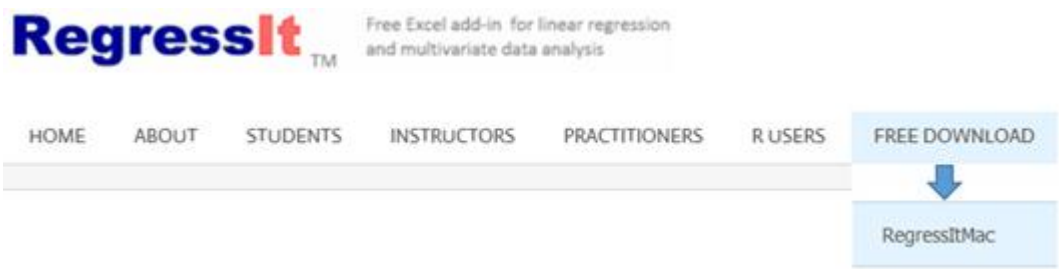


RegressItMac installation and test instructions[1]

RegressItMac is the Mac version of **RegressIt**, a free Excel add-in that is vastly more powerful and also more user-friendly than the regression tool in the Analysis Toolpak that comes with Excel. The program can be obtained at **https://regressit.com**, along with extensive documentation and examples of analysis. The top menu of the website is shown above. Here are instructions for how to download and install and test the program.

1. Create a new folder in which to store your RegressIt files. It is recommended that you create a new folder called **RegressIt** in the Documents folder, and download the program file and its documentation and test files there. This will make it easy to find in the future if you need to update files. You can store your own data and analysis files elsewhere.

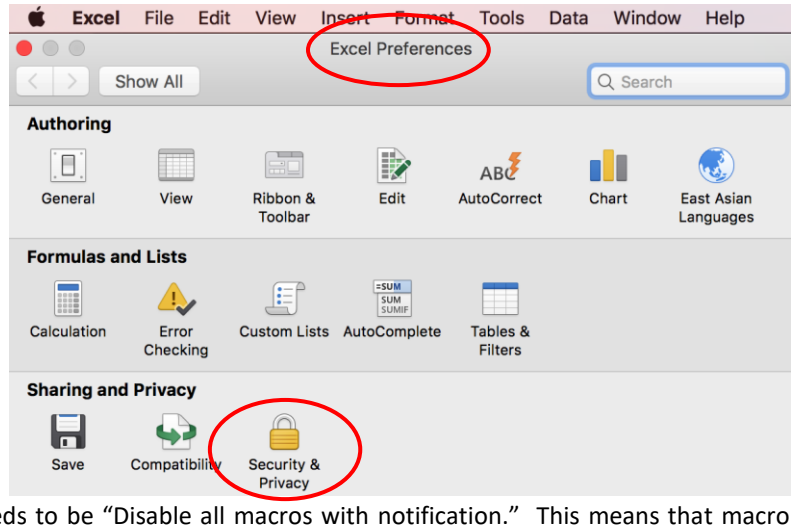
2. Go the Mac download page on the RegressIt web site and click on each file you wish to download, which will save it to your downloads folder. You can either download the program file and documentation and data files separately, or you can download them all at once by using the zip file option. Then use Finder to go to the downloads folder and copy and paste the files to the new RegressIt folder. The zip file option maybe necessary if the program file will not download or if it fails to launch because of security software that prevents the use of a downloaded executable file.

3. If you are using a recent-model Mac with the M1 chip, you will need to use the "Rosetta 2" emulator to run the program, otherwise it will crash when running an analysis. Before using it for the first time, use Finder to navigate to the folder where the RegressItMac.xlam file is stored, click on it to select it, choose File/Get Info from the menu, and check the box for "Open using Rosetta."

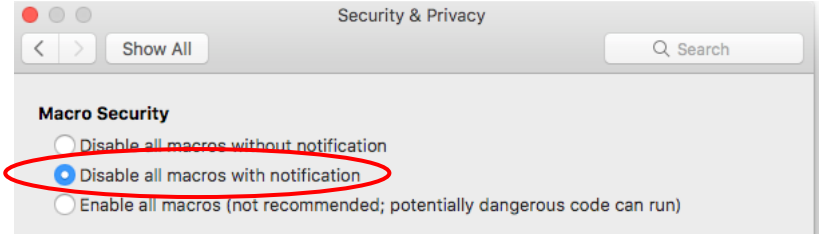
4. Launch Excel and open the test file (the one with data and models). If you do not open an Excel workbook file first, you will not see the Preferences option on the Excel menu. Also, the RegressIt tab will not appear on the ribbon when the program first loads. It will be running, but you won't see it until a workbook is opened. **Alternatively you can open a data file of your own to begin your analysis. A new data file should contain a single worksheet on which data is arranged columnwise with variable names in the first row. The names should contain only letters, numbers, spaces, and/or periods.** Before using it for the first time you will need to hit the Select Data and Create Names buttons on the RegressIt menu to assign variable names (Excel range names). Choose only the "Top Row" option when doing this.

5. Check your macro security settings. Go to **Excel/Preferences/Security and Privacy** on the menu.

[1]October 14, 2021

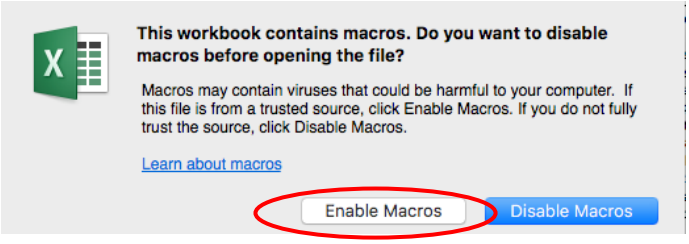


The security setting needs to be "Disable all macros with notification." This means that macro files are not enabled by default, but you will have the option to enable them when they are loaded. Probably it is already set this way.

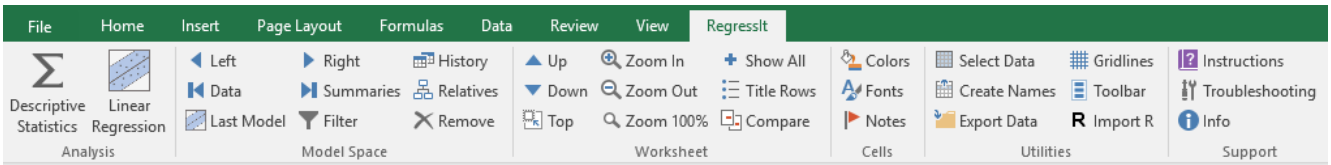


6. If your Mac's native language is not English and/or if your usual number format uses a comma instead of a period for the decimal separator, see the separate document on "RegressItMac language and number format" settings.

7. Open the RegressItMac.xlam program file. You should get an pop-up box with a scary message that says "Microsoft has identified a potential security concern" (namely that you are trying to open an executable file). Click "Enable Macros".



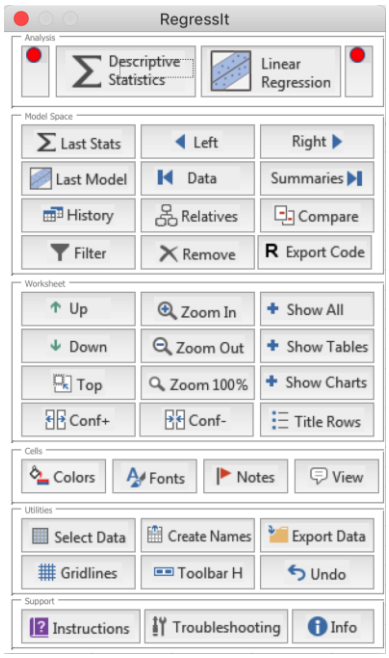
You should then see a RegressIt tab appear on the Excel top menu, with this ribbon:



Note: this menu will not appear unless and until a data file has also been loaded.

It is also possible to install RegressIt on your add-ins menu so that it will load automatically in each Excel session without the security prompt. See point #12 on page 6 in this document for details.

8. Click the "Toolbar" button, which will launch the vertical floating toolbar. (This step is just to illustrate the alternative menus.) The vertical floating toolbar can also be launched by hitting Control-G. **If the RegressIt ribbon does not appear after you have loaded your data file and opened and enabled the program file, then you should hit Control-G to see if it is actually running.** It is possible that the ribbon isn't working but the program is otherwise active. If that is the case, you will still have its full functionality. There is also a **horizontal** version of the floating toolbar which is launched from the "Toolbar H" button on the vertical toolbar. (After opening this you can close the vertical one.) The horizontal toolbar can be placed below the Excel window if that location is preferred. **When using one of the floating toolbars, you can temporarily hide the ribbon by clicking the "Collapse the ribbon" button at its right end.**



The vertical and horizontal floating toolbars are alternatives to the ribbon which can be placed to one side or below the Excel window, and they have bigger buttons which may be better for use on touchscreens.

A fully detailed analysis can be driven on a tablet or touchscreen computer by tapping your finger on the screen. No typing is needed unless you want to customize the names of analyses.

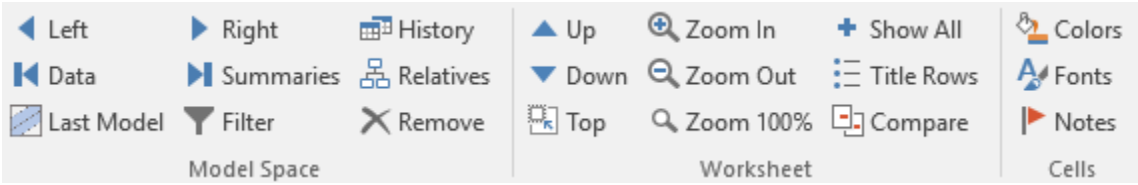
You can close the toolbar by clicking on any of the 3 red buttons. The reason there are 3 of them is that depending on where you have moved the toolbar, some of them may not be visible or not responsive.

9. In the test models file, follow the instructions on the data worksheet to re-run all the analyses. You just need to go to each analysis worksheet and re-run it by clicking Descriptive Analysis or Linear Regression and then hitting Run.

a. **Re-run the Stats 1 analysis**. Go to its worksheet, hit the Descriptive Statistics button on the ribbon, then hit the Run button to re-run it with the same output selections. The default name assigned to the new analysis will be Stats 3. Watch the progress reports in the status bar in the lower left corner of the screen. When it is finished it will say "Finished with output for Stats 3." By default, all the tables and charts on the new worksheet will be hidden at first , and only their title rows will appear. This is done because there could potentially be very large tables or very large numbers of charts. **Click the "Show All" button on the ribbon to unhide all the output**. The hit the Last Stats button to toggle back and forth between the new analysis and original one. They should look identical. (Normally you will use this button to jump to the last viewed stats sheet from a regression model sheet.)

b. After running the Stats 1 analysis, **save the file under a new name (say, RegressItMacTest1)**, and save it again after each new analysis is run so that you will have a backup point in case anything goes wrong. (You don't need to change the name on each subsequent run if it ran OK.) Next, **go to the other descriptive stats worksheets and the regression model worksheets and re-run them.** For the regression models you will hit Linear Regression button on the ribbon, followed by Run. When Model 1.0 run is re-run, the default name of the new model will be Model 1.1, and so on.

10. Also play with the model space and worksheet navigation buttons on the ribbon to fully explore the output.

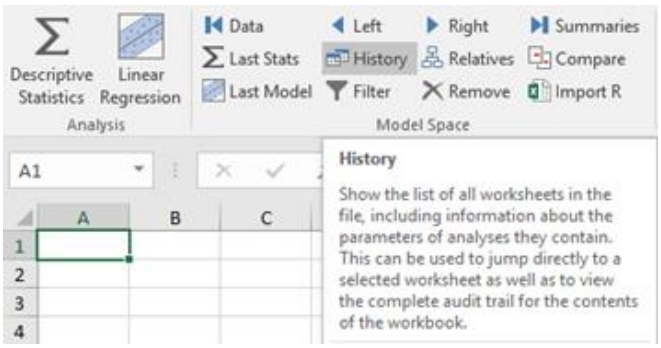


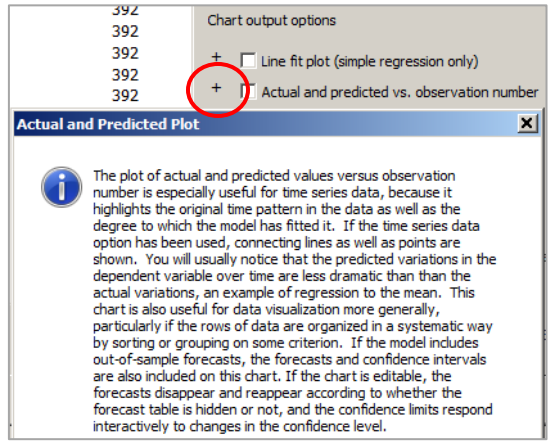
The **VCR buttons** move you to the left or right in the file one sheet at time, or jump directly to the data sheet (first sheet) or the Model Summaries sheet (last sheet). The Model Summaries sheet contains a complete audit trail for all the models that are currently in the file or were previously present in the file, with side by side statistics in journal article format, suitable for presentation. The **Last Model** button allows you to toggle back and forth to the last model sheet you were on, useful for model comparisons. The **History** and **Relatives** buttons allow you to navigate the analysis trail by random access or by parent-child model connections.

The **Up and Down arrows** move you up or down a worksheet by whole table or whole chart, so the topmost one is always aligned with the top of the window. (This also minimizes redrawing time for charts as you are scrolling.) The **Zoom** buttons zoom *all the worksheets in the file at once*, in predefined steps, which is useful for adapting the view to a new monitor or projector as well as examining results more closely . The **Compare** button resets the viewpoint of all *other* worksheets so that the same table or chart is at the top of the screen for comparison when flipping back and forth. The **Show-All** button shows or hides all tables and charts. The **Titles** button shows or hides the title rows above tables and charts. *If you show the title rows while hiding all tables and charts, you see an outline view of the contents of the workbook*.

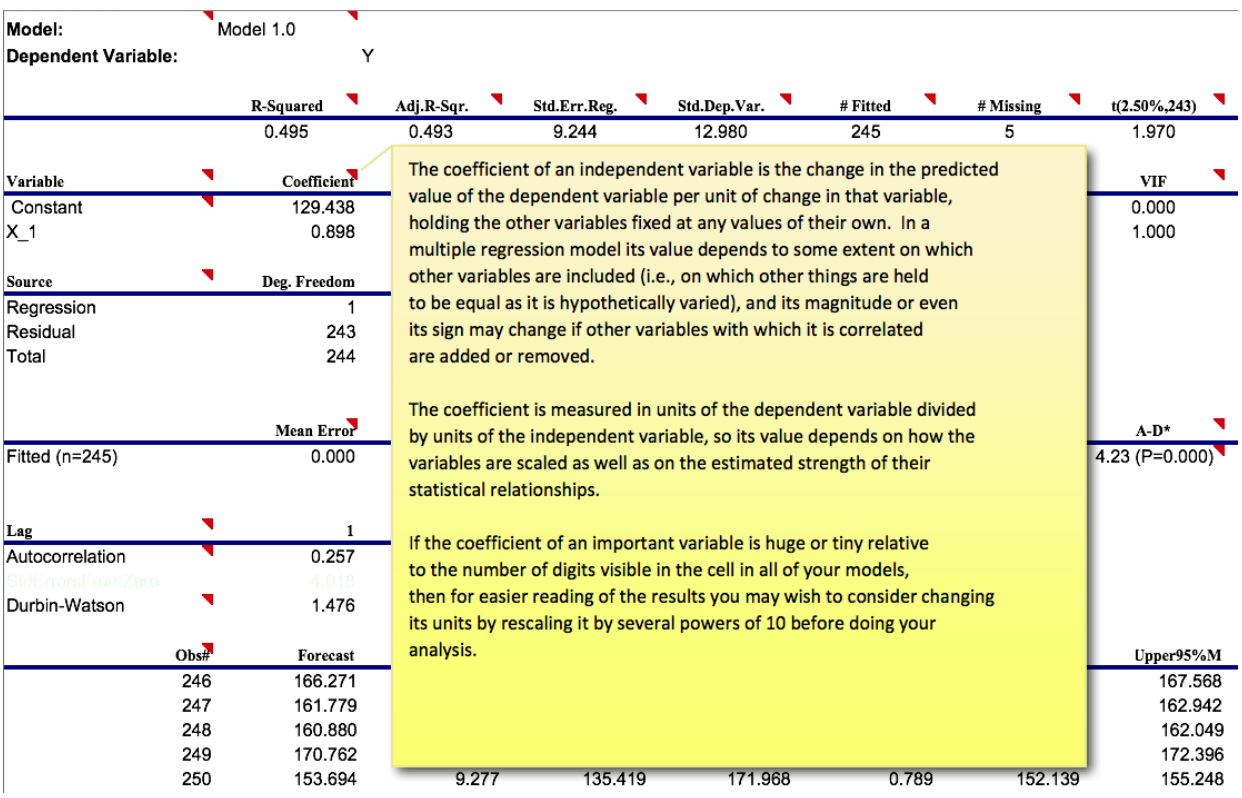
The **Colors** and **Fonts** buttons turn color and fond coding on and off, and the **Notes** button turns on and off the red flags that indicate the presence of *teaching notes* in cells. If you hover the mouse over a cell with a red flag, the note will pop up.

11. Notice that there are 3 layers of internal documentation in RegressIt, which provide you with explanations of the program features as well as instruction in linear regression analysis. First, if you hold the mouse over one of the buttons on its ribbon, you will see a pop-up box with a brief description of its function. Second, if you click the plus (+) symbols in the Linear Regression dialog box, you will see pop-up boxes with fairly detailed descriptions of the model options





Third, if you choose the teaching-notes option when running the model, the output worksheet will contain teaching notes in the form of cell comments attached to title rows and column headings. The presence of a cell comment is indicated by a red flag that appears in the corner of the cell. (Click the Notes button on the ribbon to toggle the flags on and off, as mentioned above.) If you move the mouse over a cell that contains a comment (when its flag is on), or if you click on the cell and hit the View button on the ribbon, you will see it displayed. *At present there are about 10,000 words of internal documentation and teaching notes*.



Model: Model 1.0
Dependent Variable: Y

R-Squared	Adj.R-Sqr.	Std.Err.Reg.	Std.Dep.Var.	# Fitted	# Missing	t(2.50%,243)
0.495	0.493	9.244	12.980	245	5	1.970

Variable	Coefficient	VIF
Constant	129.438	0.000
X_1	0.898	1.000

Source	Deg. Freedom
Regression	1
Residual	243
Total	244

	Mean Error	A-D*
Fitted (n=245)	0.000	4.23 (P=0.000)

Lag	1
Autocorrelation	0.257
Durbin-Watson	1.476

Obs#	Forecast						Upper95%M
246	166.271						167.568
247	161.779						162.942
248	160.880						162.049
249	170.762						172.396
250	153.694	9.277	135.419	171.968	0.789	152.139	155.248

The coefficient of an independent variable is the change in the predicted value of the dependent variable per unit of change in that variable, holding the other variables fixed at any values of their own. In a multiple regression model its value depends to some extent on which other variables are included (i.e., on which other things are held to be equal as it is hypothetically varied), and its magnitude or even its sign may change if other variables with which it is correlated are added or removed.

The coefficient is measured in units of the dependent variable divided by units of the independent variable, so its value depends on how the variables are scaled as well as on the estimated strength of their statistical relationships.

If the coefficient of an important variable is huge or tiny relative to the number of digits visible in the cell in all of your models, then for easier reading of the results you may wish to consider changing its units by rescaling it by several powers of 10 before doing your analysis.

12. A few secrets that apply to the Mac:

a. **Do not hit any keys on the keyboard while an analysis is running**, because this may cause a crash. Be patient and watch progress messages flash by in the status bar at the lower left corner of the screen. It is OK to touch the mouse while a procedure is running, although it won't have any effect on RegressIt until the analysis is finished.
b. If the worksheet or the Excel menu ever **freezes** at any time, **jiggle the mouse or jiggle the worksheet slightly with your finger on top of mouse**. It is possible that the program is waiting for a screen update operation to be performed, and this should do it.
c. If your Mac is one that has the newer M1 chip and the program crashes right after hitting "Run" to run a descriptive analysis or regression model, you probably have not yet chosen the open-with-Rosetta option. Use Finder to navigate to the folder where the RegressItMac.xlam file is stored, click on it to select it, choose File/Get Info from the menu, and check the box for "Open using Rosetta
d. **Whenever a crash occurs,** it is advisable to restart Excel and back up to an earlier working version of the file. However, it may be possible to rescue the existing file as follows. If a new worksheet called "_running_" appears at the very left (first sheet), delete it. Then go to Formulas/Define Names to look at the list of named variables. If you see any whose names begin with "_running_", delete those by using the "-" button under the name list. Then save the file under a new name, restart Excel, re-load the file, and try to continue your analysis.
e. If no Excel file is open but a floating toolbar or other Regressit dialog box still appears on the screen, and you are unable to cancel out of it, **open a data or model file** and **then** try to close it.
f. If neither the ribbon nor a floating toolbar is visible, but the program is believed to be running, hit **Control-G**. This will launch the vertical floating toolbar.
g. If Excel appears to be locked up (i.e., if jiggling the mouse or moving the worksheet slightly or clicking on a cell or opening a file or checking behind the Excel window for an open dialog box doesn't work), and/or if the little colored wheel has been spinning for an inordinately long time, then you may have to force Excel to close (sorry!) by using the Activity Monitor (found in the Apps/Utilities folder) or by htting Cmd-Option-Escape. You should save your file frequently, and include an updated version number in the file name when doing so if you have added very much since the last version change, as a hedge against this possibility. Also please note that RegressIt is not super-fast if the data set is very large (tens of thousands of rows or more), so be patient if the colored wheel spins for a while when an analysis first starts running.
h. The interface for generating R code may occasionally appear to get stuck, i.e., the R code dialog box may appear to freeze. What is probably happening is that Excel is asking for permission to write the script file. (This doesn't always happen, just once in a while.) Try closing and reopening the RegressIt dialog boxes and look for a system prompt to grant file access.
i. See the **support page** on the web site (https://regressit.com/support.html) for details of other issues that may arise.

13. Installation on the add-ins menu? Caution! It is possible to add RegressIt to your official Excel add-ins menu on a Mac so that it can autoload without the Enable-macro prompt. To do so, go to **Tools/Excel Add-ins** on the menu and browse to the RegressItMac.xlam file and choose it. However, it is recommended that you NOT do this, at least not while you are still deciding whether you will use it very often. It's not hard to go to the RegressIt folder (or the desktop if that is where you have placed it) and open its file on the occasions when you want to use it. If you do choose to install it on the add-ins menu at some point, *don't install it multiple times under different names or in different location*s. If you need to upgrade to a new version, replace the originally installed file with another copy with the same name in the same location. **Be aware that on a Mac it is impossible to remove the name of a previously installed third-party add-in from the add-ins menu, even if its file is later deleted.**