Introduction to VA Analysis R Shiny App

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1 Introduction

2 Background

Check out the vignette for **openVA**.

3 Installing and Starting R Shiny App for Windows 10

3.1 Quick Version

Download the R Shiny zip file at

https://github.com/jarathomas/openVA-Pipeline/tree/master/RShinyApp/shiny-openVA.zip

and unzip it – the contents should include two files: (1) shiny-openVA.R (R Shiny script file) and (2) CrossVA_0.9.3.zip (an R package).

1. Install Java (https://java.com/en/download/)
2. Download the R executable (with same architecture as Java, e.g., 64-bit) from https://cran.r-project.org/bin/windows/base/ and double-click the file to install R
3. Start R and install the necessary packages by typing the following in the R Console window at the prompt >

   ```
   install.packages(c("openVA", "shiny", "shinyjs"), dependencies=TRUE)
   ```

   A new window should appear asking the user to select a Secure CRAN mirror, and the installation will begin after clicking the Ok button.
4. Install the CrossVA package (included in the R Shiny zip file) by clicking, in the R menu bar, **Packages > Install package(s) from local files . . .** then select the CrossVA_0.9.3.zip file (you may need to navigate to the folder where the R Shiny zip file was downloaded) and click the open button at the bottom-right of the Select files window.

5. Open the shiny-openVA.R script (included in the R Shiny zip file) through the R menu bar **File** > **Open Script . . .** then select the shiny-openVA.R script file and click the open button at the bottom-right of the Open script window. This step should open a new R Editor window.

6. Make sure the focus is on the R Editor window (by clicking on it) and run the shiny-openVA.R script through the menu bar **Edit** > **Run all** which will execute the code (in the R Console) and open your web browser with the R Shiny app.

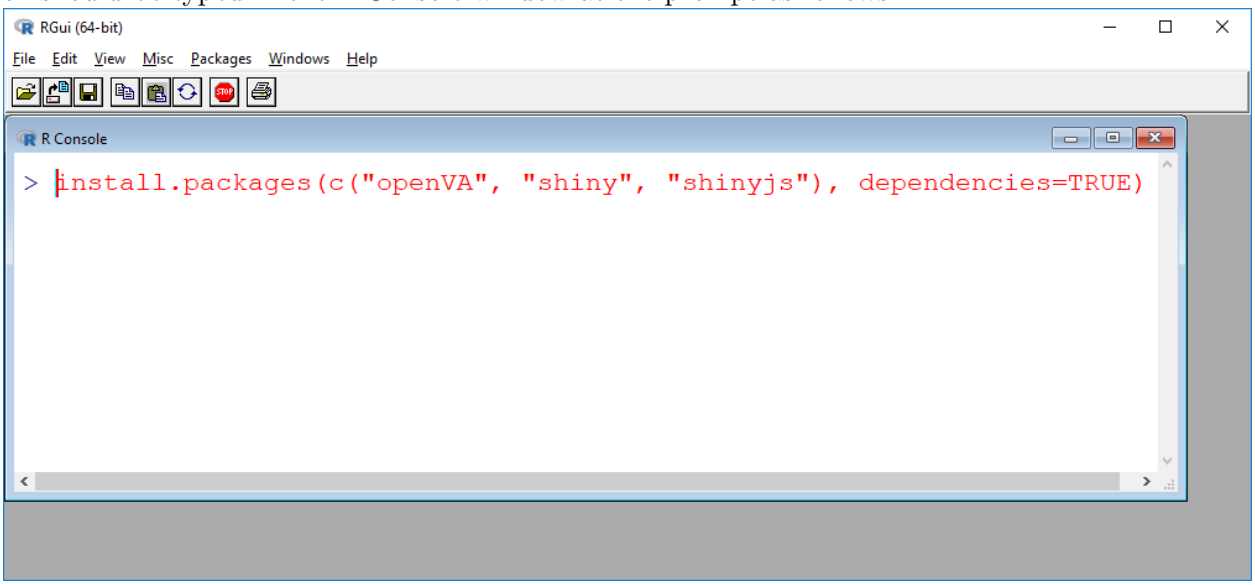
3.2 More Details

The R software is available for download from the Comprehensive R Archive Network (CRAN) https://cran.r-project.org/bin/windows/base/. Installation instructions are also available from CRAN, but the process should be familiar: download the executable file (ending in .exe and double-click the file. The R Shiny app uses several packages, one of which requires Java (version 6 or above) to be installed on your computer (https://java.com/en/download/). It is not unusual to experience difficulties while trying to configure R to work with Java. For more details about the configuration procedure, see the InSilicoVA manual (https://github.com/richardli/InSilicoVA/blob/master/Documents/Insilico-manual.pdf).

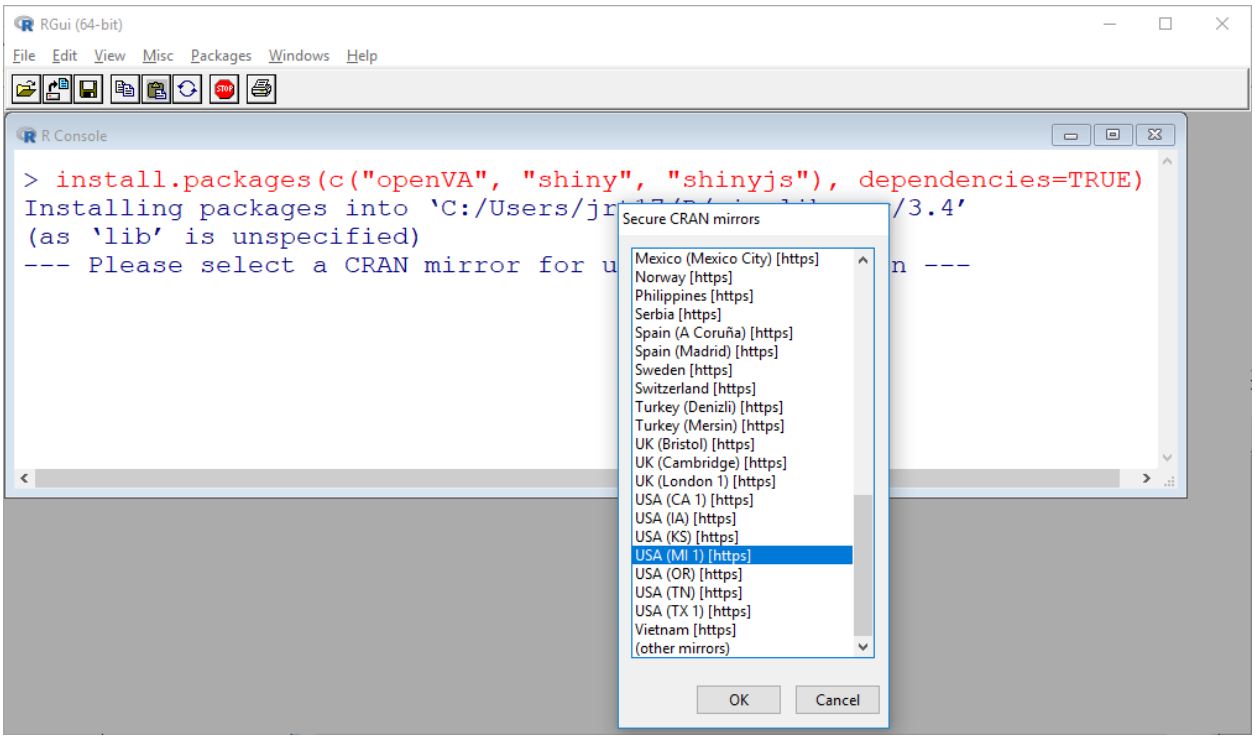
After Java and R have been installed, the next step is to install R packages that contain the tools needed for the Shiny app to run. Start the R Gui by double-clicking the icon and install the necessary packages with the command

```
install.packages(c("openVA", "shiny", "shinyjs"), dependencies=TRUE)
```

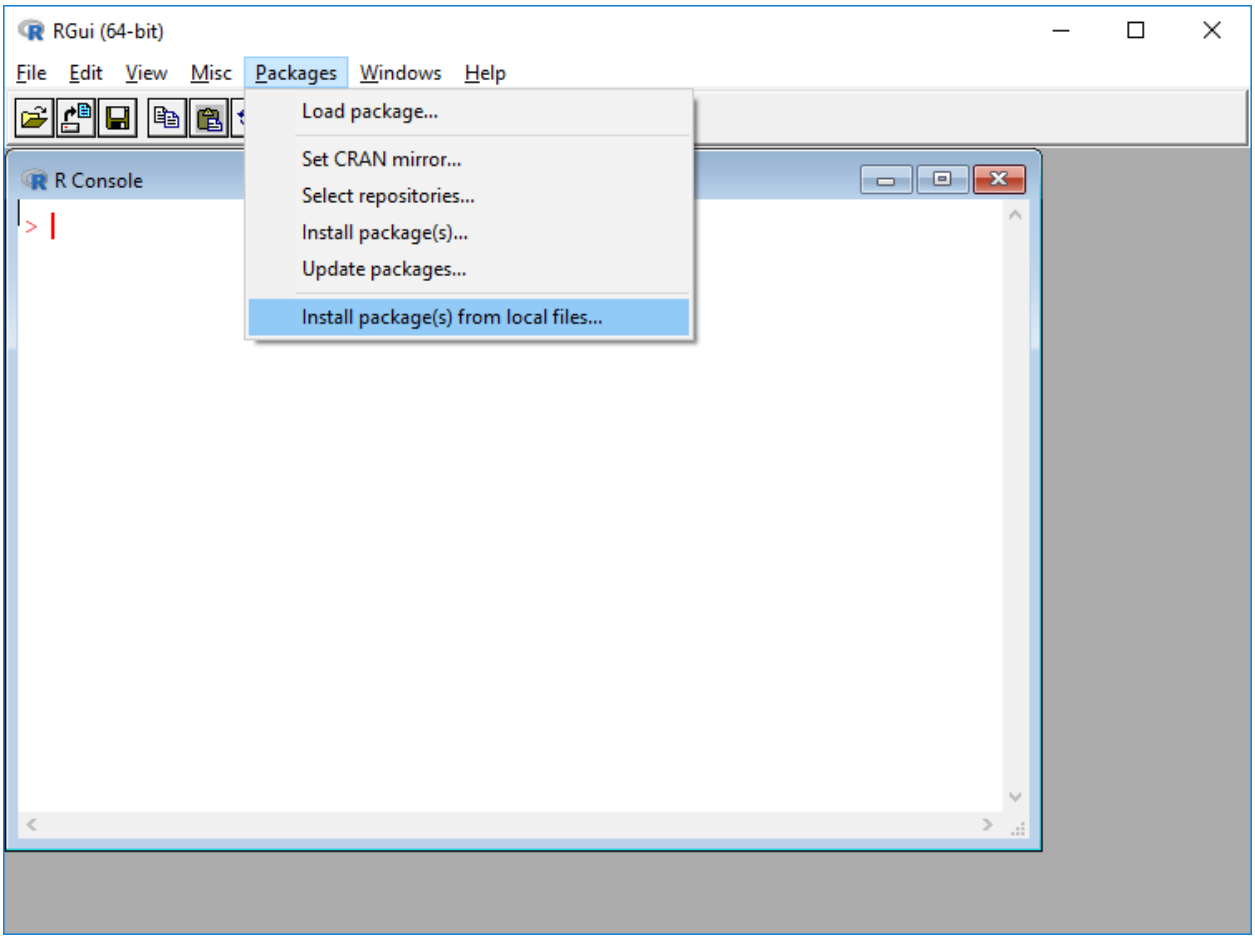
which should be typed in the R Console window at the prompt as follows:



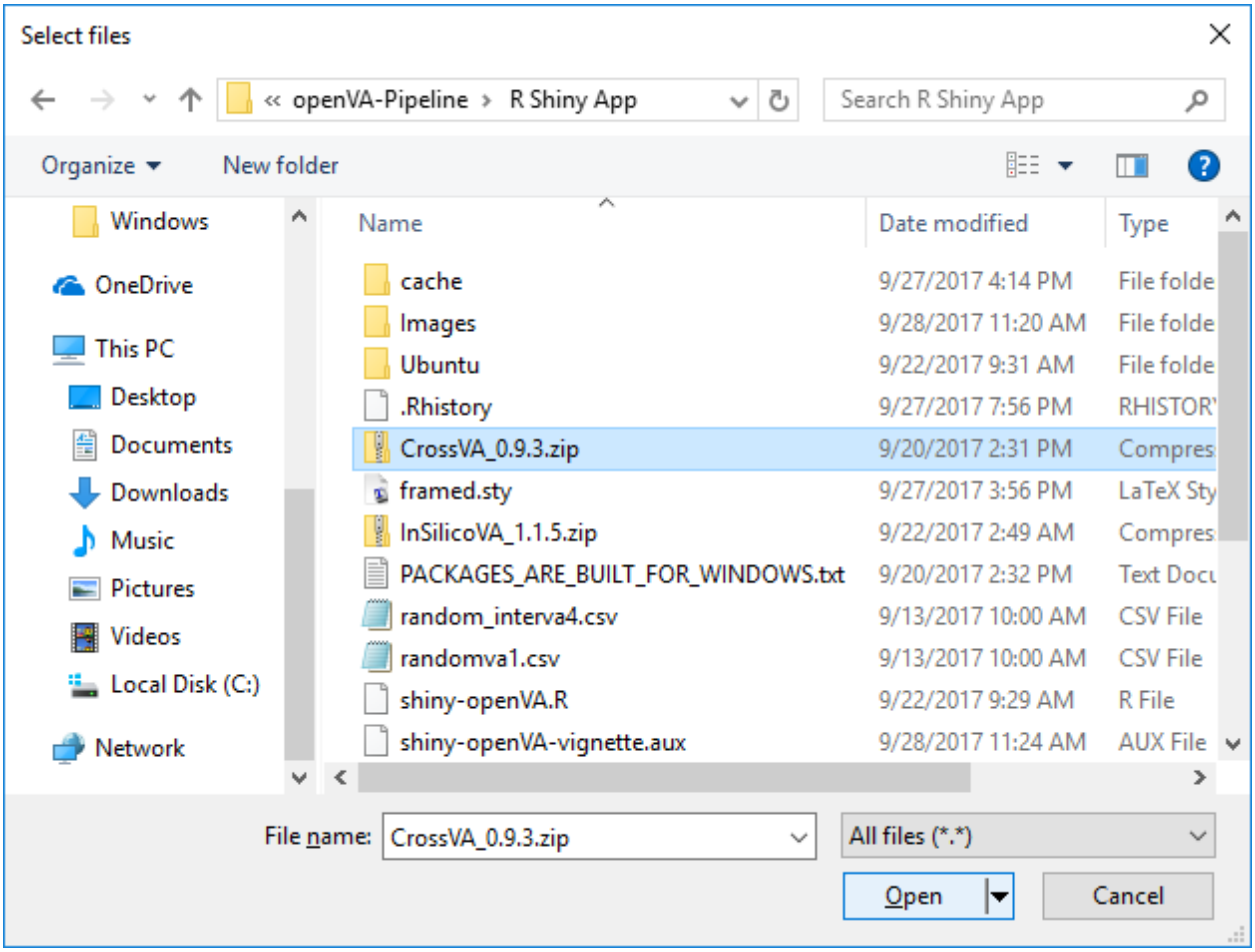
A new window should appear asking the user to select a Secure CRAN mirror (choose a CRAN mirror near your location), and the installation will begin after clicking the Ok button.



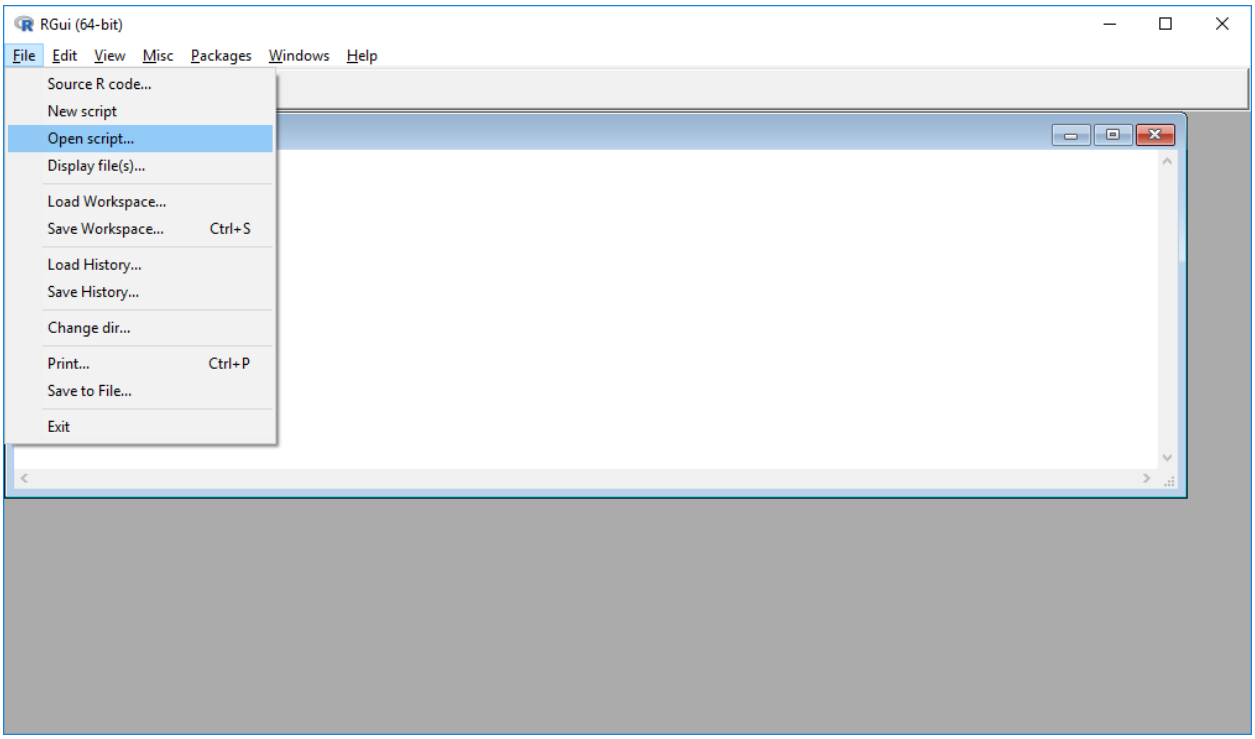
You will see A LOT of text scrolling in the R Console which describes the installation of the numerous packages the Shiny app needs. A modified version of the CrossVA package also needs to be installed with the following three steps: (1) select the R menu bar options **Packages** > **Install package(s) from local f**



(2) select the CrossVA_0.9.3.zip file (you may need to navigate to the folder where the R Shiny zip file was downloaded); and (3) click the open button at the bottom-right of the Select files window.

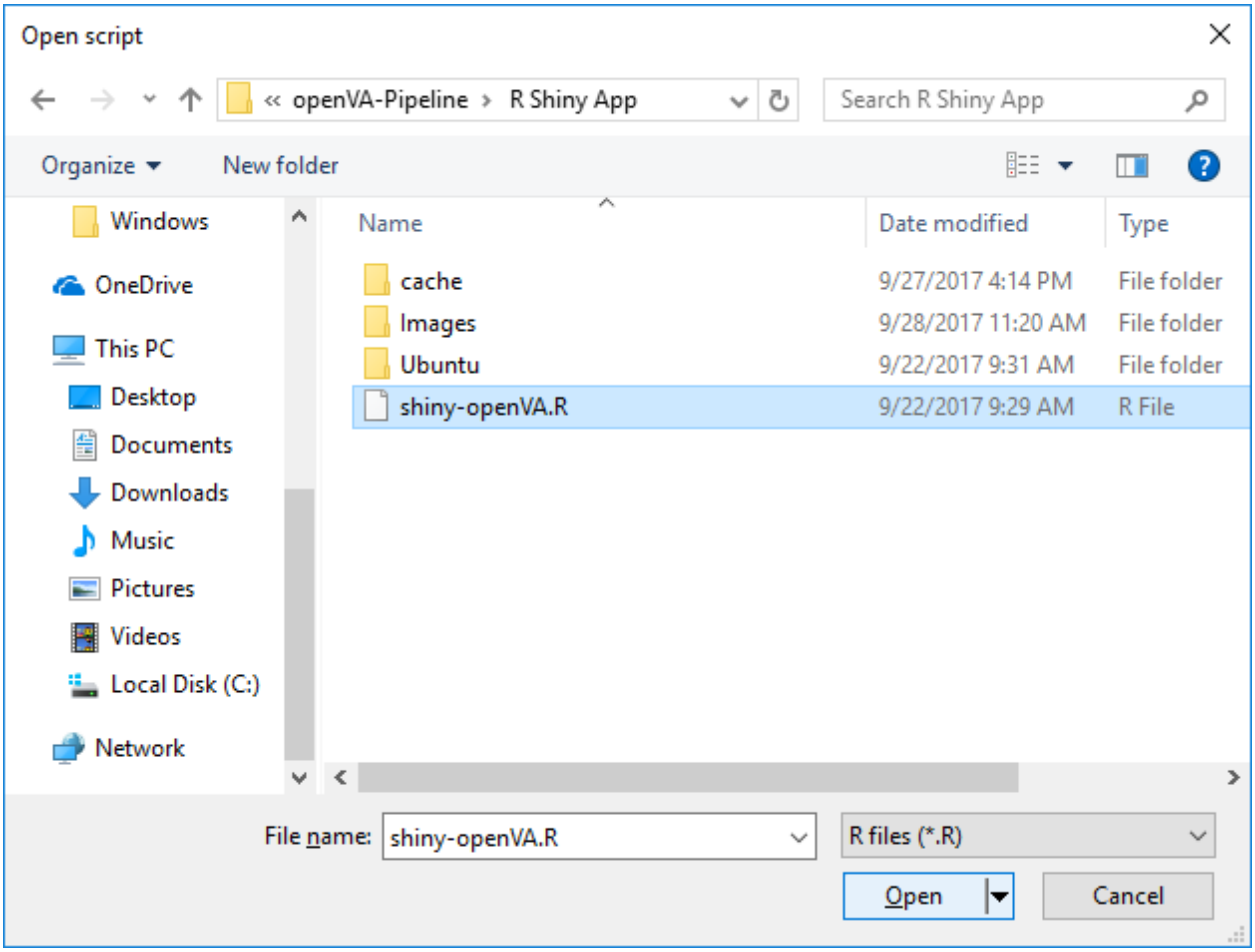


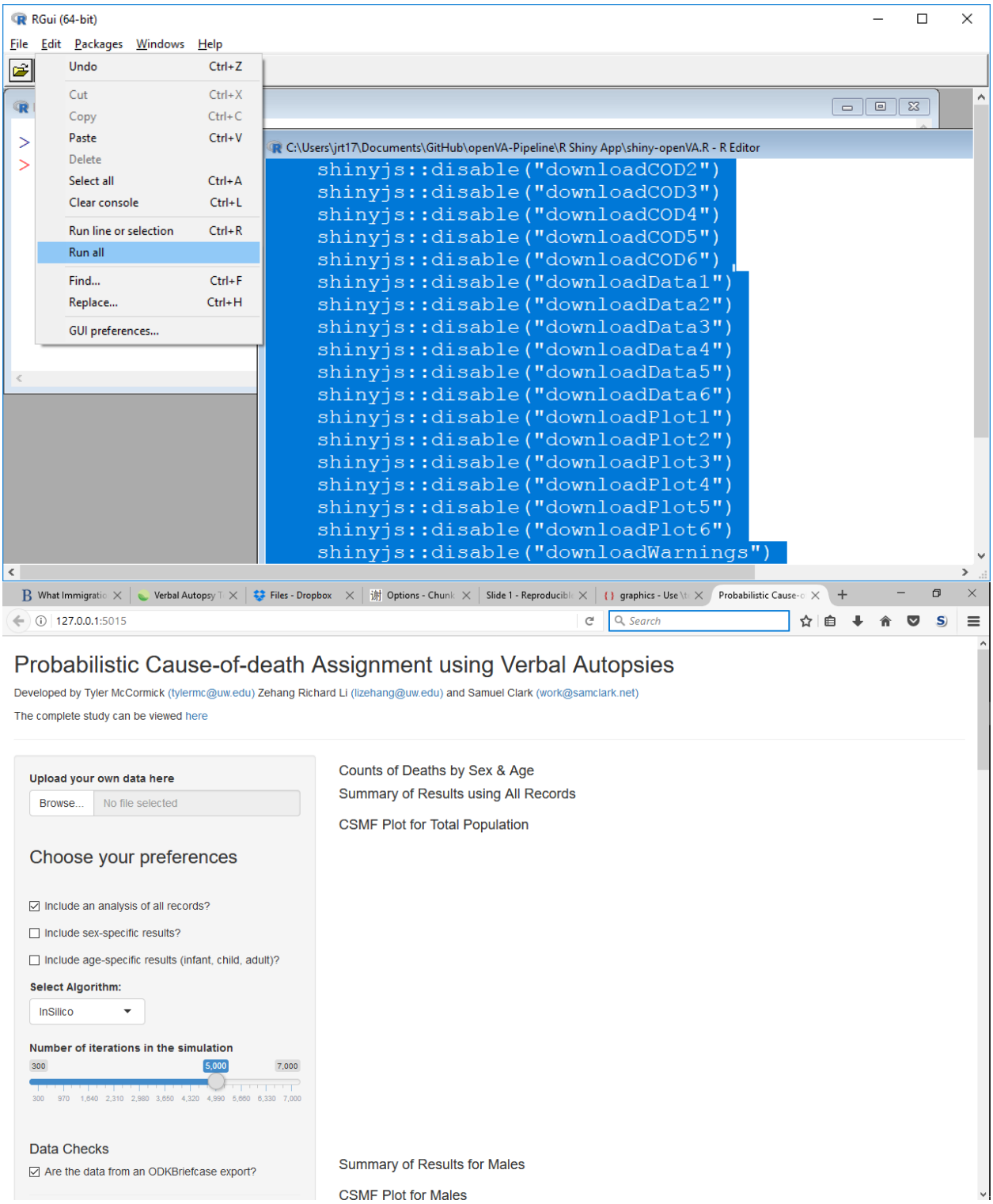
Next open the shiny-openVA.R script (included in the R Shiny zip file) through the R menu bar **File > Open Script . . .**



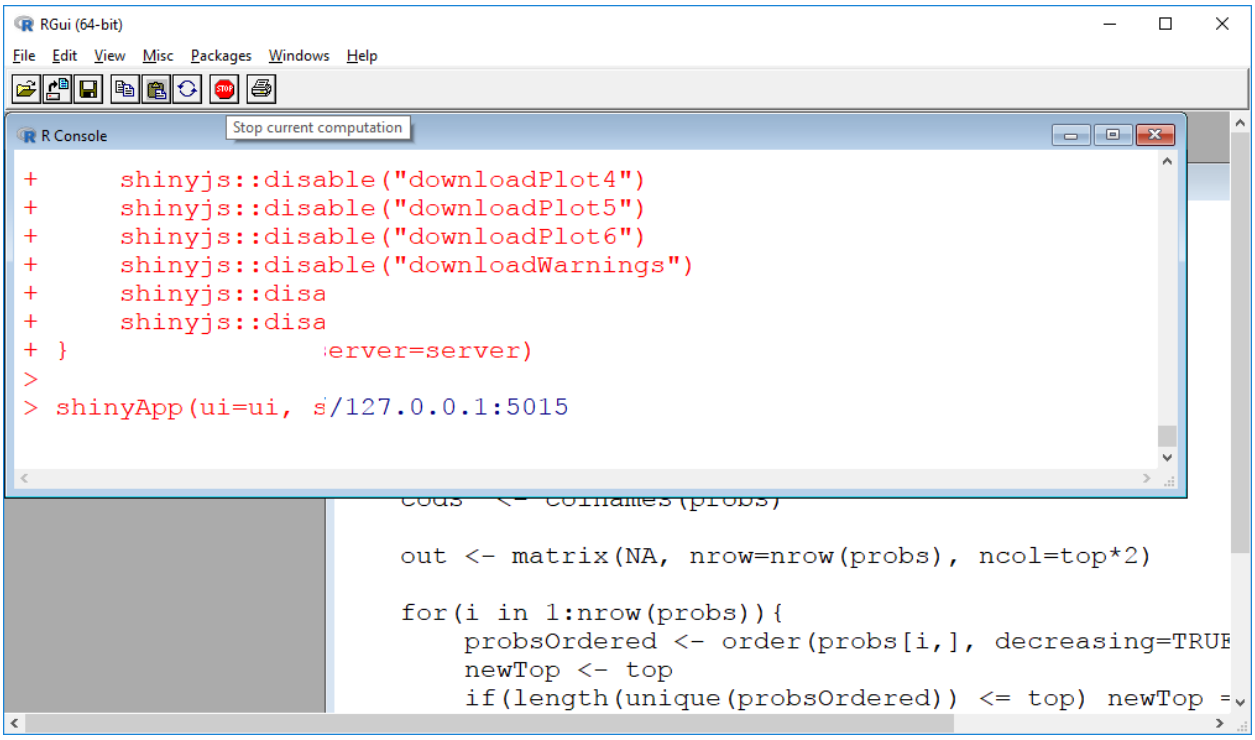
then select the shiny-openVA.R script file and click the open button at the bottom-right of the Open script window.

This step should open a new R Editor window. Make sure the focus is on the R Editor window (by clicking on it) and run the shiny-openVA.R script through the menu bar **Edit** > **Run all** which will execute the code (in the R Console) and open your web browser with the R Shiny app.


Open script
« openVA-Pipeline › R Shiny App
Search R Shiny App
Organize
New folder
Windows
OneDrive
This PC
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Network
Name
Date modified
Type
cache
9/27/2017 4:14 PM
File folder
Images
9/28/2017 11:20 AM
File folder
Ubuntu
9/22/2017 9:31 AM
File folder
shiny-openVA.R
9/22/2017 9:29 AM
R File
File name:
shiny-openVA.R
R files (*.R)
Open
Cancel



Stop the Shiny app.



4 Using the R Shiny App

4.1 InSilicoVA

4.2 InterVA