

1. 在自己的终端 (比如 Git Bash、Zsh 等) 配置好 Conda Init, 使得启动终端后, 在提示符 (比如 \$、%) 前能够看到 (base)

```
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ which conda
/d/haozhiting/Anaconda3/Scripts/conda

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ conda
usage: conda-script.py [-h] [-v] [--no-plugins] [-V] COMMAND ...

conda is a tool for managing and deploying applications, environments and packages.

options:
  -h, --help            Show this help message and exit.
  -v, --verbose          Can be used multiple times. Once for detailed output, twice for INFO logging, thrice for DEBUG logging, four times for TRACE logging.
  --no-plugins           Disable all plugins that are not built into conda.
  -V, --version          Show the conda version number and exit.

commands:
  The following built-in and plugins subcommands are available.

COMMAND
  activate              Activate a conda environment.
  build                 Build conda packages from a conda recipe.
  clean                 Remove unused packages and caches.
  commands              List all available conda subcommands (including those from plugins). Generally only used by tab-completion.
  compare               Compare packages between conda environments.
  config                Modify configuration values in .condarc.
  content-trust          Signing and verification tools for Conda
```

```
$ conda init --help
usage: conda-script.py init [-h] [--all] [--user] [--no-user] [--system] [--reverse] [--anaconda-prompt] [--json] [-v]
                        [-q] [-d]
                        [SHELLS ...]

Initialize conda for shell interaction.

positional arguments:
  SHELLS                One or more shells to be initialized. If not given, the default value is 'bash' on unix and 'cmd.exe' & 'powershell' on Windows. Use the '--all' flag to initialize all shells. Available shells: ['bash', 'cmd.exe', 'fish', 'powershell', 'tcsh', 'xonsh', 'zsh']

options:
  -h, --help            Show this help message and exit.
  --all                 Initialize all currently available shells.
  --anaconda-prompt     Add an 'Anaconda Prompt' icon to your desktop.
  -d, --dry-run          Only display what would have been done.

setup type:
```

```
no change      D:\haozhiting\Anaconda3\shell\condabin\Conda.psm1
no change      D:\haozhiting\Anaconda3\shell\condabin\conda-hook.ps1
no change      D:\haozhiting\Anaconda3\Lib\site-packages\xontrib\conda.xsh
no change      D:\haozhiting\Anaconda3\etc\profile.d\conda.csh
modified       C:\Users\Administrator\.bash_profile

==> For changes to take effect, close and re-open your current shell. <==

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ pwd
/c/Users/Administrator

Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ ls -al
total 23999
drwxr-xr-x 1 Administrator 197121      0  3月 20 16:24 ./
drwxr-xr-x 1 Administrator 197121      0 10月  9 2022 ../
-rw-r--r-- 1 Administrator 197121    268  3月 20 16:24 .bash_profile
drwxr-xr-x 1 Administrator 197121      0  3月  7 19:39 .conda/
-rw-r--r-- 1 Administrator 197121     25  3月  7 18:44 .condarc
drwxr-xr-x 1 Administrator 197121      0  8月 23 2023 .continuum/
-rw-r--r-- 1 Administrator 197121    211  3月 12 22:39 .gitconfig
drwxr-xr-x 1 Administrator 197121      0  8月 23 2023 .jupyter/
-rw-r--r-- 1 Administrator 197121     20  3月 12 22:50 .lessht
drwxr-xr-x 1 Administrator 197121      0 10月 28 2022 .local/
drwxr-xr-x 1 Administrator 197121      0  8月 23 2023 .matplotlib/
drwxr-xr-x 1 Administrator 197121      0 11月 21 23:35 .MUMU
drwxr-xr-x 1 Administrator 197121      0  5月 21 2023 .spss/
drwxr-xr-x 1 Administrator 197121      0  8月 23 2023 .spyder-py3/
```

```
(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$
```

```
(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$
```

- 2.使用 `conda info` 命令查看本机 Conda 的配置信息
- 3.

```
MINGW64: c:/Users/Administrat...
(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ conda info

      active environment : base
      active env location : D:\haozhiting\Anaconda3
            shell level   : 1
      user config file    : C:\Users\Administrator\.condarc
 populated config files   : D:\haozhiting\Anaconda3\.condarc
                           C:\Users\Administrator\.condarc
      conda version       : 24.9.2
      conda-build version : 24.9.0
      python version      : 3.12.7.final.0
         solver          : libmamba (default)
 virtual packages        : __archspec=1=skylake
                           __conda=24.9.2=0
                           __cuda=11.6=0
                           __win=0=0
      base environment    : D:\haozhiting\Anaconda3 (writable)
      conda av data dir   : D:\haozhiting\Anaconda3\etc\conda
      conda av metadata url : None
        channel URLs     : https://repo.anaconda.com/pkgs/main/win-64
                           https://repo.anaconda.com/pkgs/main/noarch
                           https://repo.anaconda.com/pkgs/r/win-64
                           https://repo.anaconda.com/pkgs/r/noarch
                           https://repo.anaconda.com/pkgs/msys2/win-64
                           https://repo.anaconda.com/pkgs/msys2/noarch
      package cache       : D:\haozhiting\Anaconda3\pkgs
                           C:\Users\Administrator\.conda\pkgs
                           C:\Users\Administrator\AppData\Local\conda\conda\pkgs
```

3.使用 `conda env list` 命令查看已有的 Conda 环境的名称和路径,理解 Conda 环境 的概念

```
(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ conda env list
# conda environments:
#
base * D:\haozhiting\Anaconda3
```

4.使用 `conda create` 命令创建两个 Conda 环境,一个里面安装 Python 3.12 和 `requests` 软件包,另一个里面安装 Python 3.9、`pandas` 和 `statsmodels` 软件包,能够在终端里切换 Conda 环境,验证 Python 和软件包的版本

```
MINGW64/c/Users/Administr
#
# $ conda deactivate

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ conda env list
# conda environments:
#
base                * D:\haozhiting\Anaconda3
prj1                 D:\haozhiting\Anaconda3\envs\prj1
prj2                 D:\haozhiting\Anaconda3\envs\prj2

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ conda activate prj1
(prj1)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ which python
/d/haozhiting/Anaconda3/envs/prj1/python
(prj1)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ python --version
Python 3.12.9
(prj1)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ python
Python 3.12.9 | packaged by Anaconda, Inc. | (main, Feb 6 2025, 18:49:16) [MSC v.1929 6
4 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> quit()
(prj1)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ ls -l
total 24051
lrwxrwxrwx 1 Administrator 197121      67  7月 24  2021  [开始] 菜单 -> '/c/Users/Admi
nistrator/AppData/Roaming/Microsoft/Windows/Start Menu/'
```

(D:) > haozhiting > Anaconda3 > envs > prj1 >

名称	修改日期
conda-meta	2025/3/20
DLLs	2025/3/20
etc	2025/3/20
include	2025/3/20
Lib	2025/3/20
Library	2025/3/20
libs	2025/3/20
Scripts	2025/3/20
share	2025/3/20
Tools	2025/3/20
.nonadmin	2025/3/20
api-ms-win-core-console-l1-1-0.dll	2024/2/22
api-ms-win-core-console-l1-2-0.dll	2024/2/22
api-ms-win-core-datetime-l1-1-0.dll	2024/2/22
api-ms-win-core-debug-l1-1-0.dll	2024/2/22
api-ms-win-core-errorhandling-l1-1-...	2024/2/22
api-ms-win-core-fibers-l1-1-0.dll	2024/2/22

```
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~  
$ conda activate prj2  
(prj2)  
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~  
$ which python  
/d/haozhiting/Anaconda3/envs/prj2/python  
(prj2)  
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~  
$  
(prj2)  
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~  
$ python --version  
Python 3.9.21  
(prj2)  
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~  
$ python  
Python 3.9.21 (main, Dec 11 2024, 16:35:24) [MSC v.1929 64 bit (AMD64)] on win32  
Type "help", "copyright", "credits" or "license" for more information.  
>>> import requests  
Traceback (most recent call last):  
  File "<stdin>", line 1, in <module>  
ModuleNotFoundError: No module named 'requests'  
>>> import pandas  
>>> pandas.__file__  
'D:\\haozhiting\\Anaconda3\\envs\\prj2\\lib\\site-packages\\pandas\\__init__.py'  
>>> pandas.__version__  
'2.2.3'  
>>> import statsmodels  
>>> statsmodels.__version__  
'0.14.4'
```

5.使用 `conda list` 命令显示 Conda 环境里的软件包列表及其版本信息


```
MINGW64/c/Users/Administr
+
-
(prj2)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ conda list
# packages in environment at D:\haozhiting\Anaconda3\envs\prj2:
#
# Name                                Version                                Build      Channel
blas                                  1.0                                    mkl
bottleneck                           1.4.2                                py39hc99e966_0
ca-certificates                      2025.2.25                            haa95532_0
icc_rt                               2022.1.0                             h6049295_2
intel-openmp                         2023.1.0                             h59b6b97_46320
mkl                                   2023.1.0                             h6b88ed4_46358
mkl-service                          2.4.0                                py39h827c3e9_2
mkl_fft                              1.3.11                              py39h827c3e9_0
mkl_random                           1.2.8                                py39hc64d2fc_0
numexpr                              2.10.1                              py39h4cd664f_0
numpy                                 2.0.2                                py39h055cbcc_0
numpy-base                           2.0.2                                py39h65a83cf_0
openssl                              3.0.16                              h3f729d1_0
packaging                             24.2                                py39haa95532_0
pandas                               2.2.3                                py39h5da7b33_0
patsy                                 1.0.1                                py39haa95532_0
pip                                  25.0                                py39haa95532_0
pybind11-abi                         5                                    hd3eb1b0_0
python                               3.9.21                              h8205438_1
python-dateutil                      2.9.0post0                          py39haa95532_2
python-tzdata                        2023.3                              pyhd3eb1b0_0
pytz                                 2024.1                              py39haa95532_0
scipy                                1.13.1                              py39h8640f81_1
setuptools                           72.1.0                              py39haa95532_0
six                                  1.16.0                              pyhd3eb1b0_1
sqlite                                3.45.3                              h2bbff1b_0
statsmodels                          0.14.4                              py39h827c3e9_0
tbb                                  2021.8.0                             h59b6b97_0
tzdata                               2025a                              h04d1e81_0
vc                                    14.42                              haa95532_4
vs2015_runtime                       14.42.34433                         he0abc0d_4
wheel                                0.45.1                              py39haa95532_0
(prj2)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
```

6.使用 conda install 命令往 Conda 环境里安装更多的软件包，并验证版本

```
MINGW64/c/Users/Administr
+ v
(prj1)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ conda install ipython
Channels:
- defaults
Platform: win-64
Collecting package metadata (repodata.json): done
Solving environment: done

## Package Plan ##

environment location: D:\haozhiting\Anaconda3\envs\prj1

added / updated specs:
- ipython

The following packages will be downloaded:
```

package	build	
asttokens-2.0.5	pyhd3eb1b0_0	20 KB
colorama-0.4.6	py312haa95532_0	53 KB
decorator-5.1.1	pyhd3eb1b0_0	12 KB
executing-0.8.3	pyhd3eb1b0_0	18 KB
ipython-8.30.0	py312haa95532_0	1.5 MB
jedi-0.19.2	py312haa95532_0	1.2 MB
matplotlib-inline-0.1.6	py312haa95532_0	19 KB
parso-0.8.4	py312haa95532_0	239 KB
prompt-toolkit-3.0.43	py312haa95532_0	733 KB
prompt_toolkit-3.0.43	hd3eb1b0_0	5 KB
pure_eval-0.2.2	pyhd3eb1b0_0	14 KB
pygments-2.15.1	py312haa95532_1	1.8 MB
stack_data-0.2.0	pyhd3eb1b0_0	22 KB
traitlets-5.14.3	py312haa95532_0	221 KB
wcwidth-0.2.5	pyhd3eb1b0_0	26 KB
Total:		5.8 MB

```
done
(prj1)
```

```
(prj1)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ conda list
# packages in environment at D:\haozhiting\Anaconda3\envs\prj1:
#
# Name                        Version      Build      Channel
asttokens                    2.0.5        pyhd3eb1b0_0
brotli-python                1.0.9        py312h5da7b33_9
bzip2                        1.0.8        h2bbff1b_6
ca-certificates              2025.2.25    haa95532_0
certifi                      2025.1.31    py312haa95532_0
charset-normalizer           3.3.2        pyhd3eb1b0_0
colorama                     0.4.6        py312haa95532_0
decorator                    5.1.1        pyhd3eb1b0_0
executing                    0.8.3        pyhd3eb1b0_0
expat                        2.6.4        h8ddb27b_0
idna                         3.7          py312haa95532_0
ipython                      8.30.0       py312haa95532_0
jedi                         0.19.2       py312haa95532_0
libffi                       3.4.4        hd77b12b_1
matplotlib-inline            0.1.6        py312haa95532_0
openssl                      3.0.16       h3f729d1_0
parso                        0.8.4        py312haa95532_0
pip                          25.0         py312haa95532_0
prompt-toolkit               3.0.43       py312haa95532_0
prompt_toolkit               3.0.43       hd3eb1b0_0
pure_eval                    0.2.2        pyhd3eb1b0_0
pygments                     2.15.1       py312haa95532_1
pysocks                      1.7.1        py312haa95532_0
python                       3.12.9       h14ffc60_0
requests                     2.32.3       py312haa95532_1
setuptools                   75.8.0       py312haa95532_0
six                           1.16.0       pyhd3eb1b0_1
sqlite                       3.45.3       h2bbff1b_0
stack_data                   0.2.0        pyhd3eb1b0_0
tk                            8.6.14       h0416ee5_0
traitlets                    5.14.3       py312haa95532_0
tzdata                       2025a        h04d1e81_0
urllib3                      2.3.0        py312haa95532_0
vc                            14.42        haa95532_4
```

7. 根据 文档，配置 Anaconda 清华镜像，加快 conda install 安装软件包的速度，将 conda-forge 设置为默认 Channel，让 conda install 能够安装更多的软件包

```
(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ conda activate prj1
(prj1) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ conda install polars
Channels:
- conda-forge
- defaults
- https://repo.anaconda.com/pkg/main
- https://repo.anaconda.com/pkg/r
- https://repo.anaconda.com/pkg/msys2
Platform: win-64
Collecting package metadata (repodata.json): done
Solving environment: done

## Package Plan ##

environment location: D:\haozhiting\Anaconda3\envs\prj1

added / updated specs:
- polars

The following packages will be downloaded:

package-----|----- build
certifi-2025.1.31 | pyhd8ed1ab_0 159 KB conda-forge
intel-openmp-2024.2.1 | h57928b3_1083 1.8 MB conda-forge
```



```
MINGW64/c/Users/Administr x + v
requests 2.32.3 py312haa95532_1 https://repo.anaconda.com/pkgs/main
setuptools 75.8.0 py312haa95532_0 https://repo.anaconda.com/pkgs/main
six 1.16.0 pyhd3eb1b0_1 https://repo.anaconda.com/pkgs/main
sqlite 3.45.3 h2bbff1b_0 https://repo.anaconda.com/pkgs/main
stack_data 0.2.0 pyhd3eb1b0_0 https://repo.anaconda.com/pkgs/main
tbb 2021.13.0 h62715c5_1 conda-forge
tk 8.6.13 h5226925_1 conda-forge
traitlets 5.14.3 py312haa95532_0 https://repo.anaconda.com/pkgs/main
tzdata 2025a h04d1e81_0 https://repo.anaconda.com/pkgs/main
ucrt 10.0.22621.0 h57928b3_1 conda-forge
urllib3 2.3.0 py312haa95532_0 https://repo.anaconda.com/pkgs/main
vc 14.42 haa95532_4 https://repo.anaconda.com/pkgs/main
vc14_runtime 14.42.34438 hfd919c2_24 conda-forge
vs2015_runtime 14.42.34438 h7142326_24 conda-forge
wcwidth 0.2.5 pyhd3eb1b0_0 https://repo.anaconda.com/pkgs/main
wheel 0.45.1 py312haa95532_0 https://repo.anaconda.com/pkgs/main
win_inet_pton 1.1.0 py312haa95532_0 https://repo.anaconda.com/pkgs/main
xz 5.6.4 h4754444_1 https://repo.anaconda.com/pkgs/main
zlib 1.3.1 h2466b09_2 conda-forge
(prj1)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ which python
/d/haozhiting/Anaconda3/envs/prj1/python
(prj1)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ python
Python 3.12.9 | packaged by conda-forge | (main, Mar 4 2025, 22:37:18) [MSC v.1943 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import polars
>>>
```

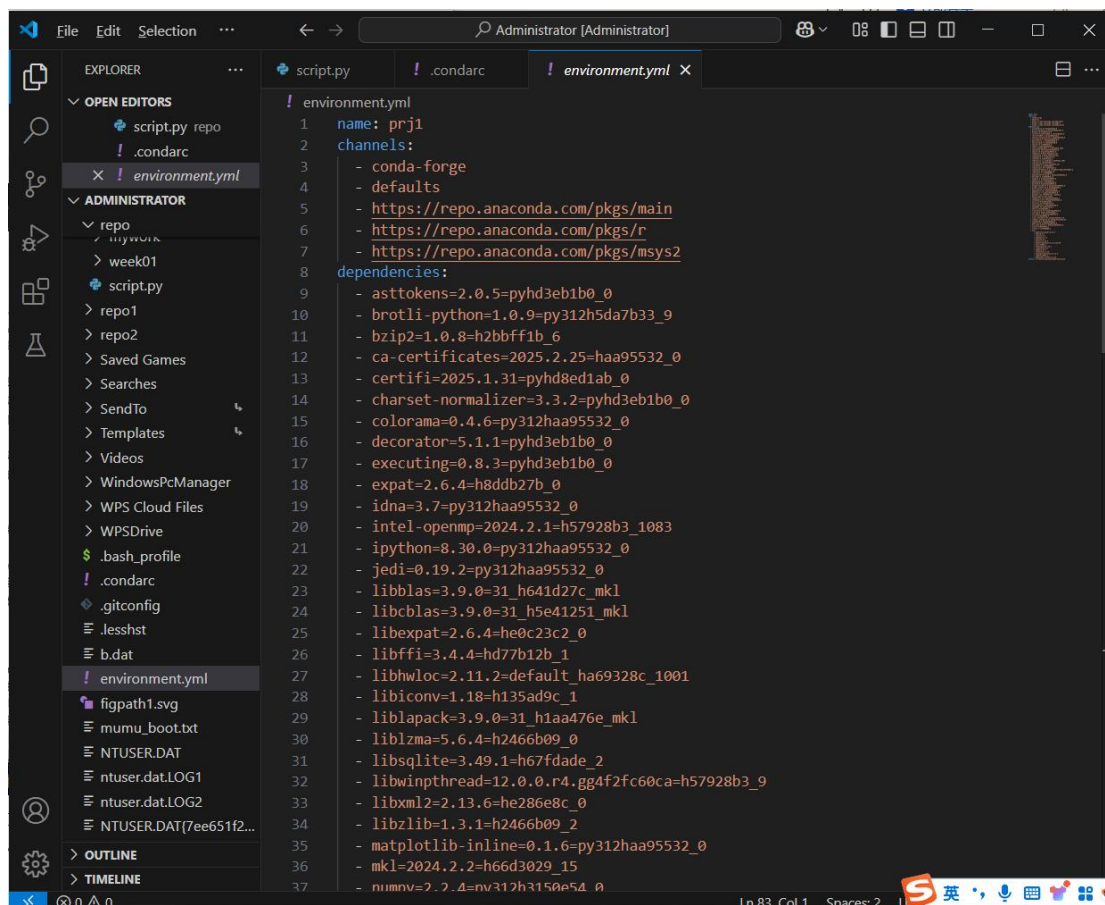
8. 使用 `pip install` 命令往 Conda 环境里安装 Python 软件包，并验证版本

```
MINGW64/c/Users/Administr x + v
(prj1)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ pip install tushare
Collecting tushare
  Downloading tushare-1.4.19-py3-none-any.whl.metadata (3.1 kB)
Collecting pandas (from tushare)
  Downloading pandas-2.2.3-cp312-win_amd64.whl.metadata (19 kB)
Requirement already satisfied: requests in d:\haozhiting\anaconda3\envs\prj1\lib\site-packages (from tushare) (2.32.3)
Collecting lxml (from tushare)
  Downloading lxml-5.3.1-cp312-cp312-win_amd64.whl.metadata (3.8 kB)
Collecting simplejson (from tushare)
  Downloading simplejson-3.20.1-cp312-cp312-win_amd64.whl.metadata (3.4 kB)
Collecting bs4 (from tushare)
  Downloading bs4-0.0.2-py2.py3-none-any.whl.metadata (411 bytes)
Collecting websocket-client<=0.57.0 (from tushare)
  Downloading websocket_client-1.8.0-py3-none-any.whl.metadata (8.0 kB)
Collecting tqdm (from tushare)
  Downloading tqdm-4.67.1-py3-none-any.whl.metadata (57 kB)
Collecting beautifulsoup4 (from bs4->tushare)
  Downloading beautifulsoup4-4.13.3-py3-none-any.whl.metadata (3.8 kB)
Requirement already satisfied: numpy>=1.26.0 in d:\haozhiting\anaconda3\envs\prj1\lib\site-packages (from pandas->tushare) (2.2.4)
Collecting python-dateutil>=2.8.2 (from pandas->tushare)
  Downloading python_dateutil-2.9.0.post0-py2.py3-none-any.whl.metadata (8.4 kB)
Collecting pytz>=2020.1 (from pandas->tushare)
  Downloading pytz-2025.1-py2.py3-none-any.whl.metadata (22 kB)
Collecting tzdata>=2022.7 (from pandas->tushare)
  Downloading tzdata-2025.1-py2.py3-none-any.whl.metadata (1.4 kB)
Requirement already satisfied: charset-normalizer<4,>=2 in d:\haozhiting\anaconda3\envs\prj1\lib\site-packages (from requests->tushare) (3.3.2)
```

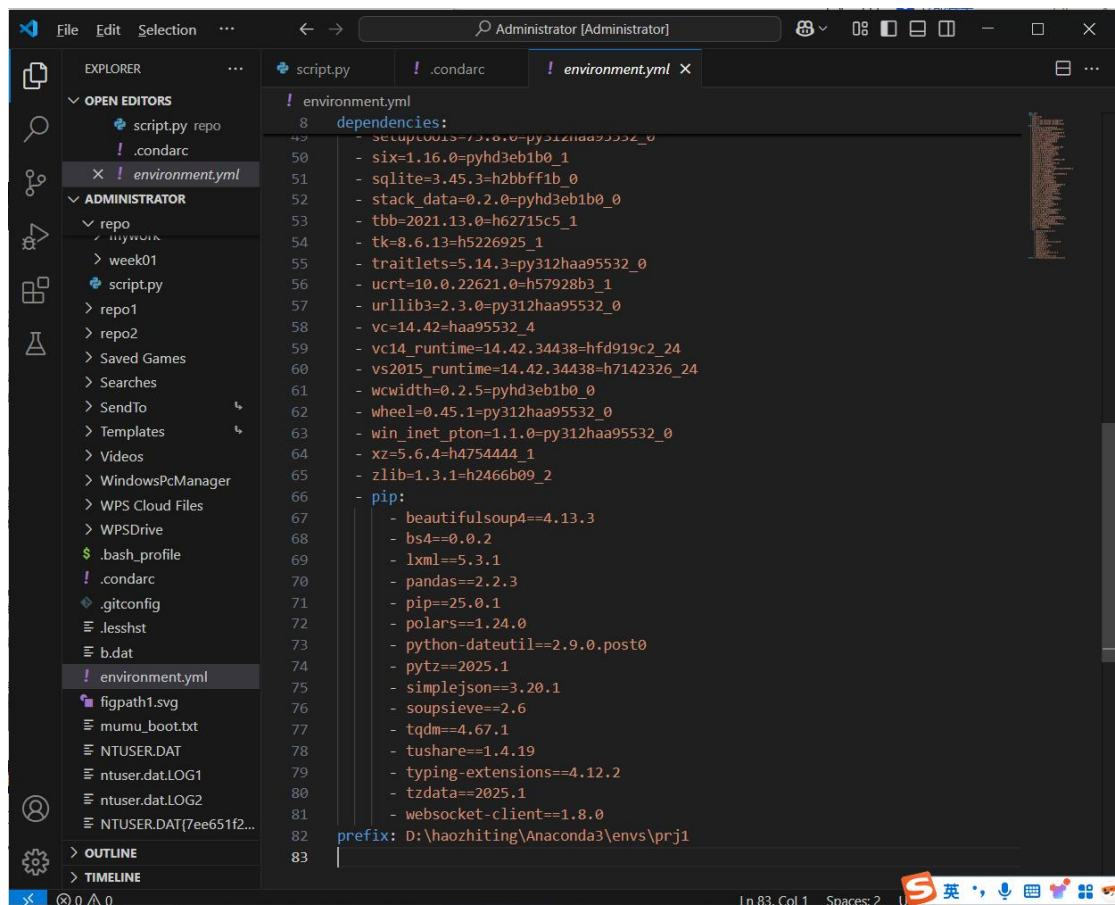
9. 根据 文档 配置 PyPI 清华镜像，加快 `pip install` 安装软件包的速度

```
MINGW64~/c/Users/Administr... x + v
stack_data      0.2.0      pyhd3eb1b0_0  https://repo.anaconda.com/pkgs/main
tbb             2021.13.0  h62715c5_1   conda-forge
tk              8.6.13     h5226925_1   conda-forge
tqdm            4.67.1     pypi_0        pypi
traitlets       5.14.3     py312haa95532_0 https://repo.anaconda.com/pkgs/main
tushare         1.4.19     pypi_0        pypi
typing-extensions 4.12.2     pypi_0        pypi
tzdata          2025.1     pypi_0        pypi
ucrt            10.0.22621.0 h57928b3_1   conda-forge
urllib3         2.3.0      py312haa95532_0 https://repo.anaconda.com/pkgs/main
vc              14.42      haa95532_4    https://repo.anaconda.com/pkgs/main
vc14_runtime    14.42.34438 hfd919c2_24   conda-forge
vs2015_runtime  14.42.34438 h7142326_24   conda-forge
wcwidth         0.2.5      pyhd3eb1b0_0  https://repo.anaconda.com/pkgs/main
websocket-client 1.8.0      pypi_0        pypi
wheel           0.45.1     py312haa95532_0 https://repo.anaconda.com/pkgs/main
win_inet_pton   1.1.0      py312haa95532_0 https://repo.anaconda.com/pkgs/main
xz              5.6.4      h4754444_1    https://repo.anaconda.com/pkgs/main
zlib            1.3.1      h2466b09_2    conda-forge
(prjl)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ python
Python 3.12.9 | packaged by conda-forge | (main, Mar  4 2025, 22:37:18) [MSC v.1943 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> import tushare
>>> tushare.__version__
'1.4.19'
>>> tushare.__file__
'D:\\haozhiting\\Anaconda3\\envs\\prjl\\Lib\\site-packages\\tushare\\__init__.py'
>>>
```

10. 能够导出 environment.yml Conda 环境配置文件，能够删除 Conda 环境，能够用 environment.yml 配置文件重建 Conda 环境



```
File Edit Selection ... Administrator [Administrator]
EXPLORER
  OPEN EDITORS
    script.py repo
    ! .condarc
    X ! environment.yml
  ADMINISTRATOR
    repo
      week01
    script.py
    repo1
    repo2
    Saved Games
    Searches
    SendTo
    Templates
    Videos
    WindowsPcManager
    WPS Cloud Files
    WPSDrive
    .bash_profile
    ! .condarc
    .gitconfig
    .jesshst
    .b.dat
    ! environment.yml
    figpath1.svg
    mumu_boot.txt
    NTUSER.DAT
    ntuser.dat.LOG1
    ntuser.dat.LOG2
    NTUSER.DAT(7ee651f2...)
  OUTLINE
  TIMELINE
  script.py
  ! .condarc
  ! environment.yml
! environment.yml
1 name: prjl
2 channels:
3   - conda-forge
4   - defaults
5   - https://repo.anaconda.com/pkgs/main
6   - https://repo.anaconda.com/pkgs/r
7   - https://repo.anaconda.com/pkgs/msys2
8 dependencies:
9   - asttokens=2.0.5=pyhd3eb1b0_0
10  - brotli-python=1.0.9=py312h5da7b33_9
11  - bzip2=1.0.8=h2bbff1b_6
12  - ca-certificates=2025.2.25=haa95532_0
13  - certifi=2025.1.31=pyhd8ed1ab_0
14  - charset-normalizer=3.3.2=pyhd3eb1b0_0
15  - colorama=0.4.6=py312haa95532_0
16  - decorator=5.1.1=pyhd3eb1b0_0
17  - executing=0.8.3=pyhd3eb1b0_0
18  - expat=2.6.4=h8ddb27b_0
19  - idna=3.7=py312haa95532_0
20  - intel-openmp=2024.2.1=h57928b3_1083
21  - ipython=8.30.0=py312haa95532_0
22  - jedi=0.19.2=py312haa95532_0
23  - libblas=3.9.0=31_h641d27c_mkl
24  - libcbblas=3.9.0=31_h5e41251_mkl
25  - libexpat=2.6.4=he0c23c2_0
26  - libffi=3.4.4=hd77b12b_1
27  - libhwloc=2.11.2=default_ha69328c_1001
28  - libiconv=1.18=h135ad9c_1
29  - liblapack=3.9.0=31_h1aa476e_mkl
30  - liblzma=5.6.4=h2466b09_0
31  - libsqlite=3.49.1=h67fdade_2
32  - libwinpthread=12.0.0.r4.gg4f2fc60ca=h57928b3_9
33  - libxml2=2.13.6=he286e8c_0
34  - libzlib=1.3.1=h2466b09_2
35  - matplotlib-inline=0.1.6=py312haa95532_0
36  - mkl=2024.2.2=h66d3029_15
37  - nummv=2.2.2=mv312h3150e54_0
```



11. 理解 Conda 与 Python 的关系,理解 Conda-Forge 与 Conda 的关系,理解 Python 解释器、第三方软件包、PyPI 软件仓库、以及程序/软件包的路径问题
12. 按照 教程 创建项目目录,在 VS Code 文本编辑器里安装一些支持 Python 开发的常用扩展,编写 main.py 脚本,创建该项目专用的 Conda 环境,在终端里激活该环境并成功运行该脚本

```
MINGW64:/c/Users/Administr ✕ + ▾
(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ pwd
/c/Users/Administrator

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~
$ cd repo

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo
$ pwd
/c/Users/Administrator/repo

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo
$ ls -l
total 5
drwxr-xr-x 1 Administrator 197121 0 3月 12 21:57 mywork/
-rw-r--r-- 1 Administrator 197121 30 3月 20 16:52 script.py
drwxr-xr-x 1 Administrator 197121 0 3月 8 13:17 week01/

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo
$ conda env list
# conda environments:
#
base          * D:\haozhiting\Anaconda3
prj1          D:\haozhiting\Anaconda3\envs\prj1
prj2          D:\haozhiting\Anaconda3\envs\prj2

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo
$ ls -l
```



```
(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo
$ mkdir myproject

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo
$ ls -l
total 5
drwxr-xr-x 1 Administrator 197121 0 3月 20 20:38 myproject/
drwxr-xr-x 1 Administrator 197121 0 3月 12 21:57 mywork/
-rw-r--r-- 1 Administrator 197121 30 3月 20 16:52 script.py
drwxr-xr-x 1 Administrator 197121 0 3月 8 13:17 week01/

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo
$ code myproject/
node:internal/modules/cjs/loader:1235
  throw err;
  ^

Error: Cannot find module 'D:\haozhiting\Anaconda3\Library\d\hao
zhiting\Microsoft VS Code\resources\app\out\cli.js'
    at Module._resolveFilename (node:internal/modules/cjs/loader
:1232:15)
    at Module._load (node:internal/modules/cjs/loader:1058:27)
    at c._load (node:electron/js2c/node_init:2:16955)
    at Function.executeUserEntryPoint [as runMain] (node:interna
l/modules/run_main:188:12)
    at node:internal/main/run_main_module:28:49 {
  code: 'MODULE_NOT_FOUND',
  requireStack: []
}
```



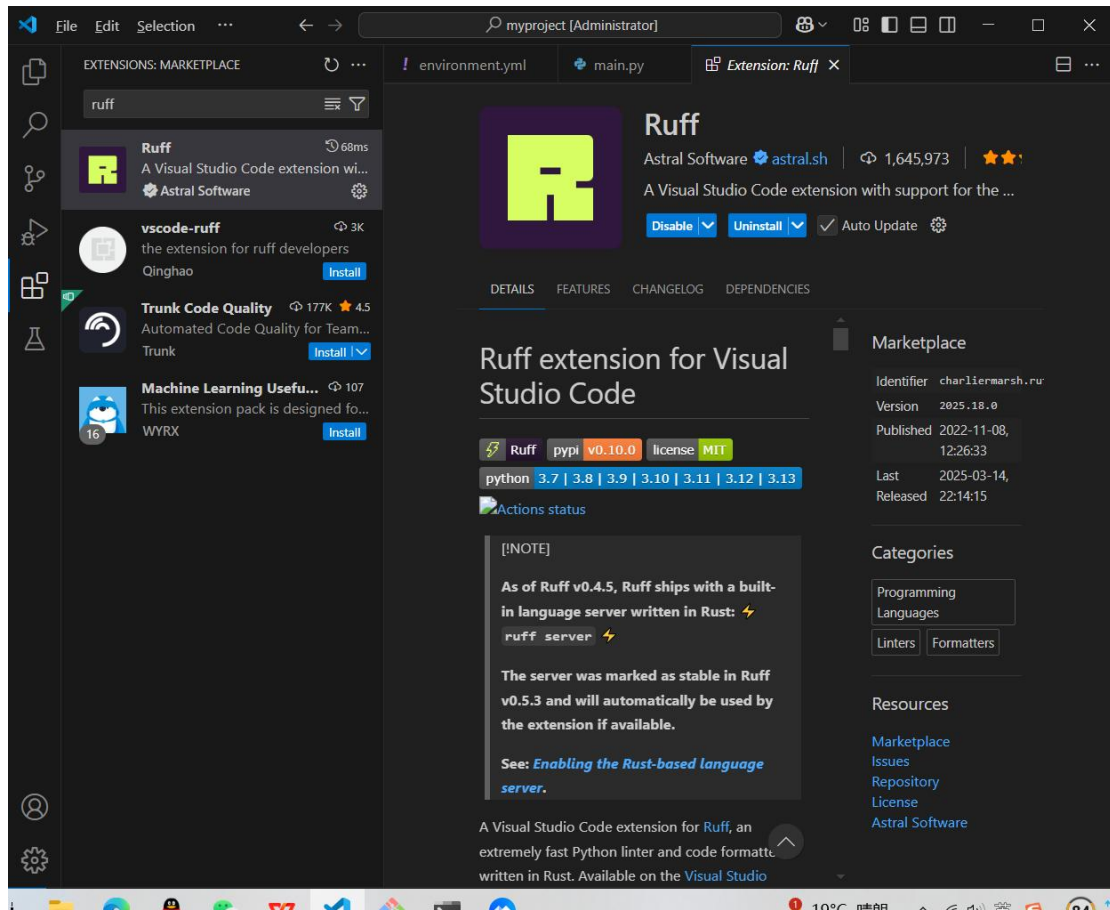
```
MINGW64:/c/Users/Administr
(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo
$ cd myproject/

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ ls -l
total 1
-rw-r--r-- 1 Administrator 197121 75  3月 20 20:43 environment.y
ml

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ cat environment.yml
done
#
# To activate this environment, use
#
#     $ conda activate myproject
#
# To deactivate an active environment, use
#
#     $ conda deactivate

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ conda env list
# conda environments:
#
base                *  D:\haozhiting\Anaconda3
myproject           D:\haozhiting\Anaconda3\envs\myproject
prj1                D:\haozhiting\Anaconda3\envs\prj1

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ conda activate myproject
(myproject)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ conda list
# packages in environment at D:\haozhiting\Anaconda3\envs\myproj
ect:
```



```
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ python main.py
Hello, conda!
(myproject)
```

```
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ python main.py
Hello, conda!
(myproject)
Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ python main.py
Hello, conda!
2.2.3
D:\haozhiting\Anaconda3\envs\myproject\Lib\site-packages\pandas\
__init__.py
(myproject)
```

```
MINGW64:/c/Users/Administr
ase_V3_Jan_2021_Final.csv
-rw-r--r-- 1 Administrator 197121 161 3月 20 21:20 main.py

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ ls -lh
total 2.3M
-rw-r--r-- 1 Administrator 197121 87 3月 20 21:15 environment.yml
-rw-r--r-- 1 Administrator 197121 2.3M 3月 20 21:32 EPA_SmartLocationDatabase
_V3_Jan_2021_Final.csv
-rw-r--r-- 1 Administrator 197121 161 3月 20 21:20 main.py

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ curl -O https://edg.epa.gov/EPADDataCommons/public/OA/EPA_SmartLocationData
base_V3_Jan_2021_Final.csv
% Total % Received % Xferd Average Speed Time Time Time Curren
t
Dload Upload Total Spent Left Speed
31 192M 31 60.7M 0 0 11365 0 4:55:35 1:33:20 3:22:15 11789
curl: (56) Recv failure: Connection was reset

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ curl -O https://edg.epa.gov/EPADDataCommons/public/OA/EPA_SmartLocationData
base_V3_Jan_2021_Final.csv
% Total % Received % Xferd Average Speed Time Time Time Curren
t
Dload Upload Total Spent Left Speed
100 192M 100 192M 0 0 332k 0 0:09:52 0:09:52 --:--:-- 1264k

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ python main.py
10.69% of U.S. residents live in highlywalkable neighborhoods.

(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$
```

```
(base) Administrator@DESKTOP-K6SQLQ1 MINGW64 ~/repo/myproject
$ conda env list
# conda environments:
#
base * D:\haozhiting\Anaconda3
myproject D:\haozhiting\Anaconda3\envs\myproject
prj1 D:\haozhiting\Anaconda3\envs\prj1
prj2 D:\haozhiting\Anaconda3\envs\prj2
```