# 19 Updating and extending Stata—Internet functionality

## Internet functionality in Stata

Stata works well with the Internet. Stata can use datasets and view remote help files as though they were on your computer. Stata also can keep itself up to date (with your permission, of course). Finally, you can install community-contributed commands, which are commands that extend Stata's functionality. These are commands that have been presented in the *Stata Journal* (SJ) or have simply been written and shared by the greater Stata community.

This chapter will show you how you can expand Stata's horizons.

## Using files from the Internet

Stata understands URLs as though they were local file locations. If you know of a file on the web that you would like to use, be it a dataset, a graph, or a do-file, you can easily open it in Stata. Here is a small example.

There are many datasets at https://www.stata-press.com/data/. Suppose that you would like to use the `census12` dataset used in [U] **11 Language syntax** and that you know that its location is https://www.stata-press.com/data/r18/census12.dta. Because you know that the command for opening a dataset is `use`, you could type the following:

```
. use https://www.stata-press.com/data/r18/census12.dta
(1980 Census data by state)

. describe

Contains data from https://www.stata-press.com/data/r18/census12.dta
 Observations:            50                  1980 Census data by state
    Variables:             7                  6 Apr 2022 15:43
─────────────────────────────────────────────────────────────────────
Variable        Storage   Display    Value
    name           type    format    label     Variable label
─────────────────────────────────────────────────────────────────────
state           str14     %14s                 State
state2          str2      %-2s                 Two-letter state abbreviation
region          str7      %9s                  Census region
pop             long      %10.0g               Population
median_age      float     %9.2f                Median age
marriage_rate   float     %9.0g
divorce_rate    float     %9.0g
─────────────────────────────────────────────────────────────────────
Sorted by:
```

This functionality is everywhere in Stata. Any command that reads a file with a *filename* in its syntax can use a web address as easily as a file that is stored on your computer.

This example used the HTTPS protocol for retrieving the file. Stata also understands the HTTP and FTP protocols.

## Official Stata updates

By official Stata, we mean the pieces of Stata that are provided and supported by StataCorp. The other and equally important pieces are the community-contributed additions published in the SJ, distributed over Statalist, or distributed in other ways.

Stata can fetch both official updates and community-contributed commands from the Internet. Let's start with the official updates. StataCorp often releases updates to official Stata. These updates add new features and, sometimes, fix bugs.

By default, Stata has automatic update checking turned on and set to check for updates every seven days. To change or check your settings, select **Edit > Preferences > General preferences...** and click on the **General** tab.

We recommend using automatic update checking because it is a simple, unobtrusive way to be sure that your copy of Stata is always up to date. If you keep this default, you will be prompted with a dialog when you start Stata if you have not recently checked for updates.

To manually check whether there are any official Stata updates, either click on **Help > Check for updates** or type `update query` in the Command window. Regardless of which choice you make, Stata goes to check for official updates. After it checks, it will show you your update status. If your copy of Stata is already up to date, you will be told. If your copy of Stata needs updating, you will be told, and a link, `Install available updates`, will show up in your Results window. You can click on this link or type `update all` and press *Enter*. In either case, Stata will download what is needed to bring your copy of Stata up to date. Stata will need to restart after being updated, so it gives you a chance to postpone the update in case there was something (such as saving the command history) you wanted to do in the current session.

Troubleshooting note: If you do not have write permission for `C:\Program Files\Stata18`, you cannot install official updates in this way. You may still download the official updates, but you will need to use the command-line version of `update`; see [U] **29 Using the Internet to keep up to date** for instructions.

## Automatic update checking

Stata can periodically check for updates for you. By default, Stata will check once every seven days for updates from the StataCorp website. The seven-day interval is from the last time an `update query` was performed, regardless of whether it was by Stata or by you. You can change the interval between checks.

Before Stata connects to the Internet to check for an update, it will ask you if you would like to check now, check the next time Stata is launched, or check after the next interval. You can disable the prompt and allow Stata to check without asking.

If an update is available, Stata will notify you. From there, you should follow the recommendations for updating Stata.

You can change the settings for automatic update checking by selecting **Edit > Preferences > General preferences...** and choosing **General**.
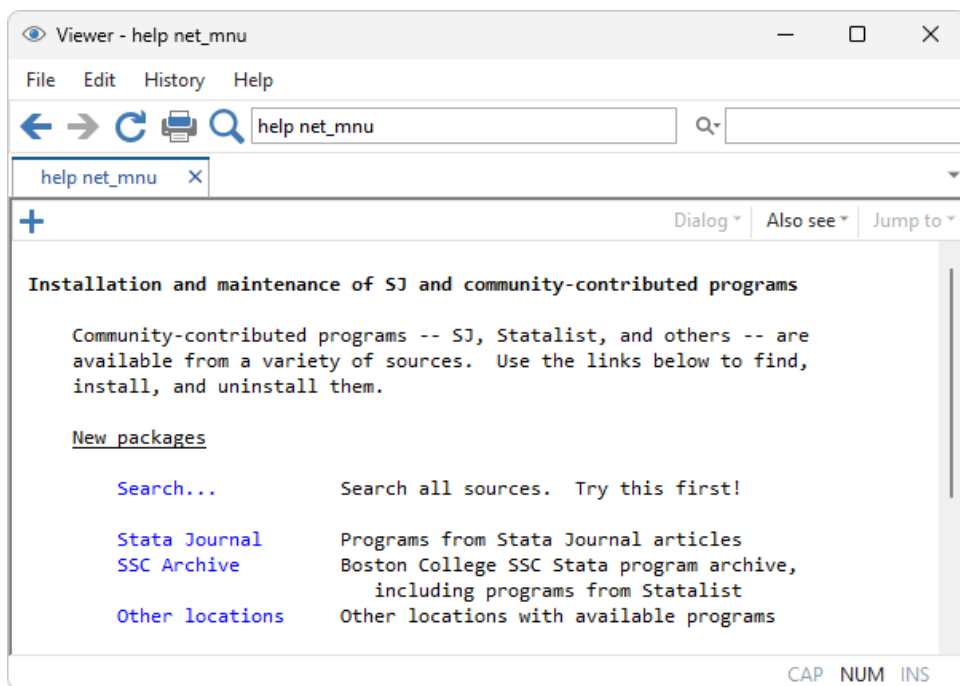
# Finding community-contributed commands by keyword

Stata has a built-in utility created specifically to search the Internet for community-contributed Stata commands. You can access it by selecting **Help > Search...**, choosing *Search net resources*, and entering a keyword in the field. Choosing **Help > SJ and community-contributed features** yields more specific choices for searching. The utility searches all community-contributed commands on the Internet, including the entire collection of SJ commands. The results are displayed in the Viewer, and you can click to go to any of the matches found.

For the syntax on how to use the equivalent `search` *keywords*`, net` command, see [R] **search**.

# Downloading community-contributed commands

Downloading community-contributed commands is easy. Start by selecting **Help > SJ and community-contributed features**:



As the Viewer says, try `Search...` first.

Suppose that you were interested in finding more information or some community-contributed commands involving goodness of fit for logistic regression. You select **Help > Search...**, select *Search all*, type `logistic goodness of fit` in the search box, and click on the **OK** button.

Viewer - search logistic goodness of fit

File   Edit   History   Help

search logistic goodness of fit

search logistic goodness of fit   ✕

Dialog ▾   Also see ▾   Jump to ▾

search for **logistic goodness of fit**                    (manual:  [R] search)

**Search of official help files, FAQs, Examples, and Stata Journals**

[R]      logistic postestimation . . . . . .   Postestimation tools for logistic
         (help logistic postestimation)

[R]      estat gof . . . . . .   Pearson or Hosmer-Lemeshow goodness-of-fit test
         (help logistic estat gof)

FAQ      . . . . . . . . . . . . . .   What statistical analysis should I use?
         . . . . . . . . . . . . . . . . .   UCLA Academic Technology Services
         5/08     https://stats.idre.ucla.edu/stata/whatstat/what-statistical-
                  analysis-should-i-usestatistical-analyses-using-stata/

Example . . . .   Textbook examples:  Applied Logistic Regression (2nd Edition)
         . . . . . . . . . . . . . . . . . .   UCLA Academic Technology Services
         2/08    examples from the book **Applied Logistic Regression
                 (2nd Edition)** by David Hosmer and Stanley Lemeshow
                 https://stats.idre.ucla.edu/other/examples/alr2/

Example . . . . . . . . . . . . . .   Seminar: Logistic regression with Stata
         . . . . . . . . . . . . . . . . .   UCLA Academic Technology Services
         5/07    seminar to help increase skills using logistic
                 regression analysis
                 https://stats.idre.ucla.edu/stata/seminars/stata-logistic/
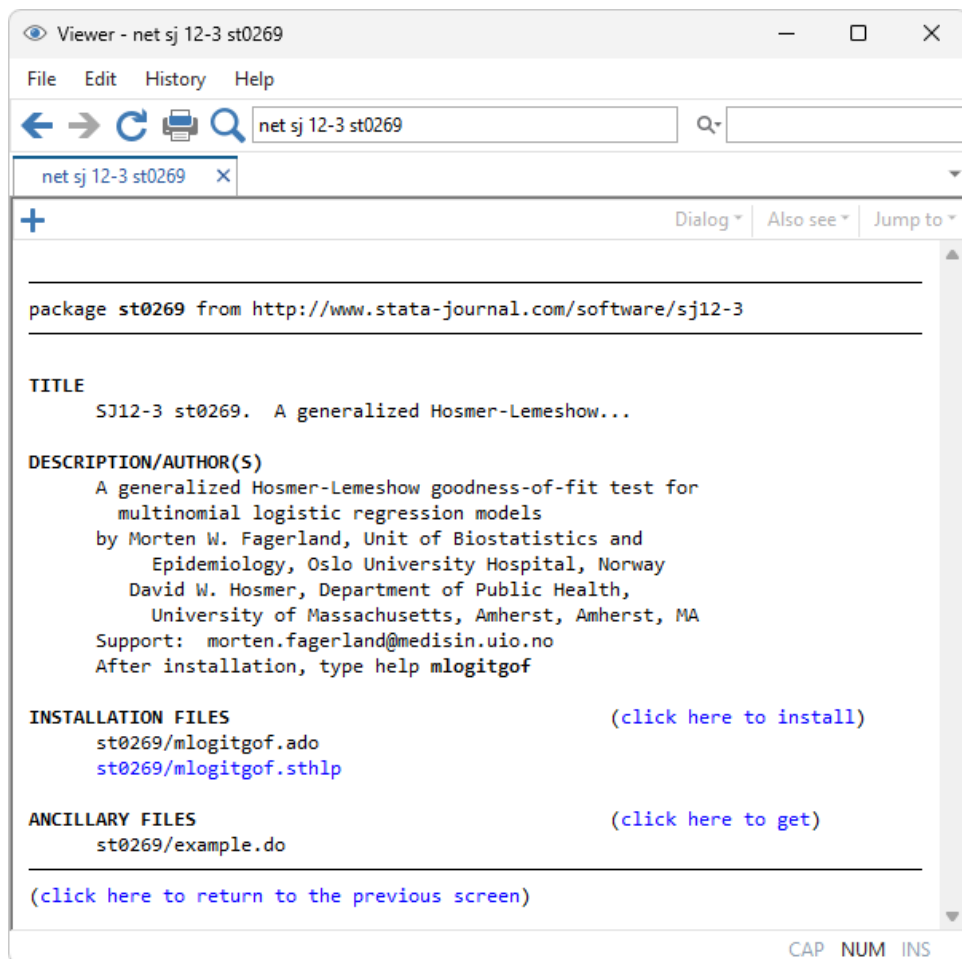
SJ-17-4 gr0071  .  Calibration of dichot. outcome models with calibration belt
         . . G. Nattino, S. Lemeshow, G. Phillips, S. Finazzi, and G. Bertolini
         (help calibrationbelt if installed)
         Q4/17   SJ 17(4):1003--1014
         implements the calibration belt (a graphical approach to
         evaluate the goodness of fit of binary outcome models by
         examining the relationship between estimated probabilities
         and observed outcome rates) and its associated test

SJ-13-2 st0299  . . . . . . . . . . Goodness-of-fit tests for categorical data
         . . . . . . . . . . . . . . . . . . . . . . . R. Bellocco and S. Algeri
         Q2/13   SJ 13(2):356--365                            (no commands)
         discusses choice of analytical units of reference (subjects
         or groups of subjects that have the same covariate pattern)
         and how that affects the definition of the saturated model
         and conclusions from goodness-of-fit tests

SJ-12-3 st0269  . . . . . . A generalized Hosmer-Lemeshow goodness-of-fit test
         (help mlogitgof if installed) . . . . M. W. Fagerland and D. W. Hosmer
         Q3/12   SJ 12(3):447--453
         implements a generalized Hosmer-Lemeshow goodness-of-fit test
         for multinomial logistic regression models

CAP  NUM  INS

The first entry points you to all the postestimation commands that are available after logistic regression. The second entry points to Stata's built-in `estat gof` command specifically for computing goodness-of-fit statistics after logistic regression. You investigate this command and find it interesting. You see that the next three links point to FAQs and examples on UCLA's website. Then the next three links are for articles in the SJ. You are interested in multinomial logistic regression, so you decide to check the last of these links. It points to an article in the SJ, volume 12, number 3 (third quarter). You should click on the `st0269` link because it will go to the command associated with this article.

```
Viewer - net sj 12-3 st0269                                    —    □    ✕

File    Edit    History    Help

←  →  C  🖨  Q    net sj 12-3 st0269              Q▾

net sj 12-3 st0269    ✕

✚                                        Dialog ▾  Also see ▾  Jump to ▾


─────────────────────────────────────────────────────────

package st0269 from http://www.stata-journal.com/software/sj12-3


TITLE
       SJ12-3 st0269.   A generalized Hosmer-Lemeshow...

DESCRIPTION/AUTHOR(S)
       A generalized Hosmer-Lemeshow goodness-of-fit test for
          multinomial logistic regression models
       by Morten W. Fagerland, Unit of Biostatistics and
             Epidemiology, Oslo University Hospital, Norway
          David W. Hosmer, Department of Public Health,
             University of Massachusetts, Amherst, Amherst, MA
       Support:  morten.fagerland@medisin.uio.no
       After installation, type help mlogitgof

INSTALLATION FILES                          (click here to install)
       st0269/mlogitgof.ado
       st0269/mlogitgof.sthlp

ANCILLARY FILES                             (click here to get)
       st0269/example.do
─────────────────────────────────────────────────────────
(click here to return to the previous screen)

                                           CAP  NUM  INS
```
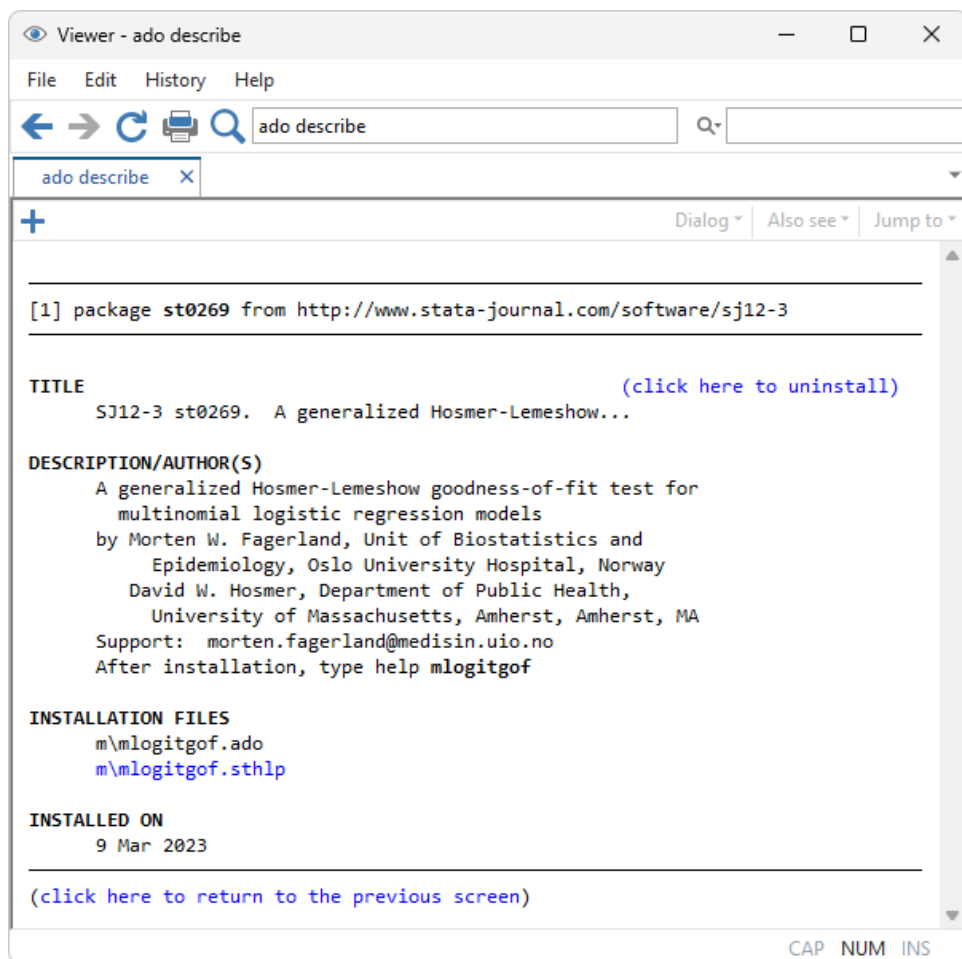
You will see that the package has one help file for the new commands. Click the `st0269/mlogitgof.sthlp` link to see if the `mlogitgof` command looks interesting. If you decide that you would like to install the command, click the **Back** button and click on the link `click here to install`. If you decide that you would like to use some of the ancillary files—files that typically help explain the workings of the command, you could download those, too. You do not need to worry—doing so will not interfere in any way with your copy of Stata. We will show you how to safely uninstall these commands shortly.

You can keep the community-contributed commands you have installed up to date by using the `ado update` command. Typing `ado update` will check for updates, while typing `ado update, update` will check for updates and install any available updates.

Now suppose that you decide that you would like to uninstall the package. Doing so is simple enough: select **Help > SJ and community-contributed features**, and click on the `List` link. You should see the following:
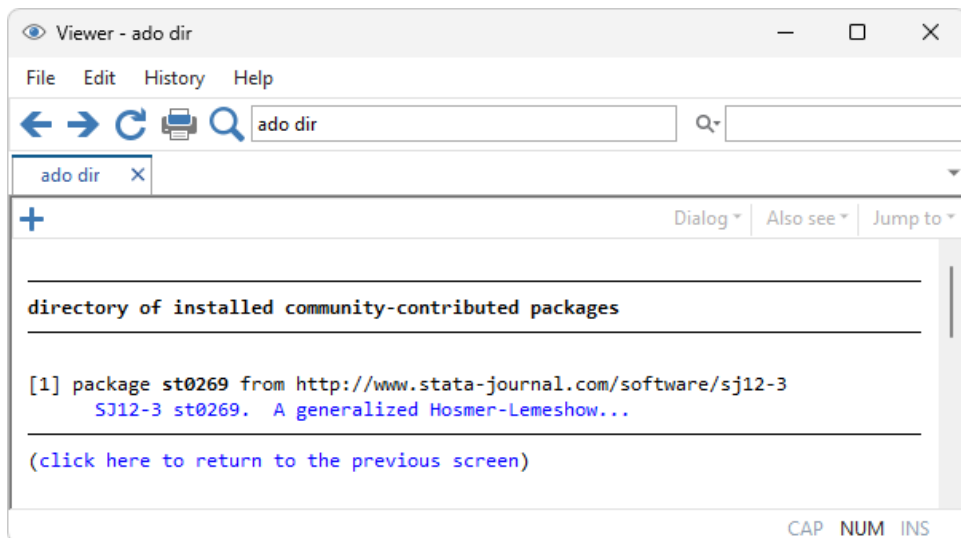
If you click on the one-line description of the package, you will see the full description of what has been installed. Here is what you would see if you scroll to the bottom, with a different install date, of course:

```
Viewer - ado describe                                    —    □    ✕

File   Edit   History   Help

←  →  C  🖶  Q   ado describe                    Q▾  

  ado describe   ✕                                                ▾

  +                                        Dialog ▾  Also see ▾  Jump to ▾
                                                                      ▲

  ────────────────────────────────────────────────────────────────
  [1] package st0269 from http://www.stata-journal.com/software/sj12-3

  ────────────────────────────────────────────────────────────────
  TITLE                                    (click here to uninstall)
        SJ12-3 st0269.  A generalized Hosmer-Lemeshow...

  DESCRIPTION/AUTHOR(S)
        A generalized Hosmer-Lemeshow goodness-of-fit test for
          multinomial logistic regression models
        by Morten W. Fagerland, Unit of Biostatistics and
             Epidemiology, Oslo University Hospital, Norway
          David W. Hosmer, Department of Public Health,
             University of Massachusetts, Amherst, Amherst, MA
        Support:  morten.fagerland@medisin.uio.no
        After installation, type help mlogitgof

  INSTALLATION FILES
        m\mlogitgof.ado
        m\mlogitgof.sthlp

  INSTALLED ON
        9 Mar 2023

  ────────────────────────────────────────────────────────────────
  (click here to return to the previous screen)
                                                                      ▼
                                               CAP  NUM  INS
```

You can uninstall materials by clicking on `click here to uninstall` when you are looking at the package description.

For information on downloading community-contributed commands by using the `net` command, see [R] **net**.

For suggested citations, see the FAQ on citing Stata documentation.