Live Training Seminar: Go Deeper with Data Analytics Using ArcGIS Pro and R

A Guide to the Materials Used

Before proceeding to the example, you must have the following installed on your computer:

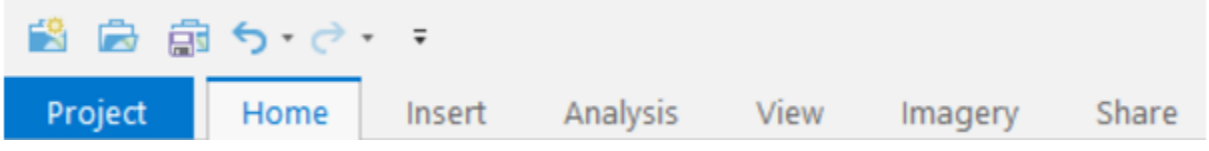
Prerequisites

1. ArcGIS 10.3.1+ or ArcGIS Pro 1.1+ (don't have it? try a free trial)
2. R Statistical Computing Software, 3.2.2+
    - 32-bit version required for ArcMap, 64-bit version required for ArcGIS Pro (Note: the installer installs both by default).
    - 64-bit version can be used with ArcMap by installing Background Geoprocessing and configuring scripts to run in the background.
3. RStudio Desktop Open Source Edition (optional)

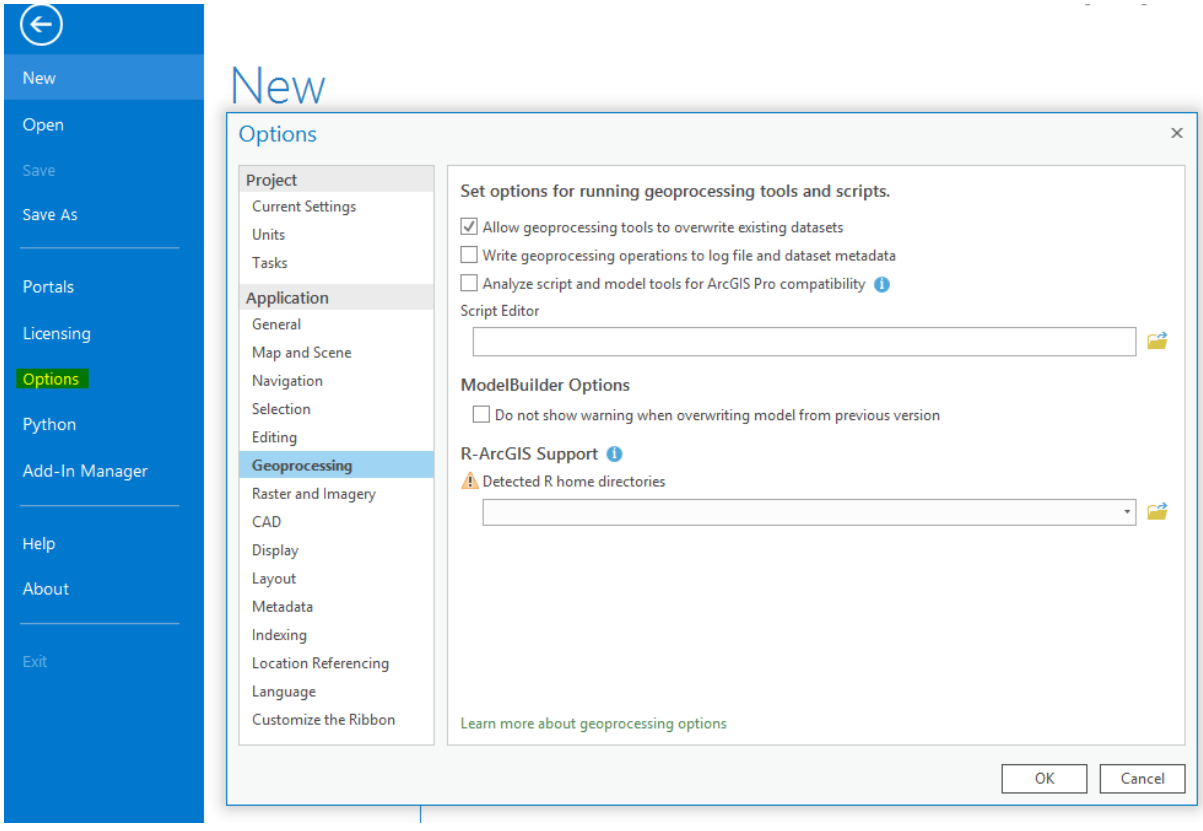
Setup Instructions

ArcGIS Pro 2.0

- Open ArcGIS Pro and click on the Project tab in your project.



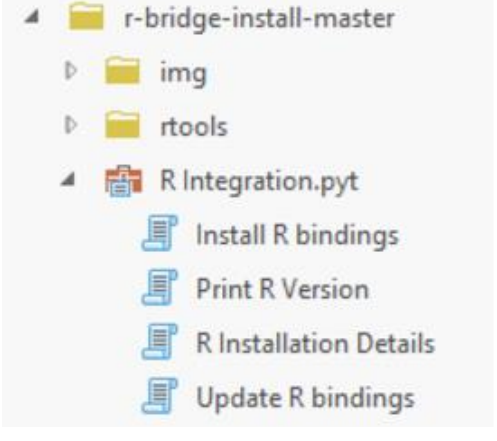
- Select Options on the blue left-hand side panel and in the pop-up window, under Application, select Geoprocessing.



- Under the R-ArcGIS Support options, select your desired R home directory. (*Note:* All versions of R installed on your computer will appear in the drop-down menu. Make sure the version you select is R 3.2.2 or later.)
- If you have previously installed the R-ArcGIS bridge, you will see an installed message that lets you know the version of your **arcgisbinding** package and allows you to check for updates, download the latest version, or update from a file. Check for updates and ensure you have the latest version of the **arcgisbinding** package. If prompted to update, click 'Yes' and the latest version will automatically be installed.
- If you have never installed the R-ArcGIS bridge, you will see a warning indicating that you need to install the **arcgisbinding** R package. As such, when you click on the icon next to the warning you will be presented with options to automatically download and install the **arcgisbinding** package, or to separately download the package, or to install the package from file. Select the first option to automatically download and install the **arcgisbinding** package.

ArcGIS Pro 1.1-1.4.1

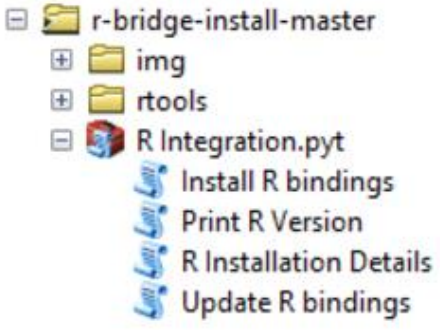
- Go to the R-ArcGIS bridge installation page and click the **Clone or download** button and select to **Download ZIP**.
- Locate the downloaded file on your computer. Right-click the **r-bridge-install-master** zipped folder and extract to a location you can easily find, such as your Documents folder.
- Open ArcGIS Pro and if necessary, click on the View tab to open the Catalog pane for your project.
- In the Catalog pane, navigate to and add a folder connection to the folder location you extracted to which contains the Python Toolbox, R Integration.pyt.
- Open the toolbox, which should look as seen below, to view the four script tools it contains:



- Run the Install R bindings script. You can then test that the bridge is able to see your R installation by running the Print R Version and R Installation Details tools, and running the included sample tools.

ArcGIS Map 10.3.1 or later

- Go to the R-ArcGIS bridge installation page and click the **Clone or download** button and select to **Download ZIP**.
- Locate the downloaded file on your computer. Right-click the **r-bridge-install-master** zipped folder and extract to a location you can easily find, such as your Documents folder.
- Open ArcMap and if necessary, click on the Windows tab to open the Catalog pane for your project.
- In the Catalog window, navigate to and add a folder connection to the folder location you extracted to which contains the Python Toolbox, R Integration.pyt.
- Open the toolbox, which should look as seen below, to view the four script tools it contains:



- Run the Install R bindings script. You can then test that the bridge is able to see your R installation by running the Print R Version and R Installation Details tools, and running the included sample tools.

Background information on the materials

These materials were used during the live training seminar on the R-ArcGIS bridge called: Go Deeper with Data Analytics Using ArcGIS Pro and R. This seminar focused on how to connect ArcGIS data and geoprocessing tools with R's advanced statistical functions. It showed how by using the R-ArcGIS bridge, you can easily transfer data between ArcGIS Pro and R. It also covered how to access R's powerful statistical functions from within ArcGIS Pro to perform an analysis unique to R and how R users can easily access geospatial data and take advantage of the advanced visualizations and geoprocessing capabilities of ArcGIS Pro.

To see the full 1-hour seminar, you can access the recorded video here.

The materials provided with the live training seminar include:

- ### Logistic Regression R Script Tool Wrappings

  The R script used to create the logistic regression script tool shown and run in the seminar.

- EMUs Florida Subset Data with Seagrass Indicator

  The data set used in the seminar that contains both ecological marine unit (EMUs) information and an indicator column for seagrass locations around the coast of Florida.

- Logistic Regression ArcGIS Script Tool Toolbox

  The toolbox used during the seminar with the customized logistic regression tool user interface and script tool properties.

- LogisticRegression.aprx

  An ArcGIS Pro project that includes the data and the logistic regression script tool toolbox.