CLIP

1. Manually download the model and upload it to raspberrypi5, or pull the model repository with the following command.

> **Tip**
>
> If **git lfs** is not installed, please first refer to git lfs installation instructions for setup.

```
git clone https://huggingface.co/AXERA-TECH/LibCLIP
```

File Description

```
m5stack@raspberrypi:~/rsp/LibCLIP $ ls -lh
total 157M
drwxrwxr-x 2 m5stack m5stack 4.0K Aug 11 09:09 cnclip
-rw-rw-r-- 1 m5stack m5stack 156M Aug 11 09:08 coco_1000.tar
-rw-rw-r-- 1 m5stack m5stack 3.8K Aug 11 09:08 config.json
-rw-rw-r-- 1 m5stack m5stack 779K Aug 11 09:08 gradio_01.png
drwxrwxr-x 5 m5stack m5stack 4.0K Aug 11 09:08 install
drwxrwxr-x 2 m5stack m5stack 4.0K Aug 11 09:08 pyclip
-rw-rw-r-- 1 m5stack m5stack 6.0K Aug 11 09:08 README.md
```

2. Create a virtual environment

```
python -m venv clip
```

3. Activate the virtual environment

```
source clip/bin/activate
```

4. Install dependencies

```
pip install -r pyclip/requirements.txt
```

5. Set environment variables

```
export LD_PRELOAD=/usr/lib/
```

6. Copy the dynamic library

```
cp install/lib/aarch64/libclip.so pyclip/
```

7. Extract the test images

```
tar xf coco_1000.tar
```

8. Start the web service

```
python pyclip/gradio_example.py --ienc cnclip/cnclip_vit_l14_336px_vision_u16u8.axmodel --tenc cnclip/cnclip
```

After successful startup, you will see information similar to the following:

```
(clip) m5stack@raspberrypi:~/rsp/LibCLIP $ python pyclip/gradio_example.py --ienc cnclip/cnclip_vit_l14_336p
Trying to load: /home/m5stack/rsp/LibCLIP/pyclip/aarch64/libclip.so

❌ Failed to load: /home/m5stack/rsp/LibCLIP/pyclip/aarch64/libclip.so
   /home/m5stack/rsp/LibCLIP/pyclip/aarch64/libclip.so: cannot open shared object file: No such file or dire
🔍 File not found. Please verify that libclip.so exists and the path is correct.

Trying to load: /home/m5stack/rsp/LibCLIP/pyclip/libclip.so
open libax_sys.so failed
open libax_engine.so failed
✅ Successfully loaded: /home/m5stack/rsp/LibCLIP/pyclip/libclip.so
Available devices: {'host': {'available': True, 'version': '', 'mem_info': {'remain': 0, 'total': 0}}, 'devi
[I][                            run][  31]: AXCLWorker start with devid 0

input size: 1
    name:    image [unknown] [unknown]
        1 x 3 x 336 x 336


output size: 1
    name: unnorm_image_features
        1 x 768

[I][              load_image_encoder][  50]: nchw 336 336
[I][              load_image_encoder][  60]: image feature len 768

input size: 1
    name:     text [unknown] [unknown]
        1 x 52


output size: 1
    name: unnorm_text_features
        1 x 768

[I][               load_text_encoder][  44]: text feature len 768
[I][                  load_tokenizer][  60]: text token len 52
100%|████████████████████████████████| 1000/1000 [00:00<00:00, 163246.95it/s]
* Running on local URL:  http://0.0.0.0:7860
* To create a public link, set `share=True` in `launch()`.
```

9. Open http://127.0.0.1:7860 in a browser, enter the desired search content in the text box, and click **Search Image**.

🔍 文搜图 Demo

请输入文本查询

小孩骑马

Top-K

25

搜图

匹配结果