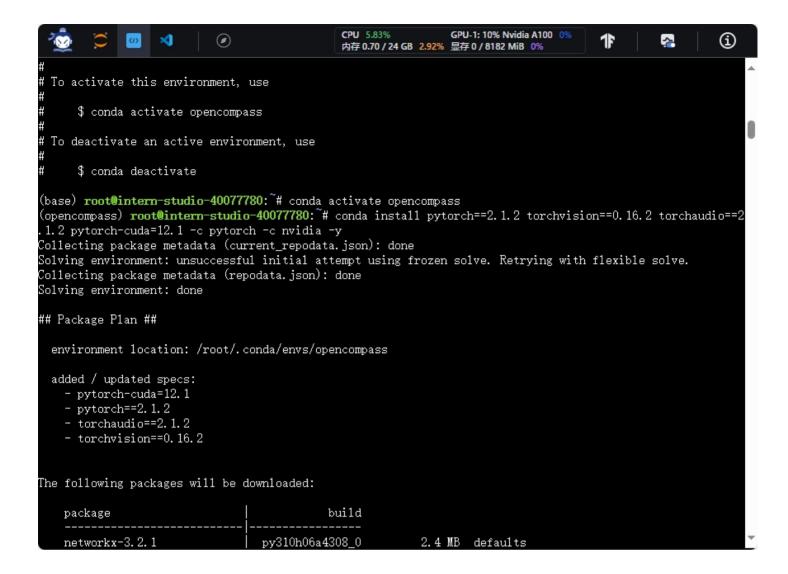
基础岛任务笔记6-OpenCompass 评测InternLM-1.8B 实践

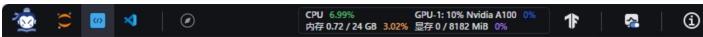
- 基础任务(完成此任务即完成闯关)
 - 使用 OpenCompass 评测 internlm2-chat-1.8b 模型在 ceval 数据集上的性能,记录复现过程并截图。
- 进阶任务(闯关不要求完成此任务)
 - 使用 OpenCompass 进行主观评测(选做)
 - 使用 OpenCompass 评测 InternLM2-Chat-1.8B 模型使用 LMDeploy部署后在 ceval 数据集上的性能(选做)
 - 使用 OpenCompass 进行调用API评测(优秀学员必做)

环境配置

首先创建开发机并创建好conda环境,其次面向GPU环境安装好

```
1 conda create -n opencompass python=3.10
2 conda activate opencompass
3 conda install pytorch==2.1.2 torchvision==0.16.2 torchaudio==2.1.2 pytorch-
   cuda=12.1 -c pytorch -c nvidia -y
5 # 注意: 一定要先 cd /root, git clone opencompass 时一定要将 opencompass clone 到
  /root 路径下
6 cd /root
7 git clone -b 0.2.4 https://github.com/open-compass/opencompass
8 cd opencompass
9 pip install -e .
10
11
12 apt-get update
13 apt-get install cmake
14 pip install -r requirements.txt
15 pip install protobuf
```





Successfully installed Levenshtein-0.25.1 OpenCC-1.1.9 absl-py-2.1.0 accelerate-0.34.0 addict-2.4.0 aichapp yeyeballs-2.4.0 aiohttp-3.10.5 aiosignal-1.3.1 annotated-types-0.7.0 anyio-4.4.0 async-timeout-4.0.3 attrs-24.2.0 boto3-1.35.12 botocore-1.35.12 click-8.1.7 cn2an-0.5.22 colorama-0.4.6 contourpy-1.3.0 cpm_kernels-1 . 0. 11 cycler-0. 12. 1 datasets-2. 19. 1 di11-0. 3. 8 distro-1. 9. 0 einops-0. 5. 0 evaluate-0. 4. 2 exceptiongroup-1. 2. fairscale-0.4.13 fonttools-4.53.1 frozenlist-1.4.1 fsspec-2024.3.1 func_timeout-4.3.5 fuzzywuzzy-0.18.0 h 11-0.14.0 httpcore-1.0.5 httpx-0.27.2 huggingface-hub-0.24.6 immutabledict-4.2.0 importlib-metadata-8.4.0 ieba-0.42.1 jiter-0.5.0 jmespath-1.0.1 joblib-1.4.2 kiwisolver-1.4.7 langdetect-1.0.9 ltp-4.2.14 ltp-core-0 1. 4 1tp-extension-0.1.13 1xm1-5.3.0 markdown-it-py-3.0.0 matp1ot1ib-3.9.2 mdur1-0.1.2 mmengine-1ite-0.10.4 multidict-6.0.5 multiprocess-0.70.16 nltk-3.8 openai-1.43.0 opencv-python-headless-4.10.0.84 packaging-24. 1 pandas-1.5.3 platformdirs-4.2.2 portalocker-2.10.1 prettytable-3.11.0 proces-0.1.7 psuti1-6.0.0 pyarrow-7.0.0 pyarrow-hotfix-0.6 pydantic-2.8.2 pydantic-core-2.20.1 pyext-0.7 pygments-2.18.0 pyparsing-3.1.4 pypi nyin-0.52.0 python-Levenshtein-0.25.1 python-dateuti1-2.9.0.post0 pytz-2024.1 rank_bm25-0.2.2 rapidfuzz-3.9 7 regex-2024. 7. 24 requests-2. 31. 0 rich-13. 8. 0 rouge-1. 0. 1 rouge_chinese rouge_score-0. 1. 2 s3transfer-0. 10. sacrebleu-2.4.3 safetensors-0.4.4 scikit_learn-1.2.1 scipy-1.14.1 seaborn-0.13.2 sentence_transformers-2. 2.2 sentencepiece-0.2.0 shellingham-1.5.4 six-1.16.0 sniffio-1.3.1 tabulate-0.9.0 termcolor-2.4.0 threadpoo 1ct1-3.5.0 tiktoken-0.7.0 timeout_decorator-0.5.0 tokenizers-0.19.1 tom1i-2.0.1 tqdm-4.64.1 transformers-4. 44.2 typer-0.12.5 wcwidth-0.2.13 xxhash-3.5.0 yapf-0.40.2 yar1-1.9.11 zipp-3.20.1

WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager, possibly rendering your system unusable. It is recommended to use a virtual environ ment instead: https://pip.pypa.io/warnings/venv. Use the --root-user-action option if you know what you are doing and want to suppress this warning.

(opencompass) root@intern-studio-40077780: /opencompass# pip install protobuf

Looking in indexes: https://pypi.tuna.tsinghua.edu.cn/simple

Collecting protobuf

Using cached https://pypi.tuna.tsinghua.edu.cn/packages/19/15/da43113361db20f2d521bc38d92549edbe06856aeec 085c420b2b8af5751/protobuf-5.28.0-cp38-abi3-many1inux2014_x86_64.wh1 (316 kB)

Installing collected packages: protobuf

Successfully installed protobuf-5.28.0

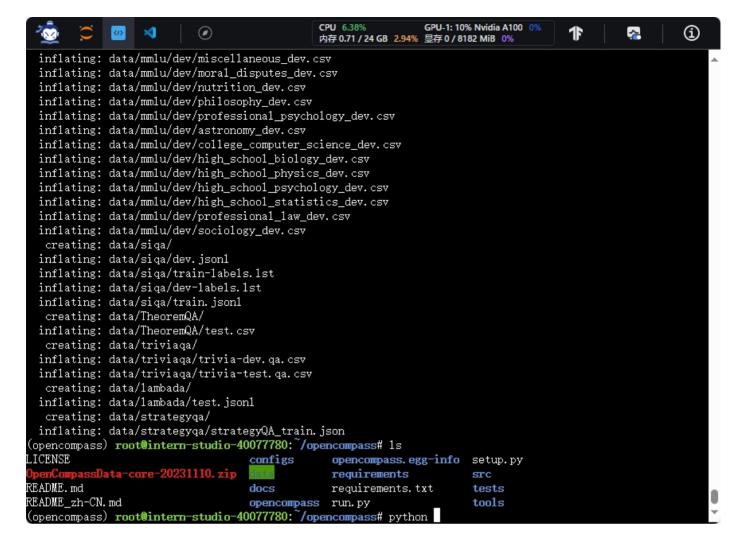
WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager, possibly rendering your system unusable. It is recommended to use a virtual environ ment instead: https://pip.pypa.io/warnings/venv. Use the --root-user-action option if you know what you are doing and want to suppress this warning.

(opencompass) root@intern-studio-40077780:~/opencompass#

数据准备

解压评测数据集,将在OpenCompass下看到data文件夹

- 1 cp /share/temp/datasets/OpenCompassData-core-20231110.zip /root/opencompass/
- 2 unzip OpenCompassData-core-20231110.zip



InternLM和ceval相关的配置文件

- 1 #列出所有跟 InternLM 及 C-Eval 相关的配置
- 2 python tools/list_configs.py internlm ceval

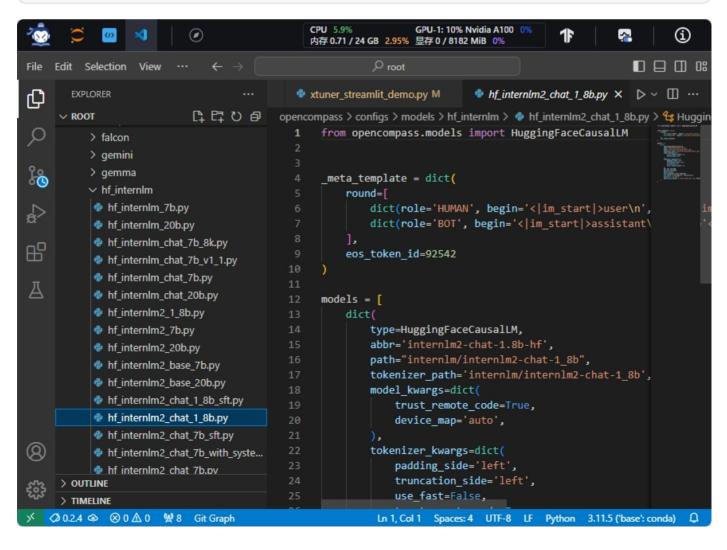
```
CPU 8.36%
                                                              GPU-1: 10% Nvidia A100 0%
                           1
                                                                                               ₹
                                                                                                        (i)
                                              内存 0.87 / 24 GB 3.61% 显存 0 / 8182 MiB 0%
README zh-CN.md
                                   opencompass run.py
(opencompass) root@intern-studio-40077780: "/opencompass# python tools/list_configs.py internlm ceval
A module that was compiled using NumPy 1.x cannot be run in
NumPy 2.0.1 as it may crash. To support both 1.x and 2.x
versions of NumPy, modules must be compiled with NumPy 2.0.
Some module may need to rebuild instead e.g. with 'pybind11>=2.12'.
If you are a user of the module, the easiest solution will be to
downgrade to 'numpy\langle 2' or try to upgrade the affected module.
We expect that some modules will need time to support NumPy 2.
Traceback (most recent call last): File "/root/opencompass/tools/list_configs.py", line 5, in <module>
   from opencompass.utils import match_files
 File "/root/opencompass/opencompass/utils/__init__.py", line 4, in <module>
    from .collect_env import * # noqa
 File "/root/opencompass/opencompass/utils/collect_env.py", line 2, in <module>
    from mmengine.utils.dl_utils import collect_env as collect_base_env
 File "/root/.conda/envs/opencompass/lib/python3.10/site-packages/mmengine/utils/dl_utils/__init__.py", li
ne 3, in <module>
    from .collect_env import collect_env
 File "/root/.conda/envs/opencompass/lib/python3.10/site-packages/mmengine/utils/dl_utils/collect_env.py"
line 10, in <module>
   import torch
 File "/root/.conda/envs/opencompass/lib/python3.10/site-packages/torch/__init__.py", line 1382, in <modul
    from .functional import * # noqa: F403
 File "/root/.conda/envs/opencompass/lib/python3.10/site-packages/torch/functional.py", line 7, in <module
   import torch.nn.functional as F
       //root/.conda/envs/opencompass/lib/python3.10/site-packages/torch/nn/__init__.py/, line 1, in <modul
    from .modules import * # noga: F403
                                   Config Path
 Dataset
 ceval_clean_pp1
                                    configs/datasets/ceval/ceval_clean_ppl.py
 ceval_contamination_pp1_810ec6
                                    configs/datasets/contamination/ceval_contamination_ppl_810ec6.py
 ceval_gen
                                    configs/datasets/ceval/ceval_gen.py
 ceval_gen_2daf24
                                    configs/datasets/ceval/ceval_gen_2daf24.py
 ceval_gen_5f30c7
                                    configs/datasets/ceval/ceval_gen_5f30c7.py
 ceval_internal_pp1_1cd8bf
                                    configs/datasets/ceval/ceval_internal_ppl_1cd8bf.py
 ceval_pp1
                                    configs/datasets/ceval/ceval_ppl.py
 ceval_ppl_1cd8bf
                                    configs/datasets/ceval/ceval_ppl_1cd8bf.py
 ceval_pp1_578f8d
                                    configs/datasets/ceval/ceval_pp1_578f8d.py
 ceval_pp1_93e5ce
                                    configs/datasets/ceval/ceval_pp1_93e5ce.py
 ceval_zero_shot_gen_bd40ef
                                    configs/datasets/ceval/ceval_zero_shot_gen_bd40ef.py
```

启动评测

使用命令行配置参数法进行评测

```
1 #打开 opencompass文件夹下configs/models/hf_internlm/的
hf_internlm2_chat_1_8b.py ,贴入以下代码
2 from opencompass.models import HuggingFaceCausalLM
3
4
5 models = [
6 dict(
```

```
type=HuggingFaceCausalLM,
            abbr='internlm2-1.8b-hf',
 8
            path="/share/new_models/Shanghai_AI_Laboratory/internlm2-chat-1_8b",
 9
            tokenizer path='/share/new models/Shanghai AI Laboratory/internlm2-
10
   chat-1_8b',
            model_kwargs=dict(
11
12
                trust_remote_code=True,
                device_map='auto',
13
14
            ),
            tokenizer_kwargs=dict(
15
                padding_side='left',
16
                truncation_side='left',
17
                use_fast=False,
18
                trust_remote_code=True,
19
20
            ),
21
            max_out_len=100,
            min_out_len=1,
22
23
            max_seq_len=2048,
            batch_size=8,
24
25
            run_cfg=dict(num_gpus=1, num_procs=1),
26
       )
27 ]
```



```
1 #环境变量配置
                                         2 export MKL SERVICE FORCE INTEL=1
                                         4 export MKL_THREADING_LAYER=GNU
                                         6 python run.py --datasets ceval_gen --models hf_internlm2_chat_1_8b --debug
                                       8 #命今解析
                                       9 python run.py
                                10 --datasets ceval_gen \ # 数据集准备
                                 11 --models hf_internlm2_chat_1_8b \ # 模型准备
                                12 --debug
                           paga.40 per Compass - INEO - Task [internIm2-1.8b-hf/ceval-college_economics, internIm2-1.8b-hf/ceval-activity. The control of the control of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 55/55 [00:00<00:00, 1488301.42it/s]
                             | 0/7 [00:00<7, ?it/s]
ention mask is not set and cannot be inferred from input because pad token is same as eos token. As a consequence, you may observe unexpected behavior. Please pass your imp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7/7 [08:37<00:00, 73.90s/it]
                                                                                                                                  - INFO - Start inferencing [intern1m2-1 8b-bf/ceval-accountant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49/49 [00:00<00:00, 1148161.43it/s]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7/7 [08:01<00:00, 68.78s/it]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49/49 [00:00<00:00, 1533738.03it/s]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 7/7 [07:48<00:00, 66.96s/it]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 49/49 [00:00<00:00, 1500152.53it/s]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1/7 [01:06<06:37, 66.33s/it]
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                                                              | PRE-348/Z4 GB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 / 8182 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-232 MIB 76.9% | PRE-348 / Z4 CB 14.48% = PRE-
[config]
un.py: error: ambiguous option: --model could match --models, --model-kwargs
open.compass) root@intern-studio-40077780: /open.compass# python run.py --datasets ceval_gen --models hf_internlm2_chat_1_8b --debug
9/05 21:36:22 - Open.compass - INEO - Loading ceval_gen: configs/datasets/ceval_ceval_gen.py
9/05 21:36:22 - Open.compass - INEO - Loading sexample: configs/summarizers/sva.ample.py
9/05 21:36:22 - Open.compass - INEO - Loading sexample: configs/summarizers/sva.ample.py
9/05 21:36:22 - Open.compass - INEO - Loading sexample: configs/summarizers/sva.ample.py
9/05 21:36:23 - Open.compass - INEO - Loading sexample: configs/summarizers/sva.ample.py
9/05 21:36:23 - Open.compass - INEO - Summarizers/sva.ample.py
9/05 21:36:25 - Open.compass - INEO - Partitioned into 1 tasks.
9/05 21:36:25 - Open.compass - INEO - Partitioned into 1 tasks.
9/05 21:36:55 - Open.compass - INEO - Partitioned into 1 tasks.
9/05 21:36:55 - Open.compass - INEO - Partitioned into 1 tasks.
9/05 21:36:55 - Open.compass - INEO - Partitioned into 1 tasks.
9/05 21:36:55 - Open.compass - INEO - Partitioned into 1 tasks.
9/05 21:36:55 - Open.compass - INEO - Partitioned into 1 tasks.
9/05 21:36:55 - Open.compass - INEO - Task [internlm2-1.8b-hf/ceval-college_economics, internlm2-1.8b-hf/ceval-accountant, internlm2-1.8b-hf/ceval-relationed into 1 tasks.
9/05 21:36:55 - Open.compass - INEO - Task [internlm2-1.8b-hf/ceval-urban_and_rural_planner, internlm2-1.8b-hf/ceval-task_accountant, internlm2-1.8b-hf/ceval-relationed i
   m2.1.8b-hf/ceval-module_scnool_opinitys, internim2-1.8b-hf/ceval-module_scnool_point(s, internim2-1.8b-hf/ceval-chemistry, internim2-1.8b-hf/ceval-advanced_mathematics, internim2-1.8b-hf/ceval-advanced_mathematics, internim2-1.8b-hf/ceval-advanced_mathematics, internim2-1.8b-hf/ceval-advanced_mathematics, internim2-1.8b-hf/ceval-middle_school_physics, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   orts_science, intern1m2-1.8b-hf/ceval-basic_medicine, intern1m2-1.8b-hf/cev
rete_mathematics, intern1m2-1.8b-hf/ceval-middle_school_geography]
| 2/2 [00:27<00:00, 13.76s/it]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 55/55 [00:00<00:00, 1488301.42it/s]
```

