

Python 下 ncnn 模型使用

第一步:

安装库

```
pip install sherpa-ncnn
```

第二步:

代码选择 1 (流式) : <https://k2-fsa.github.io/sherpa-ncnn/python/index.html>

或

<https://github.com/k2-fsa/sherpa-ncnn/blob/master/python-api-examples/speech-recognition-from-microphone.py>

Listing 1 Real-time speech recognition with a microphone using *sherpa-ncnn* Python API

```
import sys

try:
    import sounddevice as sd
except ImportError as e:
    print("Please install sounddevice first. You can use")
    print()
    print(" pip install sounddevice")
    print()
    print("to install it")
    sys.exit(-1)

import sherpa_ncnn
```

代码选择 2 (流式带端点) :

<https://github.com/k2-fsa/sherpa-ncnn/blob/master/python-api-examples/speech-recognition-from-microphone-with-endpoint-detection.py>

第三步:

模型选择举例: [csukuangfj/sherpa-ncnn-streaming-zipformer-en-2023-02-13](https://github.com/csukuangfj/sherpa-ncnn-streaming-zipformer-en-2023-02-13)
(English)

下载方法 1 (wget) :

https://k2-fsa.github.io/sherpa-ncnn/pretrained_models/zipformer-transucer-models.html#id9

下载方法 2 (huggingface) :

<https://huggingface.co/csukuangfj/sherpa-ncnn-streaming-zipformer-bilingual-zh-en-2023-02-13/tree/main>

模型文件有:

decoder_jit_trace-pnnx.ncnn.bin	6.41 MB	LFS	↓
decoder_jit_trace-pnnx.ncnn.param	439 Bytes		↓
encoder_jit_trace-pnnx.ncnn.bin	127 MB	LFS	↓
encoder_jit_trace-pnnx.ncnn.param	162 kB		↓
export-for-ncnn-bilingual.sh	3.06 kB		↓
joiner_jit_trace-pnnx.ncnn.bin	7.35 MB	LFS	↓
joiner_jit_trace-pnnx.ncnn.param	490 Bytes		↓
tokens.txt	56.3 kB		↓

第四步:

替换路径运行:

```
recognizer = sherpa_ncnn.Recognizer(  
    tokens="./sherpa-ncnn-conv-emformer-transducer-2022-12-06/tokens.txt",  
    encoder_param="./sherpa-ncnn-conv-emformer-transducer-2022-12-06/encoder_jit_trace-pnnx.ncnn.param",  
    encoder_bin="./sherpa-ncnn-conv-emformer-transducer-2022-12-06/encoder_jit_trace-pnnx.ncnn.bin",  
    decoder_param="./sherpa-ncnn-conv-emformer-transducer-2022-12-06/decoder_jit_trace-pnnx.ncnn.param",  
    decoder_bin="./sherpa-ncnn-conv-emformer-transducer-2022-12-06/decoder_jit_trace-pnnx.ncnn.bin",  
    joiner_param="./sherpa-ncnn-conv-emformer-transducer-2022-12-06/joiner_jit_trace-pnnx.ncnn.param",  
    joiner_bin="./sherpa-ncnn-conv-emformer-transducer-2022-12-06/joiner_jit_trace-pnnx.ncnn.bin",  
    num_threads=4,  
    hotwords_file="",  
    hotwords_score=1.5,  
)
```