

# AgentLego: 组装智能体“乐高”

## 1、直接使用 AgentLego

```
(agent) root@intern-studio-50051048:~/agent#
(agent) root@intern-studio-50051048:~/agent#
(agent) root@intern-studio-50051048:~/agent# cd /root/agent
(agent) root@intern-studio-50051048:~/agent# wget http://download.openmlab.com/agentlego/road.jpg
--2024-04-25 22:14:43-- http://download.openmlab.com/agentlego/road.jpg
Resolving proxy.intern-ai.org.cn (proxy.intern-ai.org.cn)... 172.18.128.194
Connecting to proxy.intern-ai.org.cn (proxy.intern-ai.org.cn)|172.18.128.194|:50000... connected.
Proxy request sent, awaiting response... 200 OK
Length: 284676 (278K) [image/jpeg]
Saving to: 'road.jpg'

road.jpg
100%[=====>] 278.00K --KB/s in 0s

2024-04-25 22:14:43 (688 MB/s) - 'road.jpg' saved [284676/284676]

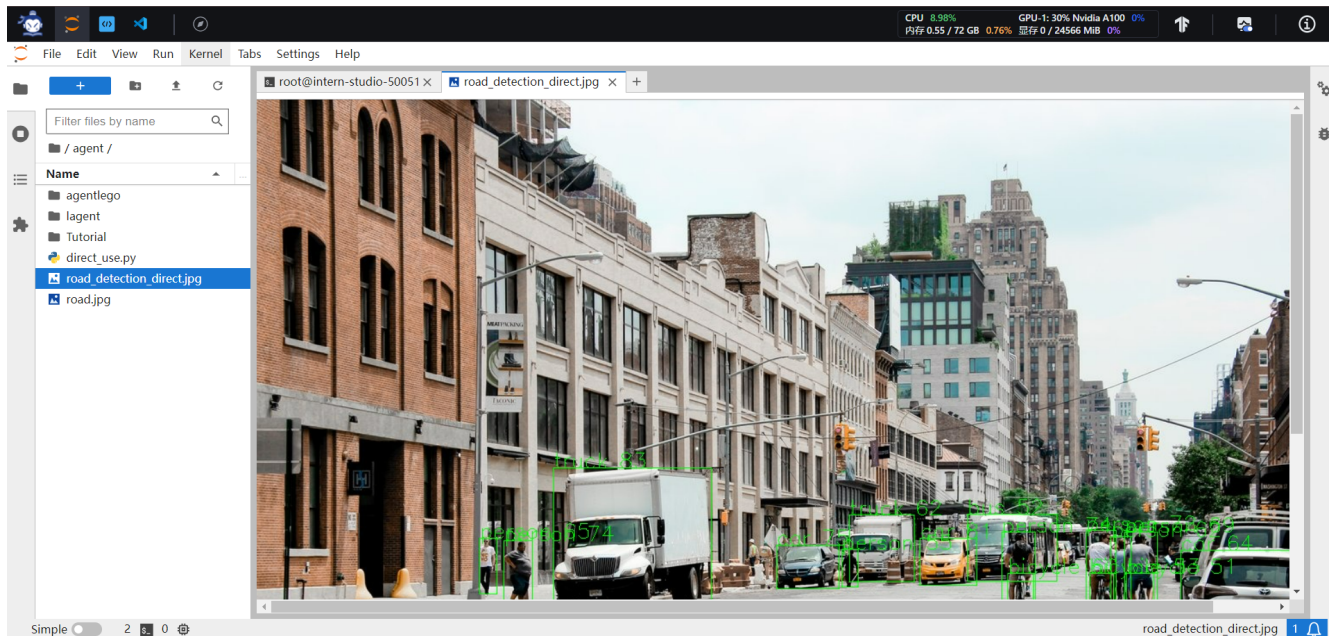
(agent) root@intern-studio-50051048:~/agent# conda activate agent
(agent) root@intern-studio-50051048:~/agent# pip install openmim==0.3.9
Looking in indexes: https://pypi.tuna.tsinghua.edu.cn/simple
Collecting openmim==0.3.9
  Downloading https://pypi.tuna.tsinghua.edu.cn/packages/00/b3/95531cee45202886940e08974561f83e9c256c98f62c7a45a51893a61c54/openmim-0.3.9-py2.py3-none-any.whl (52 kB)
    52 kB/52 kB 630.6 KB/s eta 0:00:00
Requirement already satisfied: Click in /root/.conda/envs/agent/lib/python3.10/site-packages (from openmim==0.3.9) (8.1.7)
Requirement already satisfied: colorama in /root/.conda/envs/agent/lib/python3.10/site-packages (from openmim==0.3.9) (0.4.6)
Collecting model-index (from openmim==0.3.9)
  Downloading https://pypi.tuna.tsinghua.edu.cn/packages/0f/a6/4d4cbbef704f186d143e2859296a610a355992e4eae71582bd598093b36a/model_index-0.1.11-py3-none-any.whl (34 kB)
Collecting opendatalab (from openmim==0.3.9)
  Downloading https://pypi.tuna.tsinghua.edu.cn/packages/10/82/28fa3a91b7c4852fba79ad32c7b49e4b1c212ab7ccf7296736a09835070d/opendatalab-0.0.10-py3-none-any.whl (29 kB)
Requirement already satisfied: pandas in /root/.conda/envs/agent/lib/python3.10/site-packages (from openmim==0.3.9) (2.2.2)
Requirement already satisfied: pip>=19.3 in /root/.conda/envs/agent/lib/python3.10/site-packages (from openmim==0.3.9) (23.3.1)
Requirement already satisfied: requests in /root/.conda/envs/agent/lib/python3.10/site-packages (from openmim==0.3.9) (2.31.0)
Requirement already satisfied: rich in /root/.conda/envs/agent/lib/python3.10/site-packages (from openmim==0.3.9) (13.7.1)
Collecting tabulate (from openmim==0.3.9)
  Using cached https://pypi.tuna.tsinghua.edu.cn/packages/40/44/4a5f08c96eb108af5cb50b41f76142f0afa346dfa99d5296fe7202a11854/tabulate-0.9.0-py3-none-any.whl (35 kB)
Requirement already satisfied: pyyaml in /root/.conda/envs/agent/lib/python3.10/site-packages (from model-index->openmim==0.3.9) (6.0.1)
Collecting markdown (from model-index->openmim==0.3.9)
```

```
Tutorial agentlego direct_use.py agent road.jpg
(agent) root@intern-studio-50051048:~/agent# python direct_use.py
Loads checkpoint by http backend from path: https://download.openmlab.com/mmdetection/v3.0/rtdet/rtdet_1_8xb32-300e_coco/rtdet_1_8xb32-300e_coco_20220719_112030-5a0be7c4.pth
Downloading: 'https://download.openmlab.com/mmdetection/v3.0/rtdet/rtdet_1_8xb32-300e_coco/rtdet_1_8xb32-300e_coco_20220719_112030-5a0be7c4.pth' to /root/.cache/torch/hub/checkpoints/rtdet_1_8xb32-300e_coco_20220719_112030-5a0be7c4.pth
100%[=====] 433M/433M [02:03:00:00, 3.67MB/s]

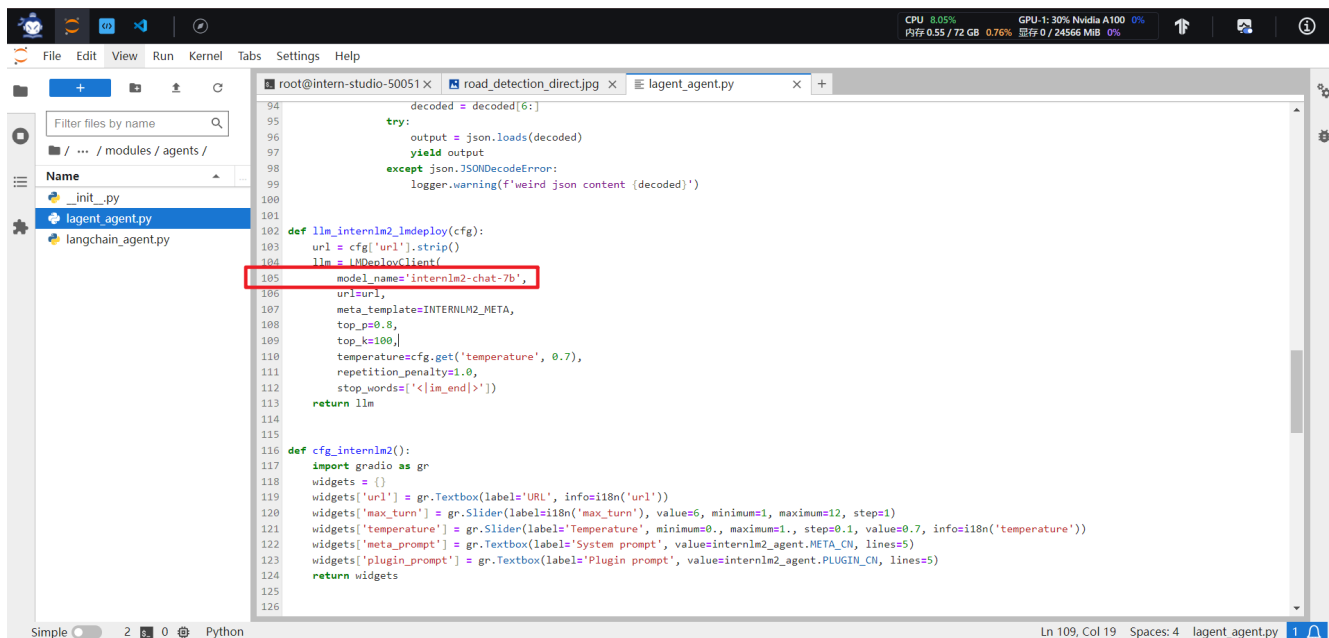
The model and loaded state dict do not match exactly

unexpected key in source state_dict: data_preprocessor.mean, data_preprocessor.std

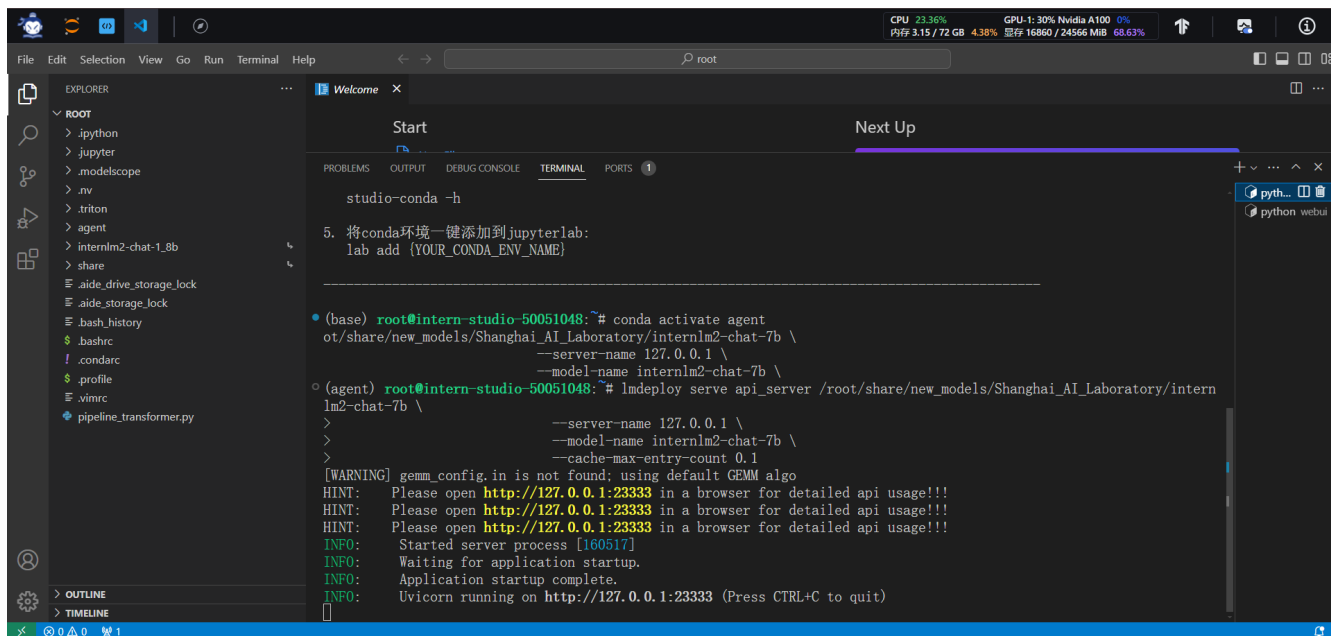
04/25 22:36:53 - mmengine - WARNING - Failed to search registry with scope "mmdet" in the "function" registry tree. As a workaround, the current "function" registry in "mmengine" is used to build instance. This may cause unexpected failure when running the built modules. Please check whether "mmdet" is a correct scope, or whether the registry is initialized.
/root/.conda/envs/agent/lib/python3.10/site-packages/mmengine/visualization/visualizer.py:196: UserWarning: Failed to add <class 'mmengine.visualization.vis_backend.LocalVisBackend'>, please provide the `save_dir` argument.
  warnings.warn(f'Failed to add {vis_backend.__class__},')
/root/.conda/envs/agent/lib/python3.10/site-packages/torch/functional.py:504: UserWarning: torch.meshgrid: in an upcoming release, it will be required to pass the indexing argument. (Triggered internally at /opt/conda/conda-bld/pytorch_1702400410390/work/aten/src/ATen/native/TensorShape.cpp:3526.)
  return _VF.meshgrid(tensors, **kwargs) # type: ignore[attr-defined]
Inference
truck (345, 428, 528, 599), score 83
car (771, 510, 837, 565), score 81
car (604, 518, 677, 569), score 75
person (866, 503, 905, 595), score 74
person (287, 513, 320, 596), score 74
person (964, 501, 999, 604), score 72
person (1009, 503, 1047, 602), score 69
person (259, 510, 279, 575), score 65
car (1074, 524, 1275, 691), score 64
person (993, 508, 1016, 597), score 62
truck (689, 483, 764, 561), score 62
bicycle (873, 551, 903, 602), score 60
person (680, 523, 699, 567), score 55
bicycle (968, 551, 996, 609), score 53
bus (826, 482, 930, 560), score 52
bicycle (1011, 551, 1043, 617), score 51
```



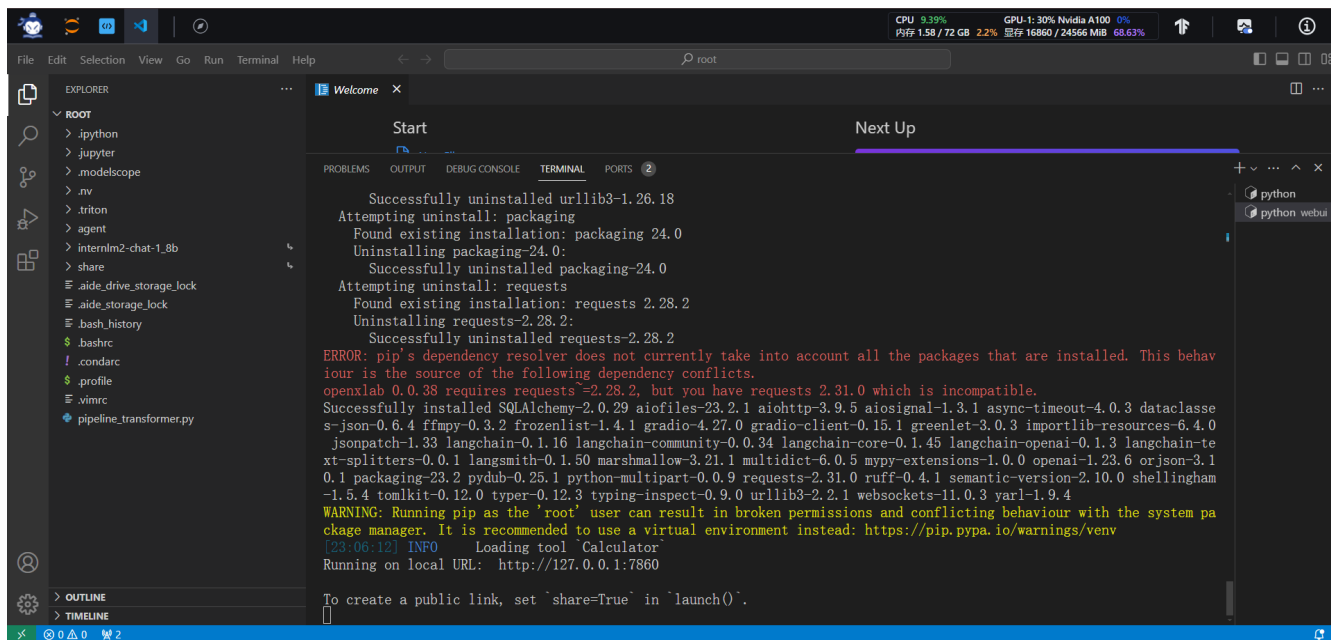
## 修改相关文件



## 使用 LMDeploy 部署



## 启动 AgentLego WebUI



## 使用 AgentLego WebUI

ChatAgentTools

Agent

internlm2

internlm2

Successfully loaded internlm2.

Load

Agent class

lagent.InternLM2Agent

Save

URL

The internlm2 server url of LMDeploy, like 'http://127.0.0.1:23333'

http://127.0.0.1:23333

Max number of turns

6

Temperature

What sampling temperature to use.

0.7

System prompt

当开启工具以及代码时，根据需求选择合适的工具进行调用

Plugin prompt

你可以使用如下工具：

ChatAgentTools

Tools

ObjectDetection

Setup All

Tool class

ObjectDetection

Save

Import from tool server

Confirm

Name

ObjectDetection

Description

The tool can detect all common objects in the picture.

☒ Enable

Device


cuda:0

Initialize arguments

Loaded ObjectDetection.

ChatAgentTools

Current agent: internlm2



猜测图中物体

ObjectDetection

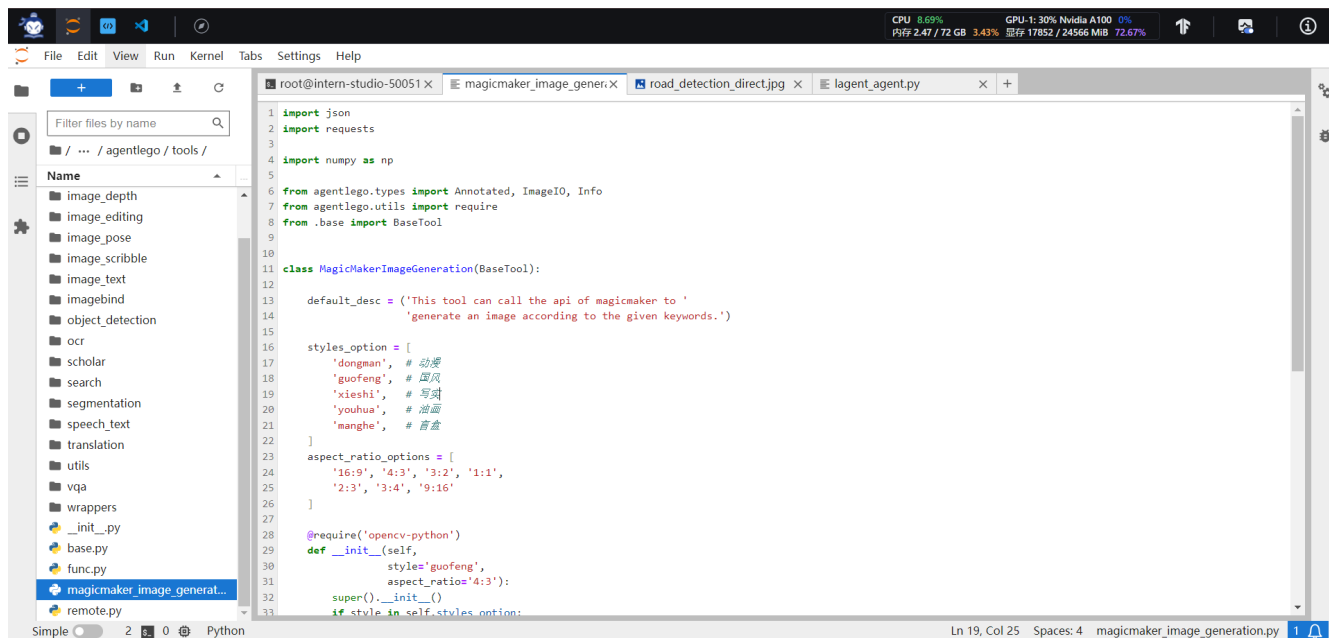
图片中共检测到以下物体：\n1. 卡车：位于图片左上角，颜色为绿色，得分83。 \n2. 汽车：位于图片右上角，颜色为红色，得分81。 \n3. 汽车：位于图片左下角，颜色为蓝色，得分75。 \n4. 人：位于图片右下角，颜色为黄色，得分74。 \n5. 人：位于图片左下角，颜色为蓝色，得分74。 \n6. 人：位于图片右下角，颜色为黄色，得分72。 \n7. 人：位于图片右下角，颜色为黄色，得分69。 \n8. 人：位于图片左下角，颜色为蓝色，得分65。 \n9. 汽车：位于图片右下角，颜色为黄色，得分64。 \n10. 人：位于图片右下角，颜色为黄色，得分62。 \n11. 卡车：位于图片左下角，颜色为蓝色，得分62。 \n12.

Send a message

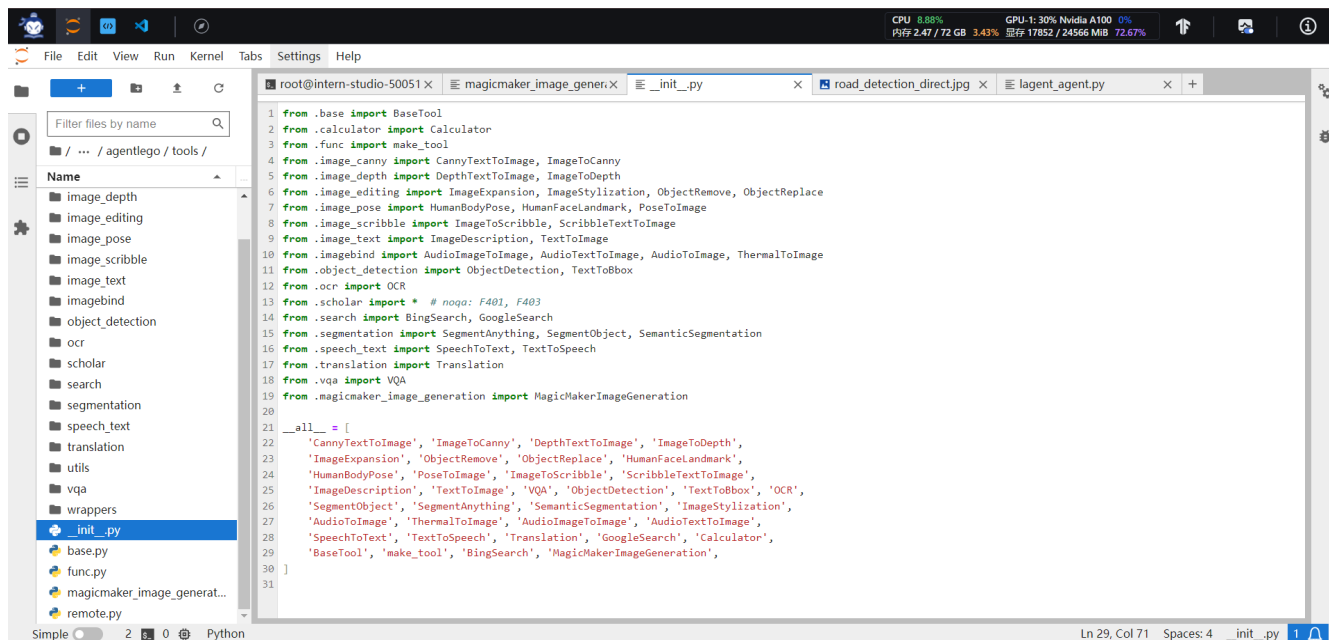
Generate

# 用 AgentLego 自定义工具

## 创建工具文件



## 注册新工具



## 体验自定义工具效果

Chat

Agent

Tools

Current agent: internlm2



帮我画一幅山水画



好的，我将调用MagicMakerImageGeneration API来帮您生成一幅山水画。请问您有任何具体的要求吗？



没有



好的，我现在调用API来生成山水画。请稍等片刻

► MagicMakerImageGeneration



Send a message



Generate