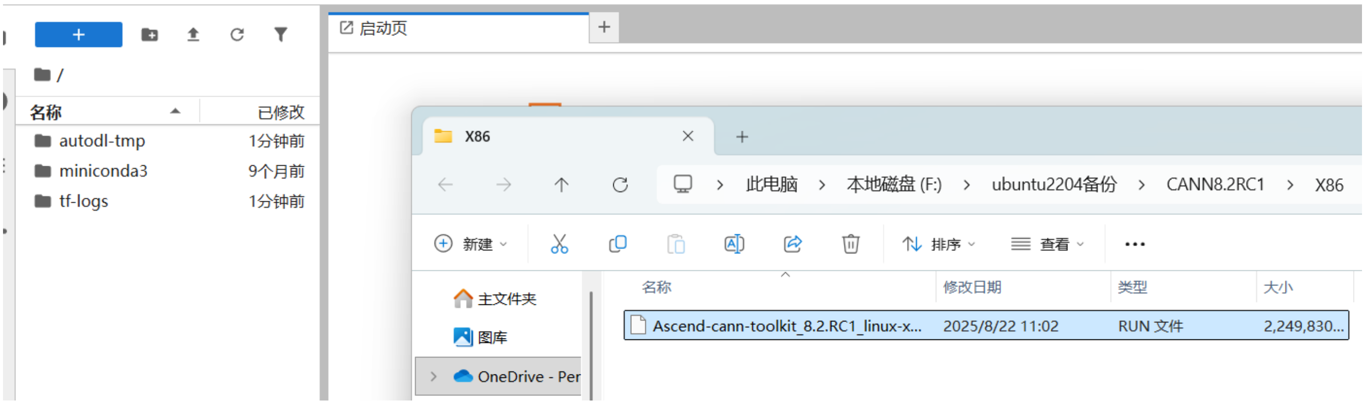
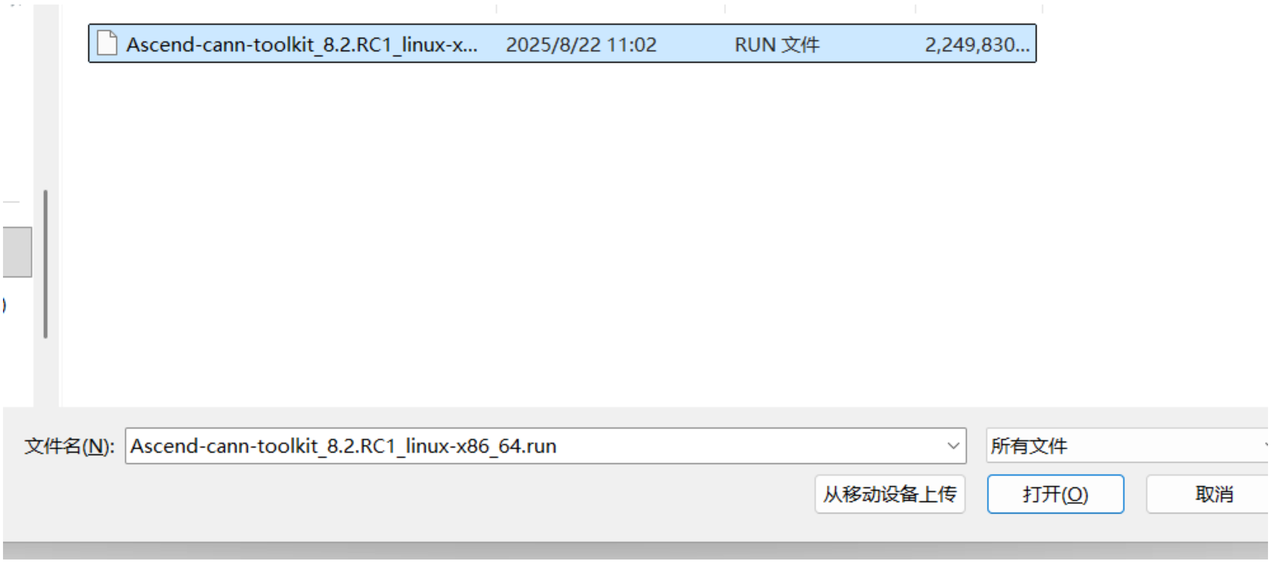
首先从本地上传安装包至服务器



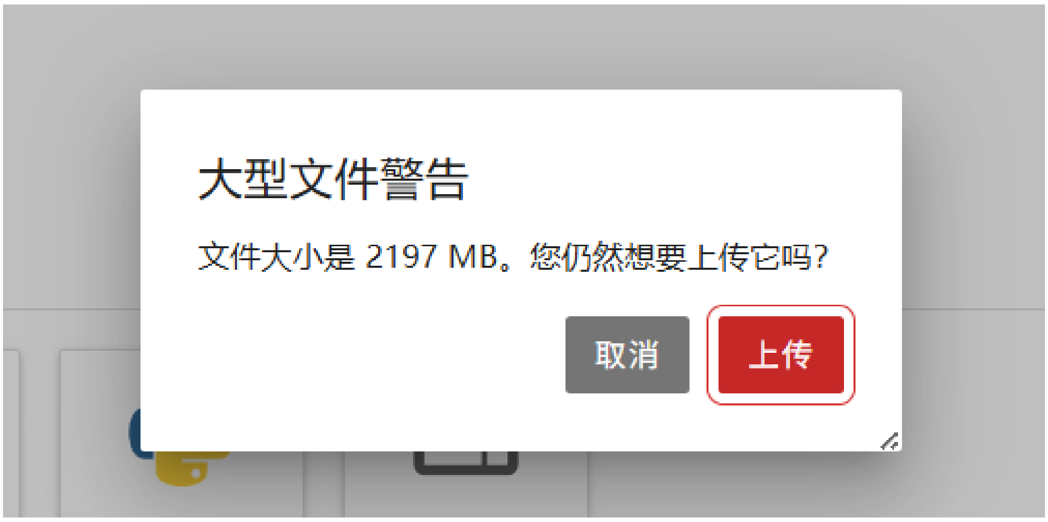
名称	已修改
autodl-tmp	1分钟前
miniconda3	9个月前
tf-logs	1分钟前

名称	修改日期	类型	大小
Ascend-cann-toolkit_8.2.RC1_linux-x...	2025/8/22 11:02	RUN 文件	2,249,830...



Ascend-cann-toolkit_8.2.RC1_linux-x... 2025/8/22 11:02 RUN 文件 2,249,830...

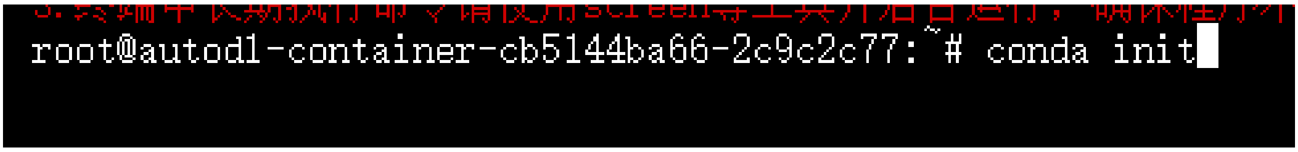
文件名(N): Ascend-cann-toolkit_8.2.RC1_linux-x86_64.run



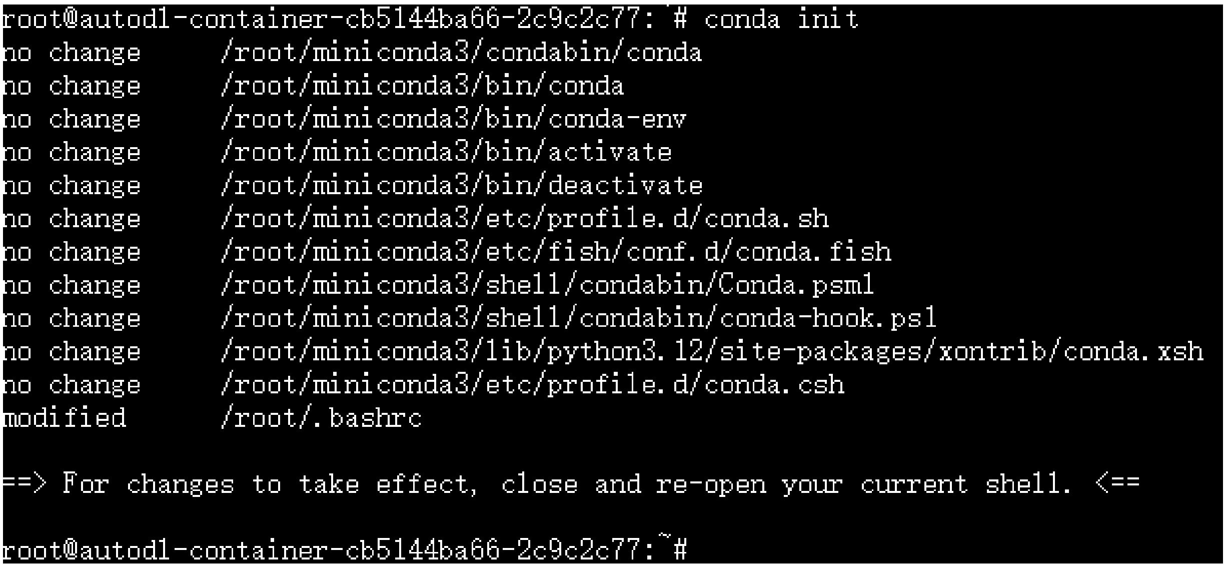
大型文件警告

文件大小是 2197 MB。您仍然想要上传它吗？

在上传任务的同时，进行环境配置，首先确保前面有（base）,没有 base 那么就初始化操作，conda init

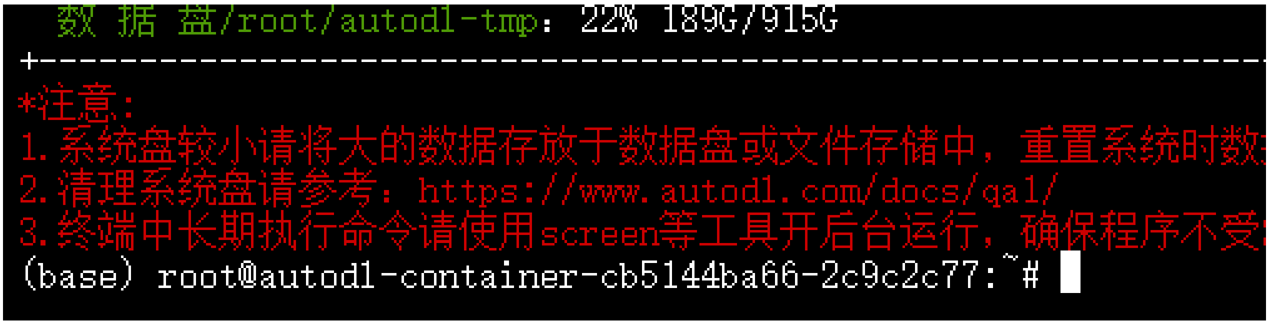


```
3.终端中长期执行命令请使用screen等工具开后台运行，确保程序不
root@autodl-container-cb5144ba66-2c9c2c77:~# conda init
```



```
root@autodl-container-cb5144ba66-2c9c2c77:~# conda init
no change     /root/miniconda3/condabin/conda
no change     /root/miniconda3/bin/conda
no change     /root/miniconda3/bin/conda-env
no change     /root/miniconda3/bin/activate
no change     /root/miniconda3/bin/deactivate
no change     /root/miniconda3/etc/profile.d/conda.sh
no change     /root/miniconda3/etc/fish/conf.d/conda.fish
no change     /root/miniconda3/shell/condabin/Conda.psm1
no change     /root/miniconda3/shell/condabin/conda-hook.ps1
no change     /root/miniconda3/lib/python3.12/site-packages/xontrib/conda.xsh
no change     /root/miniconda3/etc/profile.d/conda.csh
modified      /root/.bashrc

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

root@autodl-container-cb5144ba66-2c9c2c77:~#
```

初始化后关闭终端，重新打开新的终端，确保前面有 base，接下来创建模型转换环境

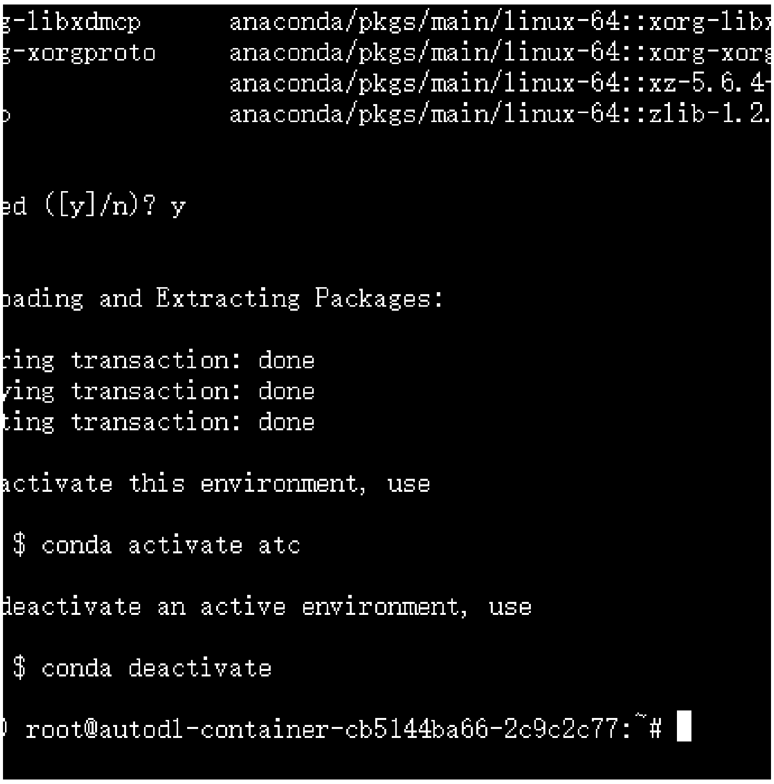


```
  数 据 盘/root/autodl-tmp: 22% 189G/915G
+--------------------------------------------------------------
*注意:
1.系统盘较小请将大的数据存放于数据盘或文件存储中，重置系统时数
2.清理系统盘请参考：https://www.autodl.com/docs/qa1/
3.终端中长期执行命令请使用screen等工具开后台运行，确保程序不受
(base) root@autodl-container-cb5144ba66-2c9c2c77:~#
```

创建一个名为 atc 的环境，版本要求 3.11.4

conda create -n atc python=3.11.4

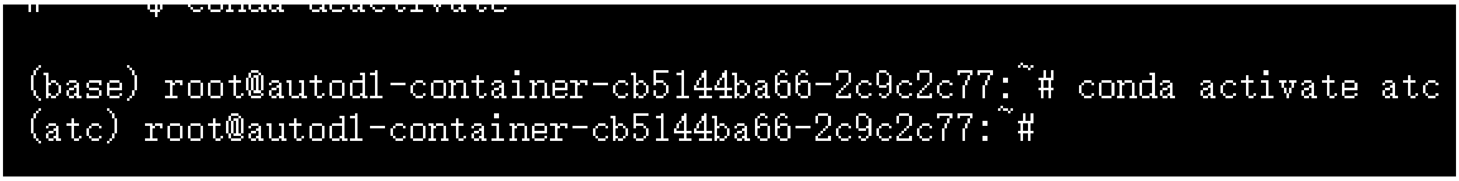
输入 y 确认



```
g-libxdmcp      anaconda/pkgs/main/linux-64::xorg-lib
g-xorgproto     anaconda/pkgs/main/linux-64::xorg-xorg
                anaconda/pkgs/main/linux-64::xz-5.6.4-
o               anaconda/pkgs/main/linux-64::zlib-1.2.


ed ([y]/n)? y


oading and Extracting Packages:

ring transaction: done
ying transaction: done
ting transaction: done

activate this environment, use

 $ conda activate atc

deactivate an active environment, use

 $ conda deactivate

) root@autodl-container-cb5144ba66-2c9c2c77:~#
```

激活 atc 环境

conda activate atc



```
#      $ conda deactivate

(base) root@autodl-container-cb5144ba66-2c9c2c77:~# conda activate atc
(atc) root@autodl-container-cb5144ba66-2c9c2c77:~#
```

确保下面操作基于 atc 环境

pip install attrs

pip install cython

pip install numpy==1.24.0

pip install decorator

pip install sympy

pip install cffi

pip install pyyaml

pip install pathlib2

pip install psutil

pip install protobuf==3.20.0

pip install scipy==1.15.3

pip install requests

pip install absl-py

pip install numpy==1.24.0

pip install scipy==1.15.3

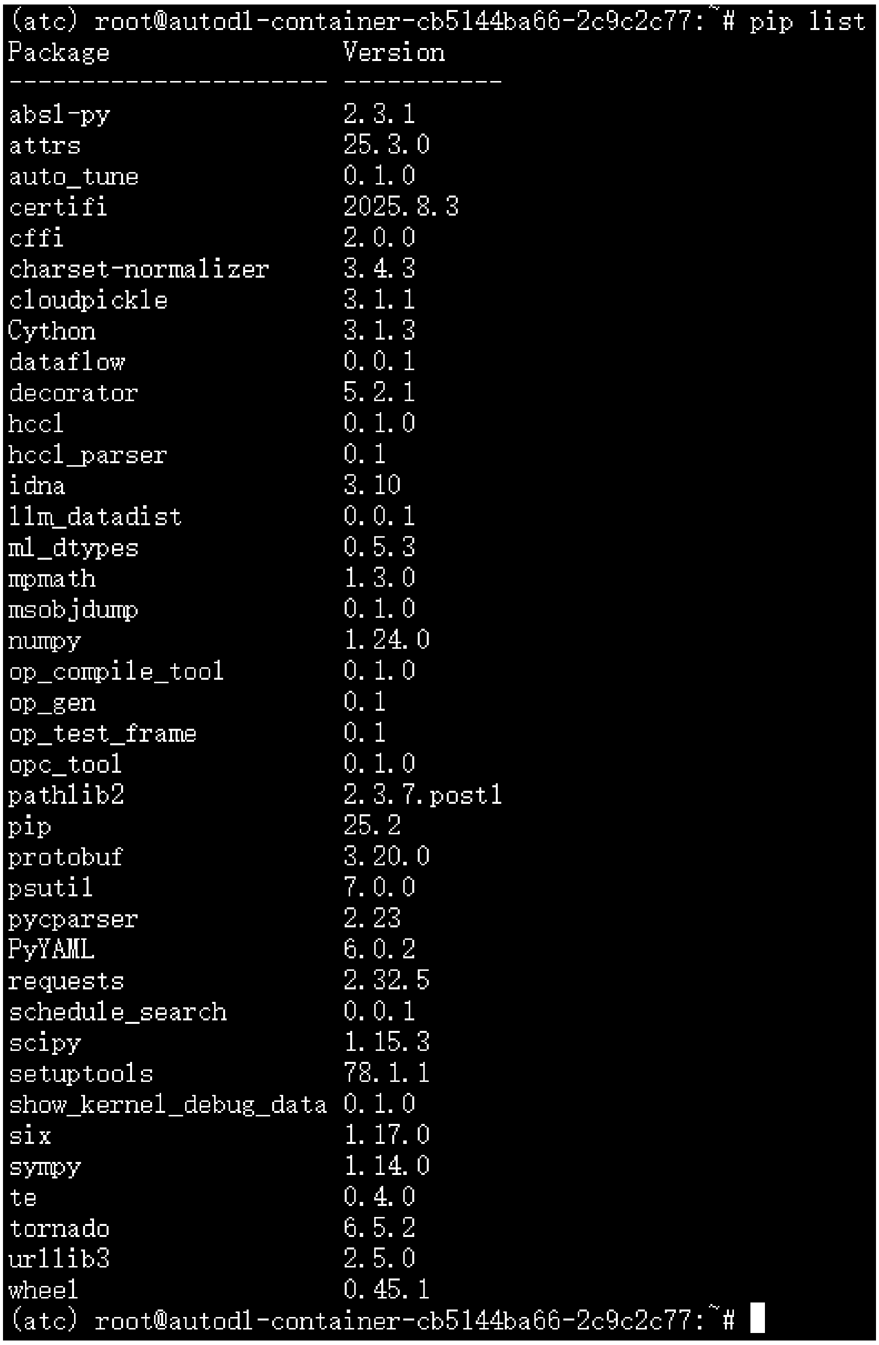
pip install cloudpickle ml-dtypes tornado

全部安装好后，通过 pip list 来查看包，确保有几个包的版本一定是指定版本，确保

numpy==1.24.0

scipy==1.15.3

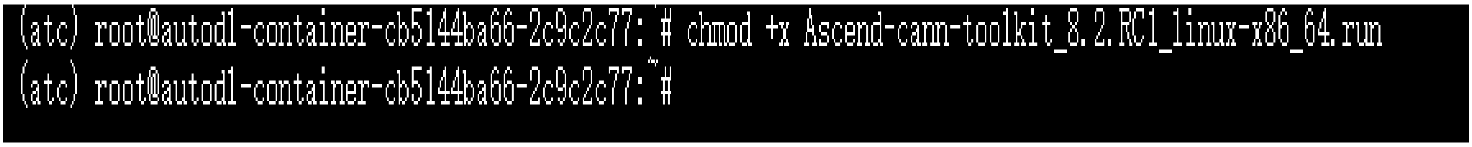
不然版本不一致转换会报错



```
(atc) root@autodl-container-cb5144ba66-2c9c2c77:~# pip list
Package                Version
---------------------- -----------
absl-py                2.3.1
attrs                  25.3.0
auto_tune              0.1.0
certifi                2025.8.3
cffi                   2.0.0
charset-normalizer     3.4.3
cloudpickle            3.1.1
Cython                 3.1.3
dataflow               0.0.1
decorator              5.2.1
hccl                   0.1.0
hccl_parser            0.1
idna                   3.10
llm_datadist           0.0.1
ml_dtypes              0.5.3
mpmath                 1.3.0
msobjdump              0.1.0
numpy                  1.24.0
op_compile_tool        0.1.0
op_gen                 0.1
op_test_frame          0.1
opc_tool               0.1.0
pathlib2               2.3.7.post1
pip                    25.2
protobuf               3.20.0
psutil                 7.0.0
pycparser              2.23
PyYAML                 6.0.2
requests               2.32.5
schedule_search        0.0.1
scipy                  1.15.3
setuptools             78.1.1
show_kernel_debug_data 0.1.0
six                    1.17.0
sympy                  1.14.0
te                     0.4.0
tornado                6.5.2
urllib3                2.5.0
wheel                  0.45.1
(atc) root@autodl-container-cb5144ba66-2c9c2c77:~#
```

接下来赋予安装包权限

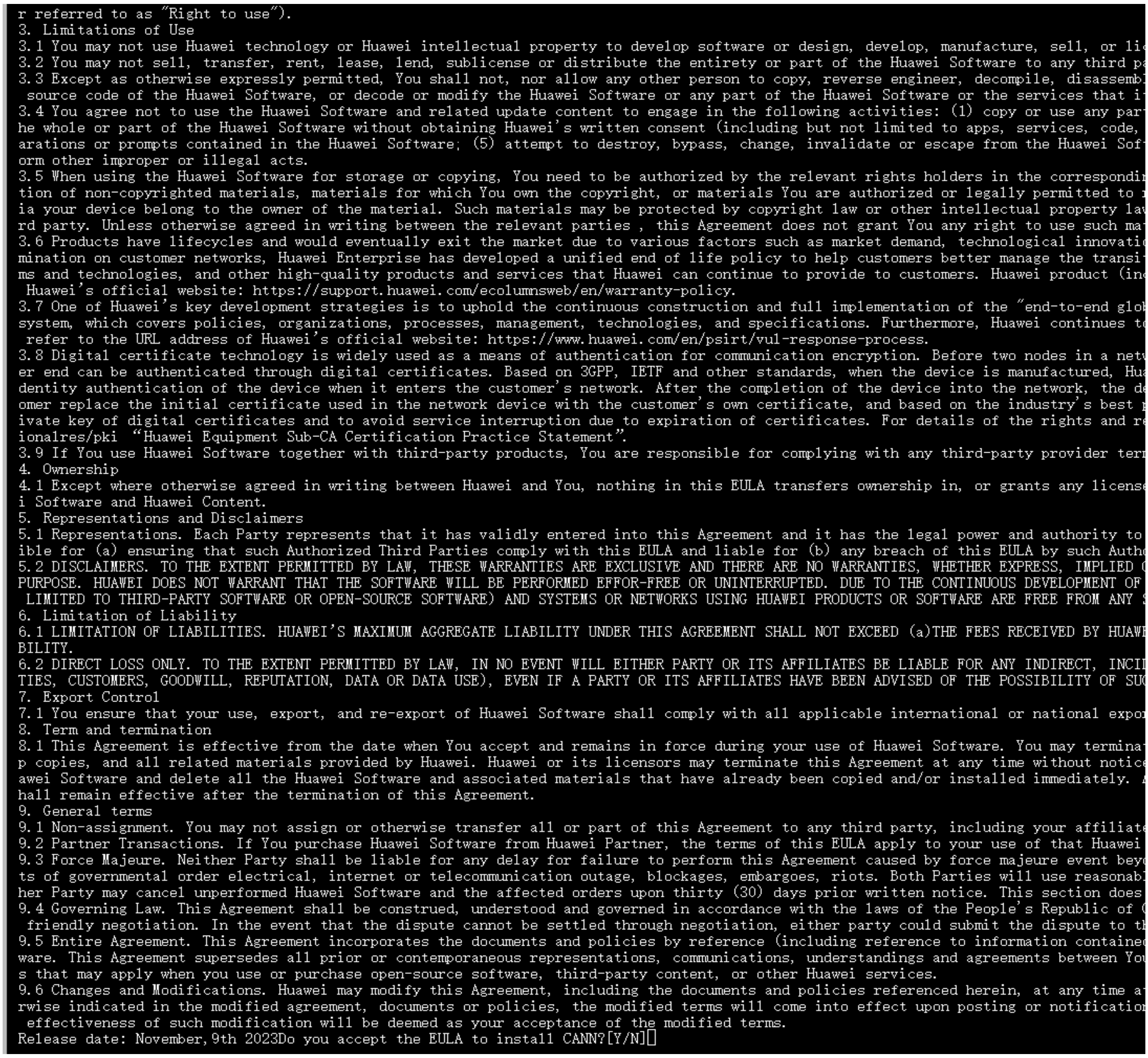
chmod +x Ascend-cann-toolkit_8.2.RC1_linux-x86_64.run



```
(atc) root@autodl-container-cb5144ba66-2c9c2c77:~# chmod +x Ascend-cann-toolkit_8.2.RC1_linux-x86_64.run
(atc) root@autodl-container-cb5144ba66-2c9c2c77:~#
```

进行安装

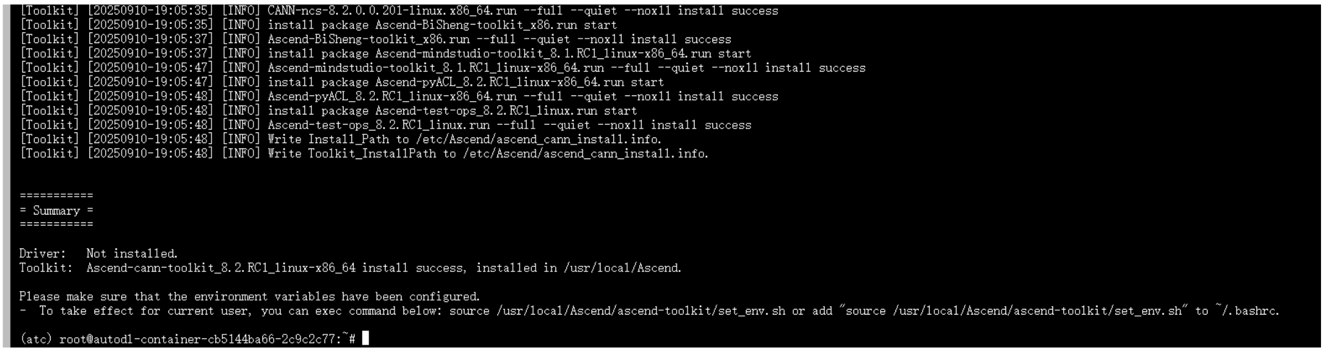
./Ascend-cann-toolkit_8.2.RC1_linux-x86_64.run --install



```
r referred to as "Right to use").
3. Limitations of Use
3.1 You may not use Huawei technology or Huawei intellectual property to develop software or design, develop, manufacture, sell, or li
3.2 You may not sell, transfer, rent, lease, lend, sublicense or distribute the entirety or part of the Huawei Software to any third pa
3.3 Except as otherwise expressly permitted, You shall not, nor allow any other person to copy, reverse engineer, decompile, disassembl
 source code of the Huawei Software, or decode or modify the Huawei Software or any part of the Huawei Software or the services that i
3.4 You agree not to use the Huawei Software and related update content to engage in the following activities: (1) copy or use any par
he whole or part of the Huawei Software without obtaining Huawei's written consent (including but not limited to apps, services, code,
arations or prompts contained in the Huawei Software; (5) attempt to destroy, bypass, change, invalidate or escape from the Huawei Sof
orm other improper or illegal acts.
3.5 When using the Huawei Software for storage or copying, You need to be authorized by the relevant rights holders in the correspondi
tion of non-copyrighted materials, materials for which You own the copyright, or materials You are authorized or legally permitted to
ia your device belong to the owner of the material. Such materials may be protected by copyright law or other intellectual property la
rd party. Unless otherwise agreed in writing between the relevant parties , this Agreement does not grant You any right to use such ma
3.6 Products have lifecycles and would eventually exit the market due to various factors such as market demand, technological innovati
mination on customer networks, Huawei Enterprise has developed a unified end of life policy to help customers better manage the transi
ms and technologies, and other high-quality products and services that Huawei can continue to provide to customers. Huawei product (in
 Huawei's official website: https://support.huawei.com/ecolumnsweb/en/warranty-policy.
3.7 One of Huawei's key development strategies is to uphold the continuous construction and full implementation of the "end-to-end glo
system, which covers policies, organizations, processes, management, technologies, and specifications. Furthermore, Huawei continues t
 refer to the URL address of Huawei's official website: https://www.huawei.com/en/psirt/vul-response-process.
3.8 Digital certificate technology is widely used as a means of authentication for communication encryption. Before two nodes in a net
er end can be authenticated through digital certificates. Based on 3GPP, IETF and other standards, when the device is manufactured, Hu
dentity authentication of the device when it enters the customer's network. After the completion of the device into the network, the d
omer replace the initial certificate used in the network device with the customer's own certificate, and based on the industry's best
ivate key of digital certificates and to avoid service interruption due to expiration of certificates. For details of the rights and r
ionalres/pki  "Huawei Equipment Sub-CA Certification Practice Statement".
3.9 If You use Huawei Software together with third-party products, You are responsible for complying with any third-party provider ter
4. Ownership
4.1 Except where otherwise agreed in writing between Huawei and You, nothing in this EULA transfers ownership in, or grants any licens
i Software and Huawei Content.
5. Representations and Disclaimers
5.1 Representations. Each Party represents that it has validly entered into this Agreement and it has the legal power and authority to
ible for (a) ensuring that such Authorized Third Parties comply with this EULA and liable for (b) any breach of this EULA by such Auth
5.2 DISCLAIMERS. TO THE EXTENT PERMITTED BY LAW, THESE WARRANTIES ARE EXCLUSIVE AND THERE ARE NO WARRANTIES, WHETHER EXPRESS, IMPLIED
PURPOSE. HUAWEI DOES NOT WARRANT THAT THE SOFTWARE WILL BE PERFORMED EFFOR-FREE OR UNINTERRUPTED. DUE TO THE CONTINUOUS DEVELOPMENT OF
 LIMITED TO THIRD-PARTY SOFTWARE OR OPEN-SOURCE SOFTWARE) AND SYSTEMS OR NETWORKS USING HUAWEI PRODUCTS OR SOFTWARE ARE FREE FROM ANY
6. Limitation of Liability
6.1 LIMITATION OF LIABILITIES. HUAWEI'S MAXIMUM AGGREGATE LIABILITY UNDER THIS AGREEMENT SHALL NOT EXCEED (a)THE FEES RECEIVED BY HUAW
BILITY.
6.2 DIRECT LOSS ONLY. TO THE EXTENT PERMITTED BY LAW, IN NO EVENT WILL EITHER PARTY OR ITS AFFILIATES BE LIABLE FOR ANY INDIRECT, INCI
TIES, CUSTOMERS, GOODWILL, REPUTATION, DATA OR DATA USE), EVEN IF A PARTY OR ITS AFFILIATES HAVE BEEN ADVISED OF THE POSSIBILITY OF SU
7. Export Control
7.1 You ensure that your use, export, and re-export of Huawei Software shall comply with all applicable international or national expo
8. Term and termination
8.1 This Agreement is effective from the date when You accept and remains in force during your use of Huawei Software. You may termina
p copies, and all related materials provided by Huawei. Huawei or its licensors may terminate this Agreement at any time without notic
awei Software and delete all the Huawei Software and associated materials that have already been copied and/or installed immediately.
hall remain effective after the termination of this Agreement.
9. General terms
9.1 Non-assignment. You may not assign or otherwise transfer all or part of this Agreement to any third party, including your affiliat
9.2 Partner Transactions. If You purchase Huawei Software from Huawei Partner, the terms of this EULA apply to your use of that Huawei
9.3 Force Majeure. Neither Party shall be liable for any delay for failure to perform this Agreement caused by force majeure event bey
ts of governmental order electrical, internet or telecommunication outage, blockages, embargoes, riots. Both Parties will use reasonab
her Party may cancel unperformed Huawei Software and the affected orders upon thirty (30) days prior written notice. This section does
9.4 Governing Law. This Agreement shall be construed, understood and governed in accordance with the laws of the People's Republic of
 friendly negotiation. In the event that the dispute cannot be settled through negotiation, either party could submit the dispute to t
9.5 Entire Agreement. This Agreement incorporates the documents and policies by reference (including reference to information containe
ware. This Agreement supersedes all prior or contemporaneous representations, communications, understandings and agreements between Yo
s that may apply when you use or purchase open-source software, third-party content, or other Huawei services.
9.6 Changes and Modifications. Huawei may modify this Agreement, including the documents and policies referenced herein, at any time a
rwise indicated in the modified agreement, documents or policies, the modified terms will come into effect upon posting or notificatio
 effectiveness of such modification will be deemed as your acceptance of the modified terms.
Release date: November,9th 2023Do you accept the EULA to install CANN?[Y/N]
```

输入 y

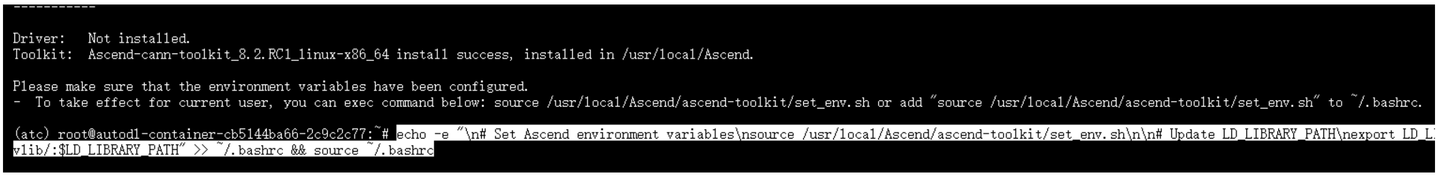
安装成功如下图



```
[Toolkit] [20250910-19:05:35] [INFO] CANN-ncs-8.2.0.0.201-linux.x86_64.run --full --quiet --nox11 install success
[Toolkit] [20250910-19:05:35] [INFO] install package Ascend-BiSheng-toolkit_x86.run start
[Toolkit] [20250910-19:05:37] [INFO] Ascend-BiSheng-toolkit_x86.run --full --quiet --nox11 install success
[Toolkit] [20250910-19:05:37] [INFO] install package Ascend-mindstudio-toolkit_8.1.RC1_linux-x86_64.run start
[Toolkit] [20250910-19:05:47] [INFO] Ascend-mindstudio-toolkit_8.1.RC1_linux-x86_64.run --full --quiet --nox11 install success
[Toolkit] [20250910-19:05:47] [INFO] install package Ascend-pyACL_8.2.RC1_linux-x86_64.run start
[Toolkit] [20250910-19:05:48] [INFO] Ascend-pyACL_8.2.RC1_linux-x86_64.run --full --quiet --nox11 install success
[Toolkit] [20250910-19:05:48] [INFO] install package Ascend-test-ops_8.2.RC1_linux.run start
[Toolkit] [20250910-19:05:48] [INFO] Ascend-test-ops_8.2.RC1_linux.run --full --quiet --nox11 install success
[Toolkit] [20250910-19:05:48] [INFO] Write Install_Path to /etc/Ascend/ascend_cann_install.info.
[Toolkit] [20250910-19:05:48] [INFO] Write Toolkit_InstallPath to /etc/Ascend/ascend_cann_install.info.


===========
= Summary =
===========

Driver:   Not installed.
Toolkit:  Ascend-cann-toolkit_8.2.RC1_linux-x86_64 install success, installed in /usr/local/Ascend.

Please make sure that the environment variables have been configured.
-  To take effect for current user, you can exec command below: source /usr/local/Ascend/ascend-toolkit/set_env.sh or add "source /usr/local/Ascend/ascend-toolkit/set_env.sh" to ~/.bashrc.

(atc) root@autodl-container-cb5144ba66-2c9c2c77:~#
```

自行确认是否成功，没有成功就有问题

接下来配置环境变量



```
-----------

Driver:   Not installed.
Toolkit:  Ascend-cann-toolkit_8.2.RC1_linux-x86_64 install success, installed in /usr/local/Ascend.

Please make sure that the environment variables have been configured.
-  To take effect for current user, you can exec command below: source /usr/local/Ascend/ascend-toolkit/set_env.sh or add "source /usr/local/Ascend/ascend-toolkit/set_env.sh" to ~/.bashrc.

(atc) root@autodl-container-cb5144ba66-2c9c2c77:~# echo -e "\n# Set Ascend environment variables\nsource /usr/local/Ascend/ascend-toolkit/set_env.sh\n\n# Update LD_LIBRARY_PATH\nexport LD_LI
vlib/:$LD_LIBRARY_PATH" >> ~/.bashrc && source ~/.bashrc
```

复制冒号下面的代码回车运行，会自动退出 atc 环境

一键写入环境变量：

echo -e "\n# Set Ascend environment variables\nsource /usr/local/Ascend/ascend-toolkit/set_env.sh\n\n# Update LD_LIBRARY_PATH\nexport LD_LIBRARY_PATH=/usr/local/Ascend/ascend-toolkit/latest/x86_64-linux/devlib/:$LD_LIBRARY_PATH" >> ~/.bashrc && source ~/.bashrc

解释：

1. **echo -e**：这个命令将以下内容写入到 .bashrc 文件中：
   - 设置 Ascend 环境变量：source /usr/local/Ascend/ascend-toolkit/set_env.sh
   - 更新 LD_LIBRARY_PATH 环境变量。
2. **>> ~/.bashrc**：将环境变量追加到用户的 .bashrc 文件末尾。
3. **source ~/.bashrc**：确保 .bashrc 文件更改生效，即立即加载新的环境变量。

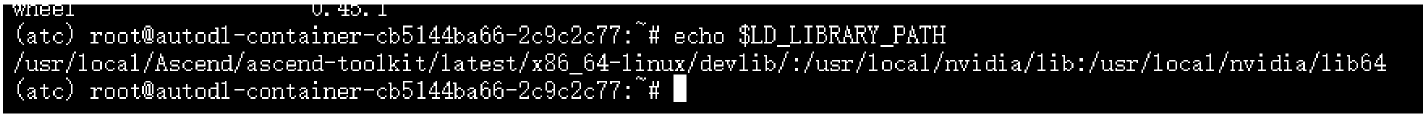
执行过程：

1. **执行该命令**：只需在终端中运行上面的命令。
2. **环境变量会被永久写入 .bashrc** 文件，并立即生效。

验证：

- **验证 LD_LIBRARY_PATH**：

echo $LD_LIBRARY_PATH



```
wheel                 0.45.1
(atc) root@autodl-container-cb5144ba66-2c9c2c77:~# echo $LD_LIBRARY_PATH
/usr/local/Ascend/ascend-toolkit/latest/x86_64-linux/devlib/:/usr/local/nvidia/lib:/usr/local/nvidia/lib64
(atc) root@autodl-container-cb5144ba66-2c9c2c77:~# █
```

接下来开始转换模型，上传服务器一个 onnx 格式模型，不能用 pt 格式模型，首先得在自己笔记本电脑上面把 pt 模型转换为 onnx 格式模型，然后上传服务器

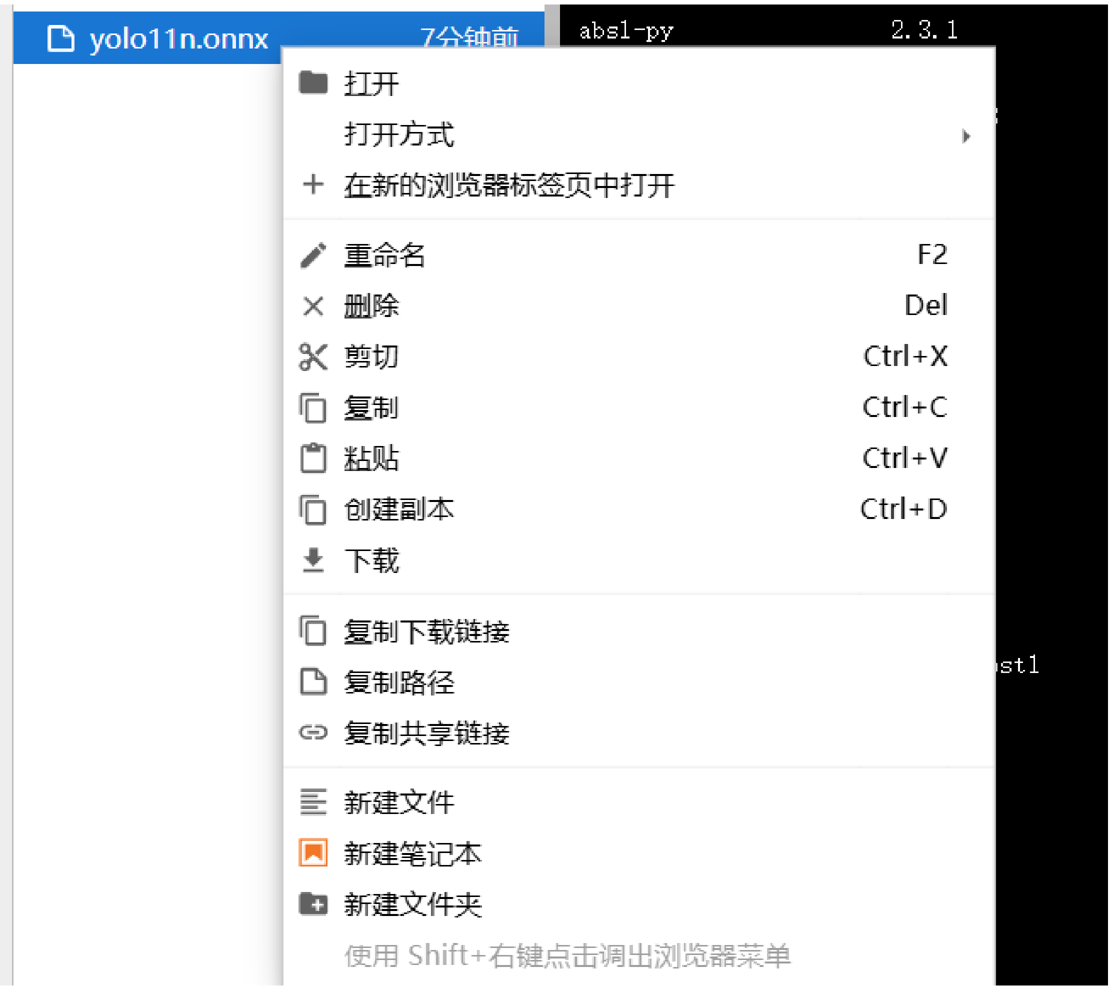
下面是在自己电脑运行的 pt 格式模型转换 onnx 格式模型的代码

from ultralytics import YOLO

model = YOLO("/home/yuking/Desktop/yolotoatc/weights/yolo11n.pt")   # load an official model

model.export(format="onnx",opset=17)

自行修改模型路径，最后会在 pt 模型路径生成一个同名但是后缀为 onnx 格式的模型，上传服务器这个 onnx 的模型



复制模型路径

接下来修改模型转换命令

原始命令

```
atc \
--model=yolo11n.onnx \
--framework=5 \
--input_format=NCHW \
--input_shape="images:1,3,640,640" \
--output=yolo11n_fp16 \
--soc_version=Ascend310B4 \
--precision_mode=allow_mix_precision
```

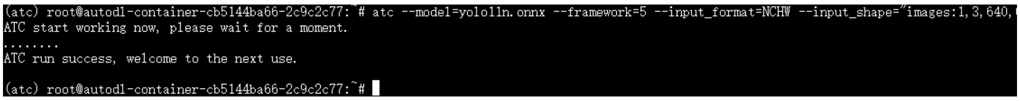
把“--model=“后面的改为自己刚才复制的路径

然后是“--output=”后面自己改成需要的名字，我改成了 yolo11n_fp16，你们可以自行更改，接下来复制这段

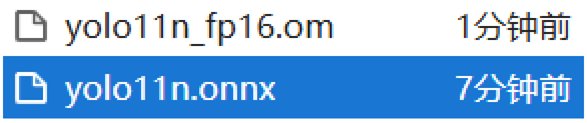
命令在 atc 环境下终端运行

开始运行，会等一段时间，一个点一个点的类似于进度条，最后会

ATC run success, welcome to the next use.即转换成功，把 om 格式模型下载下来就可以了



```
(atc) root@autodl-container-cb5144ba66-2c9c2c77:~# atc --model=yolo11n.onnx --framework=5 --input_format=NCHW --input_shape="images:1,3,640,
ATC start working now, please wait for a moment.
........
ATC run success, welcome to the next use.

(atc) root@autodl-container-cb5144ba66-2c9c2c77:~# 
```



```
yolo11n_fp16.om    1分钟前
yolo11n.onnx       7分钟前
```