About establishing a Stata kernel on JupyterHub

IMPORTANT: Due to the fact that the existing network license only supports 5 users, only the first five applicants can have access to `/usr/local/stata18`. They will also receive email notifications about the access to Stata. For users who wish to use Stata but have not filled out the form, please declare your need through this link. When the demand reaches a certain number, we will consider upgrading the license.

Step 1: Activating Stata in your terminal

Open the terminal on Jupyter and then type the command:

```
nano ~/.bashrc
```

You will be guided to an interface like this:

At the end of the file, add the following argument:

```
export PATH="/usr/local/stata-18:$PATH"
```

Please make sure that you haven't made other changes except adding the command to the end of the file. Then you can save the file by `ctrl+s` and exit by `ctrl+x`.

Please run the following command to apply the change:

```
source ~/.bashrc
```

Then you will be able to run Stata programs simply by typing `stata` in the terminal:

```
(base) jupyter-qiansiqihu@user:/mnt/disk1/qiansiqihu-dot$ stata

  ___  ____  ____  ____  ____ ®
 /__    /   ____/   /   ____/      StataNow 18.5
___/   /   /___/   /   /___/       BE-Basic Edition

 Statistics and Data Science       Copyright 1985-2023 StataCorp LLC
                                   StataCorp
                                   4905 Lakeway Drive
                                   College Station, Texas 77845 USA
                                   800-782-8272        https://www.stata.com
                                   979-696-4600        service@stata.com

Stata license: 5-user network, expiring 28 Jun 2025
Serial number: 501809388172
  Licensed to: Department of Decisions, Operations and Technology; CUHK Business School
               Hong Kong

Notes:
      1. Unicode is supported; see help unicode_advice.

. sysuse auto
(1978 automobile data)

. summarize

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
        make |          0
       price |         74    6165.257    2949.496       3291      15906
         mpg |         74     21.2973    5.785503         12         41
       rep78 |         69    3.405797    .9899323          1          5
    headroom |         74    2.993243    .8459948        1.5          5
-------------+---------------------------------------------------------
       trunk |         74    13.75676    4.277404          5         23
      weight |         74    3019.459    777.1936       1760       4840
      length |         74    187.9324    22.26634        142        233
        turn |         74    39.64865    4.399354         31         51
displacement |         74    197.2973    91.83722         79        425
-------------+---------------------------------------------------------
  gear_ratio |         74    3.014865    .4562871       2.19       3.89
     foreign |         74    .2972973    .4601885          0          1

. exit
(base) jupyter-qiansiqihu@user:/mnt/disk1/qiansiqihu-dot$
```

Step 2: Establishing Stata kernels in Jupyter

We can utilize the library `nbstata` to build notebook files for Stata programs. First, open the terminal on Jupyter and install the library:

```
pip install nbstata
```

Then run the following command to install the Stata kernel:

```
python -m nbstata.install --conf-file
```

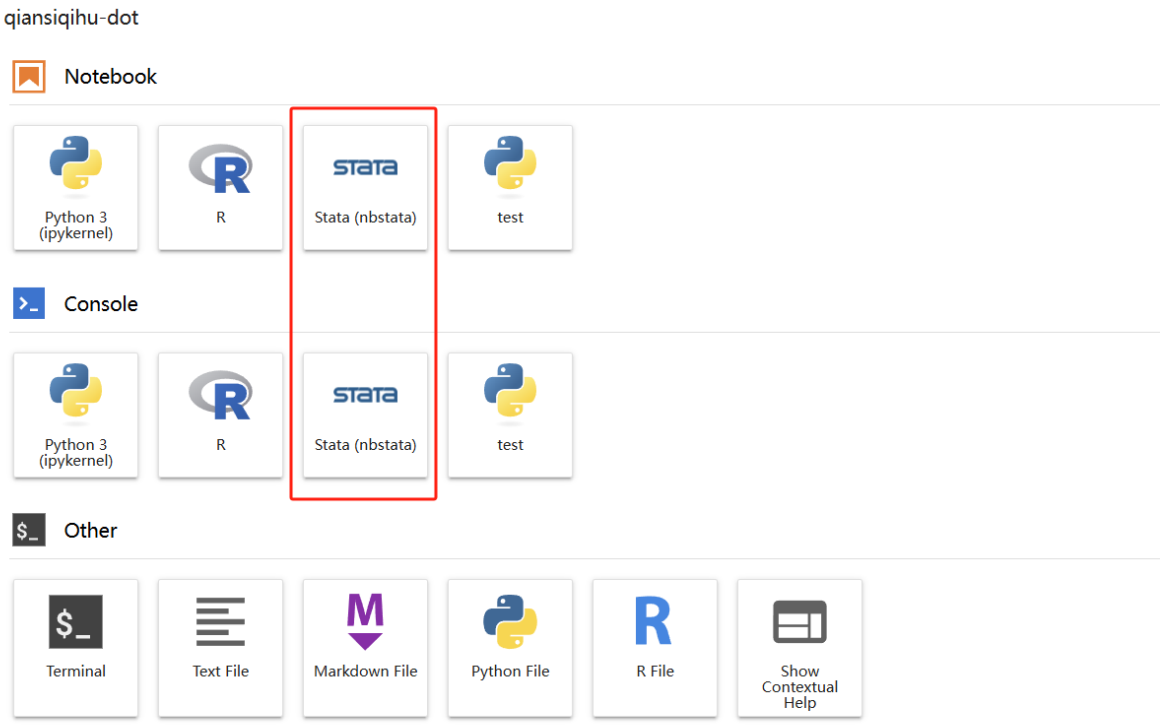
You can access the configuration file with

```
nano ~/.config/nbstata/nbstata.conf
```

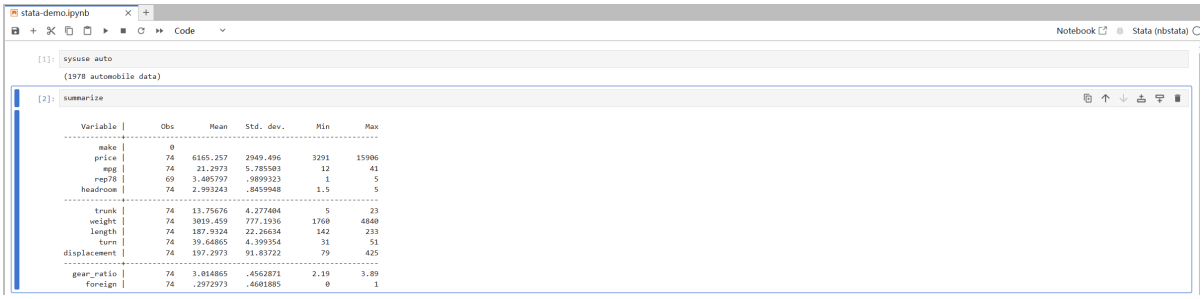
Please check whether the content is consistent with the screenshot below.

```
  GNU nano 6.2                                  /home/jupyter-qiansiqihu/.config/nbstata/nbstata.conf
[nbstata]
stata_dir = /usr/local/stata18
edition = mp
splash = False
graph_format = png
graph_width = 5.5in
graph_height = 4in
echo = None
missing = .
```

After properly setting up the configuration file, the Stata kernel will become available.



Now you can run Stata programs in notebook files:



Please be aware that if you do not have access to `/usr/local/stata18`, the output will look like as follows:

```
[ ]: sysuse auto

Specified stata_dir, "/usr/local/stata18", is not Stata's installation path
```