

# R Installation and Setup

MnModel Phase 4 User Guide: Appendix A

---

Jeffrey Walsh, Andrew Brown, and Luke Burds

June 24, 2019

© 2019. The MnModel process and the predictive models it produces are copyrighted by the Minnesota Department of Transportation. Any fair use under copyright law should include the disclaimer above. Any use that extends beyond fair use permitted under copyright law requires the written permission of the Minnesota Department of Transportation.

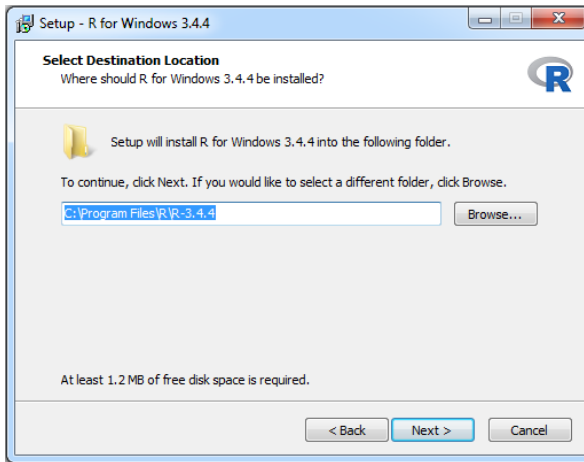
MnModel was financed with Transportation Enhancement and State Planning and Research funds from the Federal Highway Administration and a Minnesota Department of Transportation match.

## Contents

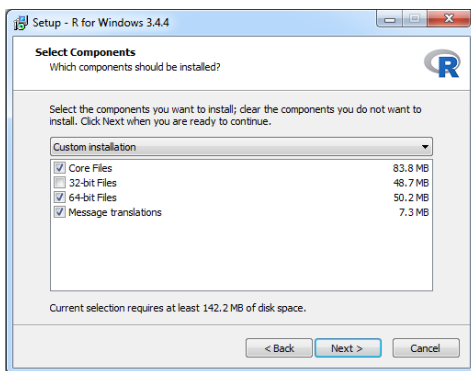
|   |   |
|---|---|
| Install R .....   | 3 |
| Install RStudio.....                                    | 3 |
| Configure ArcGIS for 64 bit Background Processing ..... | 4 |

# Install R

First, download and install R from this location (<https://cran.cnr.berkeley.edu/>). In this example, we're installing 64bit R for Windows, version 3.5.3 from the Berkeley CRAN mirror and installing to the default location: **C:\Program Files\R\R-3.5.3.**



Only the 64bit version of R is needed, so please make sure the 32bit Files are unchecked as shown below:



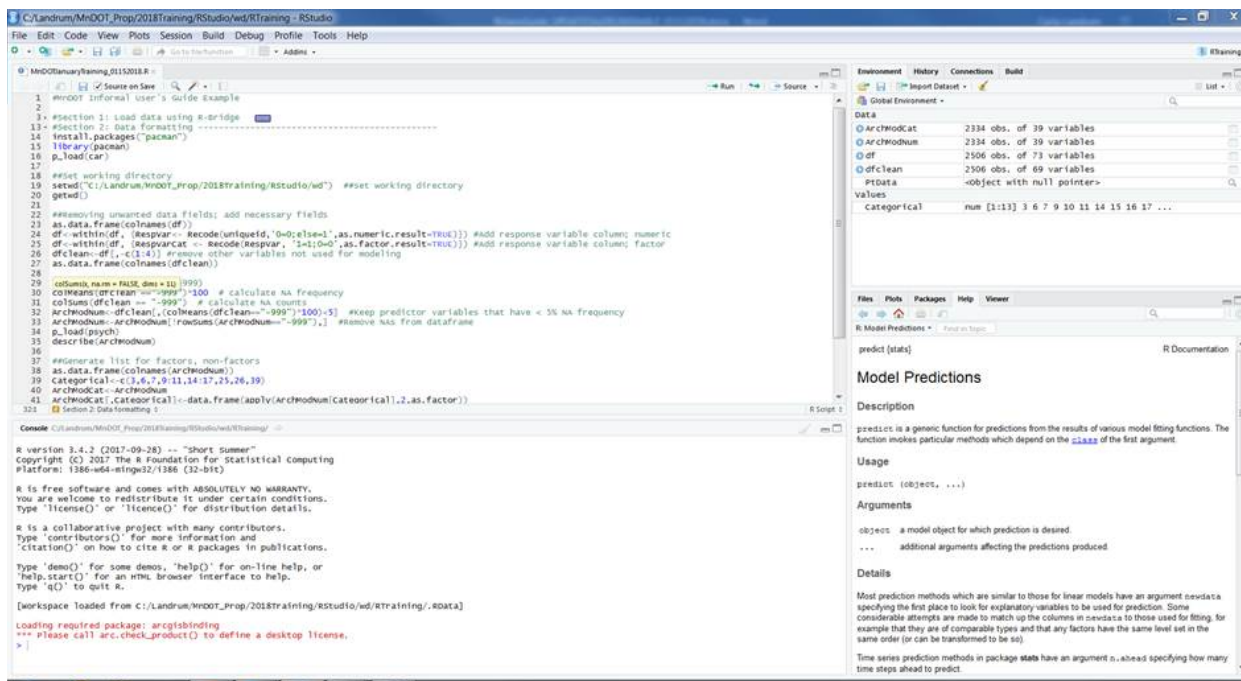
# Install RStudio

Note that the instructions below are for a standard installation of R Studio. To use R Markdown and the Reticulate package, which enables the Python-R communication, you must install the 'preview' version of RStudio. The link to this version is currently <https://www.rstudio.com/products/rstudio/download/preview/>.

1. Download and Install RStudio
  - <https://www.rstudio.com/products/rstudio/download/preview/>
  - Select RStudio Desktop RStudio 1.2.1322 - Windows 7+
  - This downloads **RStudio-1.2.1322.exe** (or a similar version number). A copy of the file has been saved to MNMODEL4\TOOLS\R\RStudio1\_2\_1322.

- Create a folder (C:\Program Files\RStudio) and copy RStudio-1.2.1322.exe into that folder.
- Right click on RStudio-1.2.1322.exe and select Run as Administrator.
- If necessary, changed the destination folder to C:\Program Files\RStudio\

2. Open RStudio. You should see an interface similar to the screenshots below.



## Configure ArcGIS for 64 bit Background Processing

To efficiently run the ArcGIS modeling tools, it is advisable to install 64bit background processing. Make sure the following items are set:

1. Install "ArcGIS\_Desktop\_BackgroundGP\_xxxx\_xxxxx.exe" for your corresponding version of ArcGIS Desktop. This enables 64bit background geoprocessing.

<http://desktop.arcgis.com/en/arcmap/10.3/analyze/executing-tools/64bit-background.htm>

<https://community.esri.com/thread/198607-where-can-i-download-arcgis-105-desktop-background-geoprocessing-64-bit>

*You must have an organization login on the ESRI web site to download this executable. Once downloaded at an organization, the executable can be saved to a server and installed on multiple computers.*

2. In ArcMap, on the main menu, go to Geoprocessing, then Geoprocessing Options and verify that background processing is Enabled:

