

# 文档

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1. GPT SoVITS开源项目: <https://github.com/RVC-Boss/GPT-SoVITS>
2. 文档: <https://www.yuque.com/baicaigongchang1145haoyuangong/ib3g1e>
3. 百度云盘: [https://pan.baidu.com/s/1J-48cX1\\_x4IroMON2CKSRw](https://pan.baidu.com/s/1J-48cX1_x4IroMON2CKSRw) 提取码: yww5

## 前提

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Docker 安装CUDA支持

## Docker镜像构建

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### 下载GPT-SoVITS源码

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```
git clone https://github.com/RVC-Boss/GPT-SoVITS.git
```

### 下载nltk\_data

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1. 自然语言工具包 (Natural Language Toolkit, NLTK) 的数据集合, 下载

```
git clone https://github.com/nltk/nltk_data.git
```

### Python 下载

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1. Python下载地址

```
https://www.python.org/ftp/python/3.10.13/Python-3.10.13.tgz
```

### 预训练模型下载

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1. GPT-SoVITS Models

```
# 此方式未经验证
git lfs install
git clone https://huggingface.co/lj1995/GPT-SoVITS pretrained_models
git lfs pull
```

或: (已验证) [https://www.icloud.com/iclouddrive/044boFMiOHHt22SNr-c-tirbA#pretrained\\_models](https://www.icloud.com/iclouddrive/044boFMiOHHt22SNr-c-tirbA#pretrained_models)

2. G2PWModel下载地址

```
https://paddlespeech.bj.bcebos.com/Parakeet/released_models/g2p/G2PWModel_1.1.zip
```

### 其他工具类模型下载

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1. uvr5\_weights 人声伴奏分类

```
git clone https://huggingface.co/lj1995/VoiceConversionWebUI
```

## 2. 中文语音识别

```
git clone https://www.modelscope.cn/iic/speech_paraformer-large_asr_nat-zh-cn-16k-common-vocab8404-pytorch.git
git clone https://www.modelscope.cn/iic/speech_fsmn_vad_zh-cn-16k-common-pytorch.git
git clone https://www.modelscope.cn/iic/punc_ct-transformer_zh-cn-common-vocab272727-pytorch.git
```

## 3. 英文语音识别

```
git clone https://huggingface.co/Systran/faster-whisper-large-v3
```

# 将以上所有未压缩资源均已zip格式提供

名称	修改日期	类型	大小
 faster-whisper-large-v3	2024/8/8 20:30	压缩(zipped)文件...	1,975 KB
 G2PVMModel_1.1	2024/8/8 16:28	压缩(zipped)文件...	575,056 KB
 GPT-SoVITS	2024/8/8 20:30	压缩(zipped)文件...	12,886 KB
 nick	2024/8/8 21:49	文本文档	1 KB
 nick	2024/8/8 21:46	WAV 文件	1,113 KB
 nltk_data	2024/8/8 20:30	压缩(zipped)文件...	1,749,276...
 pretrained_models	2024/8/9 0:01	压缩(zipped)文件...	1,398,312...
 pretrained_models_bak	2024/8/8 20:30	压缩(zipped)文件...	245 KB
 punc_ct-transformer_zh-cn-common...	2024/8/8 20:30	压缩(zipped)文件...	264,783 KB
 Python-3.10.13	2024/5/25 14:29	WinRAR 压缩文件	25,500 KB
 speech_fsmn_vad_zh-cn-16k-commo...	2024/8/8 20:29	压缩(zipped)文件...	6,532 KB
 speech_paraformer-large_asr_nat-zh...	2024/8/8 20:30	压缩(zipped)文件...	1,186,412...
 VoiceConversionWebUI	2024/8/8 20:29	压缩(zipped)文件...	266 KB

# Dockerfile.api

```
FROM quay.io/0voice/ubuntu:22.04
# 替换镜像源
RUN sed -i 's/archive.ubuntu.com/cn.archive.ubuntu.com/g' /etc/apt/sources.list
# 安装所需依赖
RUN apt update && DEBIAN_FRONTEND=noninteractive apt -y install unzip build-essential zlib1g-dev libncurses5-dev libgdbm-dev libnss3-dev libssl-dev libsqlite3-dev libreadline-dev libffi-dev wget curl llvm libbz2-dev tk-dev liblzma-dev libsox-dev
# 安装FFmpeg
RUN apt -y install ffmpeg

# 指定工作目录
WORKDIR /work
# 添加python安装程序
ADD ./Python-3.10.13.tgz ./
# 添加所有zip文件
ADD ./*.zip ./
```

```

# 解压所有zip文件,注意: 此处需要用单引号括起来
RUN unzip '*.zip'
# 删除所有zip文件
RUN rm -r *.zip

RUN mv nltk_data/packages /usr/share/nltk_data

RUN mv pretrained_models/* ./GPT-SovITS/GPT_SovITS/pretrained_models
RUN mv G2PWModel_1.1 ./GPT-SovITS/GPT_SovITS/text/G2PWModel
# RUN mv VoiceConversionWebUI/uvr5_weights/* ./GPT-SovITS/tools/uvr5/uvr5_weights
# RUN mv punc_ct-transformer_zh-cn-common-vocab272727-pytorch ./GPT-
SovITS/tools/asr/models/
# RUN mv speech_fsmn_vad_zh-cn-16k-common-pytorch ./GPT-SovITS/tools/asr/models/
# RUN mv speech_paraformer-large_asr_nat-zh-cn-16k-common-vocab8404-pytorch
./GPT-SovITS/tools/asr/models/
# RUN mv faster-whisper-large-v3 ./GPT-SovITS/tools/asr/models/

# 编译安装python
WORKDIR /work/Python-3.10.13
RUN ./configure --enable-optimizations
RUN make -j$(nproc) && make install

WORKDIR /app/
RUN mv /work/GPT-SovITS ./
RUN rm -r /work/*

WORKDIR /app/GPT-SovITS
ADD ./nick.WAV ./
# 安装依赖
RUN pip3 install -i https://pypi.tuna.tsinghua.edu.cn/simple --trusted-host
pypi.tuna.tsinghua.edu.cn torch==2.1.1 torchvision==0.16.1 torchaudio==2.1.1
RUN pip3 install -i https://pypi.tuna.tsinghua.edu.cn/simple --trusted-host
pypi.tuna.tsinghua.edu.cn -r requirements.txt

CMD ["python3", "api.py", "-dr", "nick.WAV", "-dt", "云原生是一种软件开发和交付的方法
论, 旨在实现高度扩展、弹性和可靠的应用程序", "-dl", "zh", "-p", "9880"]

```

## Dockerfile.webui

```

FROM quay.io/0voice/ubuntu:22.04
# 替换镜像源
RUN sed -i 's/archive.ubuntu.com/cn.archive.ubuntu.com/g' /etc/apt/sources.list
# 安装所需依赖
RUN apt update && DEBIAN_FRONTEND=noninteractive apt -y install unzip build-
essential zlib1g-dev libncurses5-dev libgdbm-dev libnss3-dev libssl-dev
libsqlite3-dev libreadline-dev libffi-dev wget curl llvm libbz2-dev tk-dev
liblzma-dev libsox-dev
# 安装FFmpeg
RUN apt -y install ffmpeg

# 指定工作目录
WORKDIR /work
# 添加python安装程序
ADD ./Python-3.10.13.tgz ./

```

```

# 添加所有zip文件
ADD ./*.zip ./
# 解压所有zip文件,注意: 此处需要用单引号括起来
RUN unzip '*.zip'
# 删除所有zip文件
RUN rm -r *.zip

RUN mv nltk_data/packages /usr/share/nltk_data

RUN mv pretrained_models/* ./GPT-SoVITS/GPT_SoVITS/pretrained_models
RUN mv G2PWModel_1.1 ./GPT-SoVITS/GPT_SoVITS/text/G2PWModel
RUN mv VoiceConversionWebUI/uvr5_weights/* ./GPT-SoVITS/tools/uvr5/uvr5_weights
RUN mv punc_ct-transformer_zh-cn-common-vocab272727-pytorch ./GPT-SoVITS/tools/asr/models/
RUN mv speech_fsmn_vad_zh-cn-16k-common-pytorch ./GPT-SoVITS/tools/asr/models/
RUN mv speech_paraformer-large_asr_nat-zh-cn-16k-common-vocab8404-pytorch ./GPT-SoVITS/tools/asr/models/
RUN mv faster-whisper-large-v3 ./GPT-SoVITS/tools/asr/models/

# 编译安装python
WORKDIR /work/Python-3.10.13
RUN ./configure --enable-optimizations
RUN make -j$(nproc) && make install

WORKDIR /app/
RUN mv /work/GPT-SoVITS ./
RUN rm -r /work/*

WORKDIR /app/GPT-SoVITS
ADD ./nick.WAV ./
# 安装依赖
RUN pip3 install -i https://pypi.tuna.tsinghua.edu.cn/simple --trusted-host pypi.tuna.tsinghua.edu.cn torch==2.1.1 torchvision==0.16.1 torchaudio==2.1.1
RUN pip3 install -i https://pypi.tuna.tsinghua.edu.cn/simple --trusted-host pypi.tuna.tsinghua.edu.cn -r requirements.txt
EXPOSE 9871 9872 9873 9874 9880
CMD ["python3", "webui.py"]

```

## 构建镜像

```

docker build -t gpt-sovits:1.0.0 -f Dockerfile.api .
docker build -t gpt-sovits-webui:1.0.0 -f Dockerfile.webui .

```

## 运行容器

```

docker run -d --name gpt-sovits1 --restart always --runtime=nvidia --gpus all -p 9881:9880 --shm-size="16G" gpt-sovits:1.0.0
docker run -d --name gpt-sovits2 --restart always --runtime=nvidia --gpus all -p 9882:9880 --shm-size="16G" gpt-sovits:1.0.0
docker run -d --name gpt-sovits3 --restart always --runtime=nvidia --gpus all -p 9883:9880 --shm-size="16G" gpt-sovits:1.0.0
docker run -d --name gpt-sovits4 --restart always --runtime=nvidia --gpus all -p 9884:9880 --shm-size="16G" gpt-sovits:1.0.0

```

## 部署到生产环境需考虑参考音频引用路径问题

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```
docker run -d --name gpt-sovits1 --restart always --runtime=nvidia --gpus all \
-v ai-transform-refer-vol:/work/GPT-SoVITS/runtime/refer \
-v test-ai-transform-refer-vol:/work/GPT-SoVITS/runtime/test-refer \
-p 9881:9880 --shm-size="16G" gpt-sovits:1.0.0
```

```
docker run -d --name gpt-sovits2 --restart always --runtime=nvidia --gpus all \
-v ai-transform-refer-vol:/work/GPT-SoVITS/runtime/refer \
-v test-ai-transform-refer-vol:/work/GPT-SoVITS/runtime/test-refer \
-p 9882:9880 --shm-size="16G" gpt-sovits:1.0.0
```