people weekly, the RStudio integrated development environment (IDE) is a set of tools built to help you be more productive with R and Python.

Don't want to download or install anything? Get started with RStudio on Posit Cloud for free. If you're a professional data scientist looking to download RStudio and also need common enterprise features,



## Difference Between Base R and R Studio





R Studio is now called POSIT



a journalist-friendly interface we install on top of Base R to run code



Designed by Hadley Wickham



Called an "integrated idea environment"



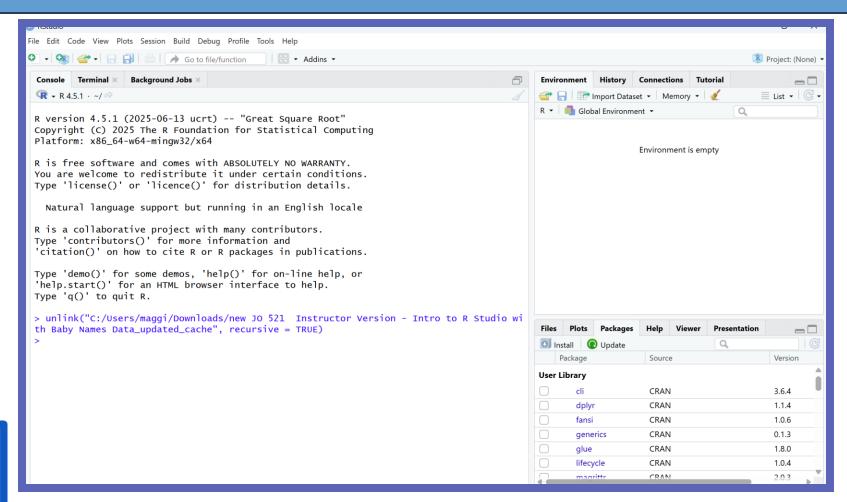
Intuitive and user-friendly



Large online support community including listservs for journalists using R

- Do your work in four "panels" once you launch the software
- Preferred software to use in newsrooms; IRE.org offers multiple training sessions for journalists using R – more than any other programming language
- Easy to share code and packages including on developer platform "github"

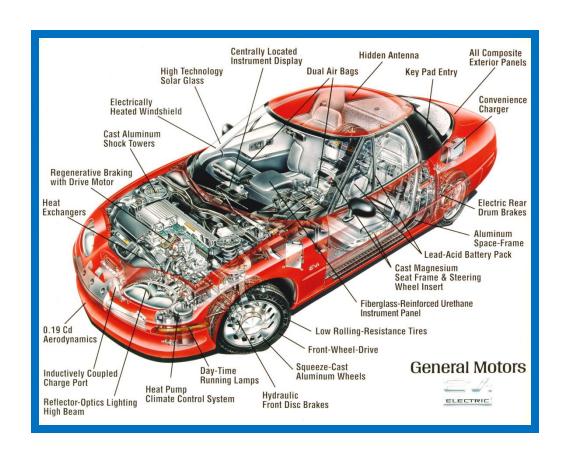
#### R Studio Interface





## Base R "Engine"

## R Studio "Dashboard"









## Toolchains for building R and R packages f

#### version of Rtools:

for R versions from 4.5.0 (R-prerelease and R-devel)

for R versions 4.4.x (R-release)

for R versions 4.3.x (R-oldrelease)

for R versions 4.2.x

for R from version 4.0.0 to 4.1.3

for R versions prior to 4.0.0



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**R** → R 4.5.1 · ~/ 🕏

R version 4.5.1 (2025-06-13 ucrt) -- "Great Square Root" Copyright (C) 2025 The R Foundation for Statistical Computing Platform: x86\_64-w64-mingw32/x64

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.

#### **Xcode Command Line Tools**

Hash: 1/0010300138090300014070100904001e029213

is not intended for regular users. Read the INSTALL file for further instructions.

#### **Subdirectories:**

<u>tools</u> Additional tools necessary for building R for Mac OS X:

Universal GNU Fortran compiler for Mac OS X (see R for Mac tools page

for details).

Binaries for macOS 11 or higher (Big Sur) for arm64-based Macs (aka

Apple silicon such as the M1 chip)

Binaries for macOS 11 or higher (Big Sur) for Intel-based Macs



big-sur-arm64

big-sur-x86 64