🔴 TROUBLE SHOOTING 🔴 Wav2Lip 환경 설정

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

- Apple Silicon 에서는 python 3.8 미만 버전 설치 불가

1️⃣ python 3.8 가상환경 (FAIL)

```
[(w2lenv) jubi@Joohyunui-MacBookPro Wav2Lip % pip install -r requirements.txt

Collecting librosa==0.7.0 (from -r requirements.txt (line 1))
  Downloading librosa-0.7.0.tar.gz (1.6 MB)
                                       1.6/1.6 MB 6.4 MB/s eta 0:00:00
  Preparing metadata (setup.py) ... done
Collecting numpy==1.17.1 (from -r requirements.txt (line 2))
  Downloading numpy-1.17.1.zip (6.5 MB)
                                       6.5/6.5 MB 4.8 MB/s eta 0:00:00
  Preparing metadata (setup.py) ... done
Collecting opencv-contrib-python>=4.2.0.34 (from -r requirements.txt (line 3))
  Downloading opencv_contrib_python-4.9.0.80-cp37-abi3-macosx_11_0_arm64.whl.metadata (20 kB)
ERROR: Ignored the following yanked versions: 3.4.11.39
ERROR: Ignored the following versions that require a different python version: 1.25.0 Requires-Python >=3.9; 1.25.0rc1 Requires-P
ython >=3.9; 1.25.2 Requires-Python >=3.9; 1.26.0 Requires-Python <3.13,>=3.9; 1.26.0b1 Requires-Python <3.13,>=3.9; 1.26.0rc1 Requires-Python <3.13,>=3.9; 1.2
6.1 Requires-Python <3.13,>=3.9; 1.26.2 Requires-Python >=3.9; 1.26.3 Requires-Python >=3.9
ERROR: Could not find a version that satisfies the requirement opencv-python==4.1.0.25 (from versions: 3.4.0.14, 3.4.10.37, 3.4.11.41, 3.4.11.43, 3.4.11.45, 3.
4.13.47, 3.4.15.55, 3.4.16.57, 3.4.16.59, 3.4.17.61, 3.4.17.63, 3.4.18.65, 4.3.0.38, 4.4.0.40, 4.4.0.42, 4.4.0.44, 4.4.0.46, 4.5.1.48, 4.5.3.56, 4.5.4.58, 4.5.
4.60, 4.5.5.62, 4.5.5.64, 4.6.0.66, 4.7.0.68, 4.7.0.72, 4.8.0.74, 4.8.0.76, 4.8.1.78, 4.9.0.80)
ERROR: No matching distribution found for opencv-python==4.1.0.25
```

> 🔴 **ERROR MESSAGE** 🔴
>
> Downloading opencv_contrib_python-4.9.0.80-cp37-abi3-macosx_11_0_arm64.whl.metadata (20 kB)
> ERROR: Ignored the following yanked versions: 3.4.11.39
> ERROR: Ignored the following versions that require a different python version: 1.25.0 Requires-Python >=3.9;
> 1.25.0rc1 Requires-Python >=3.9; 1.25.1 Requires-Python >=3.9; 1.25.2 Requires-Python >=3.9; 1.26.0 Requires-
> Python <3.13,>=3.9; 1.26.0b1 Requires-Python <3.13,>=3.9; 1.26.0rc1 Requires-Python <3.13,>=3.9; 1.26.1
> Requires-Python <3.13,>=3.9; 1.26.2 Requires-Python >=3.9; 1.26.3 Requires-Python >=3.9
> ERROR: Could not find a version that satisfies the requirement opencv-python==4.1.0.25 (from versions: 3.4.0.14,
> 3.4.10.37, 3.4.11.41, 3.4.11.43, 3.4.11.45, 3.4.13.47, 3.4.15.55, 3.4.16.57, 3.4.16.59, 3.4.17.61, 3.4.17.63,
> 3.4.18.65, 4.3.0.38, 4.4.0.40, 4.4.0.42, 4.4.0.44, 4.4.0.46, 4.5.1.48, 4.5.3.56, 4.5.4.58, 4.5.4.60, 4.5.5.62, 4.5.5.64,
> 4.6.0.66, 4.7.0.68, 4.7.0.72, 4.8.0.74, 4.8.0.76, 4.8.1.78, 4.9.0.80)
> ERROR: No matching distribution found for opencv-python==4.1.0.25

2️⃣ Python 3.9 가상환경 (FAIL)

```
[(w2lenv2) jubi@Joohyunui-MacBookPro Wav2Lip % pip install -r requirements.txt
Collecting librosa==0.7.0 (from -r requirements.txt (line 1))
  Using cached librosa-0.7.0.tar.gz (1.6 MB)
  Preparing metadata (setup.py) ... done
Collecting numpy==1.17.1 (from -r requirements.txt (line 2))
  Using cached numpy-1.17.1.zip (6.5 MB)
  Preparing metadata (setup.py) ... done
Collecting opencv-contrib-python>=4.2.0.34 (from -r requirements.txt (line 3))
  Using cached opencv_contrib_python-4.9.0.80-cp37-abi3-macosx_11_0_arm64.whl.metadata (20 kB)
ERROR: Ignored the following yanked versions: 3.4.11.39
ERROR: Could not find a version that satisfies the requirement opencv-python==4.1.0.25 (from versions: 3.4.0.14, 3.4.10.37, 3.4.11.41, 3.4.11.43, 3.4.11.45, 3.
4.13.47, 3.4.15.55, 3.4.16.57, 3.4.16.59, 3.4.17.61, 3.4.17.63, 3.4.18.65, 4.3.0.38, 4.4.0.40, 4.4.0.42, 4.4.0.44, 4.4.0.46, 4.5.1.48, 4.5.3.56, 4.5.4.58, 4.5.
4.60, 4.5.5.62, 4.5.5.64, 4.6.0.66, 4.7.0.68, 4.7.0.72, 4.8.0.74, 4.8.0.76, 4.8.1.78, 4.9.0.80)
ERROR: No matching distribution found for opencv-python==4.1.0.25
```

3️⃣ Python 3.9 & opencv-python 4.3.0.38 (FAIL)

- 수정 전 : opencv-python==4.1.0.25
- 수정 후 : opencv-python==4.3.0.38

```
[(w2lenv2) jubi@Joohyunui-MacBookPro Wav2Lip % pip install -r requirements.txt
Collecting librosa==0.7.0 (from -r requirements.txt (line 1))
  Using cached librosa-0.7.0.tar.gz (1.6 MB)
  Preparing metadata (setup.py) ... done
Collecting numpy==1.17.1 (from -r requirements.txt (line 2))
  Using cached numpy-1.17.1.zip (6.5 MB)
  Preparing metadata (setup.py) ... done
Collecting opencv-contrib-python>=4.2.0.34 (from -r requirements.txt (line 3))
  Using cached opencv_contrib_python-4.9.0.80-cp37-abi3-macosx_11_0_arm64.whl.metadata (20 kB)
Collecting opencv-python==4.3.0.38 (from -r requirements.txt (line 4))
  Downloading opencv-python-4.3.0.38.tar.gz (88.0 MB)
  ──────────────────────────────────────── 88.0/88.0 MB 5.3 MB/s eta 0:00:00
  Installing build dependencies ... error
  error: subprocess-exited-with-error

  × pip subprocess to install build dependencies did not run successfully.
  │ exit code: 1
  ╰─> [3096 lines of output]
      Ignoring numpy: markers 'python_version == "3.5"' don't match your environment
      Ignoring numpy: markers 'python_version == "3.6"' don't match your environment
      Ignoring numpy: markers 'python_version == "3.7"' don't match your environment


      note: This error originates from a subprocess, and is likely not a problem with pip.
      ERROR: Failed building wheel for numpy
      Running setup.py clean for numpy
      error: subprocess-exited-with-error

      × python setup.py clean did not run successfully.
      │ exit code: 1
      ╰─> [10 lines of output]
          Running from numpy source directory.

          `setup.py clean` is not supported, use one of the following instead:

            - `git clean -xdf` (cleans all files)
            - `git clean -Xdf` (cleans all versioned files, doesn't touch
                               files that aren't checked into the git repo)

          Add `--force` to your command to use it anyway if you must (unsupported).

          [end of output]

      note: This error originates from a subprocess, and is likely not a problem with pip.
      ERROR: Failed cleaning build dir for numpy
      Failed to build numpy
      ERROR: Could not build wheels for numpy, which is required to install pyproject.toml-based projects
      [end of output]

  note: This error originates from a subprocess, and is likely not a problem with pip.
error: subprocess-exited-with-error

× pip subprocess to install build dependencies did not run successfully.
│ exit code: 1
╰─> See above for output.

note: This error originates from a subprocess, and is likely not a problem with pip.
```

4 python 3.9 & 하나씩 설치

① conda update

```
conda update -n base -c defaults conda
```

- current version : 23.7.4
- latest version : 23.11.0

❶ conda 버전 확인

```
conda --version
```

```
[(w2lenv) jubi@Joohyunui-MacBookPro ~ % conda --version          ]
 conda 23.11.0
```

① librosa=0.7.0 → 0.10.1

```
conda install conda-forge::librosa
```

- 설치된 버전 : librosa 0.10.1

```
librosa                    0.10.1              pyhd8ed1ab_0    conda-forge
```

```
conda install conda-forge::librosa=0.7.0
```

② numpy=1.17.1 → 1.24.3
- 이미 설치됨

```
numpy                      1.24.3              py38h1398885_0
```

③ opencv-contrib-python≥4.2.0.34

```
conda
```

- 설치 불가

5️⃣ miniforge 가상환경 & python 3.8

- miniforge만이 arm64 Silicon Mac을 실험적으로 지원하고 있음
- M1(CPU-8CORE & CPU-8CORE) 특성상 다른 CPU와 GPU와는 연산 방식이 다르기 때문에 일반적인 방법으로 ANACONDA에서 tensorflow 및 opencv를 설치하면, 연산이 안되나 에러가 난다
- 그래서 Apple에서 공식적으로 ANACONDA가 아닌 miniforge3를 지원하고 있다

① conda 삭제

anaconda-clean 패키지

```
conda install anaconda-clean
```

```
anaconda-clean
```

Anaconda 디렉토리 삭제

```
cd
```

```
sudo rm -rf anaconda3
```

Anaconda 백업 제거

```
sudo rm -rf .anaconda_backup
```

관련 파일 삭제

```
sudo rm -rf ~/.condarc ~/.conda ~/.continuum
```

.bash-profile & .zshrc 에서 Anaconda path 제거

```
open -e .bash_profile
```

```
open -e .zshrc
```

① Miniforge3-MacOSX-arm64 설치

GitHub - conda-forge/miniforge: A conda-forge distribution.

A conda-forge distribution. Contribute to conda-forge/miniforge development by creating an account on GitHub.

https://github.com/conda-forge/miniforge?tab=readme-ov-file

conda-forge/
miniforge

A conda-forge distribution.

CONDA-FORGE

36 Contributors   92 Issues   9 Discussions   5k Stars   274 Forks

② **Miniforge3-MacOSX-arm64.sh 설치**

❶ **Miniforge3-MacOSX-arm64.sh 를 원하는 디렉토리로 이동**

❷ **터미널에서 해당 디렉토리로 이동**

❸ **권한 설정**

```
chmod +x Miniforge3-MacOSX-arm64.sh
```

❹ **설치**

```
sh Miniforge3-MacOSX-arm64.sh
```

→ miniforge3 설치 (`cd ~` 에서 확인)

❺ **설치 확인**

```
brew info miniforge
```

```
[(base) jubi@Joohyunui-MacBookPro ~ % brew info miniforge
==> miniforge: 23.11.0-0 (auto_updates)
https://github.com/conda-forge/miniforge
/opt/homebrew/Caskroom/miniforge/23.11.0-0 (55.7MB)
From: https://github.com/Homebrew/homebrew-cask/blob/HEAD/Casks/m/miniforge.rb
==> Name
miniforge
==> Description
Minimal installer for conda specific to conda-forge
==> Artifacts
Miniforge3-23.11.0-0-MacOSX-arm64.sh (Installer)
/opt/homebrew/Caskroom/miniforge/base/condabin/conda (Binary)
==> Caveats
Please run the following to setup your shell:
  conda init "$(basename "${SHELL}")"

==> Analytics
install: 1,867 (30 days), 5,521 (90 days), 21,730 (365 days)
```

② miniforge 가상환경 생성

❶ 가상환경 목록 조회

```
conda info --envs
```

```
[(base) jubi@Joohyunui-MacBookPro ~ % conda info --envs
# conda environments:
#
base                     *  /Users/jubi/miniforge3
```

❷ 가상환경 생성 python=3.8

> 3.8 미만은 지원하지 않음

```
conda create -n "myenv" python=3.8
```

▼ 결과

```
[(base) jubi@Joohyunui-MacBookPro ~ % conda create -n "myenv" python=3.8
Channels:
 - conda-forge
Platform: osx-arm64
Collecting package metadata (repodata.json): done
Solving environment: done

## Package Plan ##

  environment location: /Users/jubi/miniforge3/envs/myenv

  added / updated specs:
    - python=3.8


The following packages will be downloaded:

    package                    |               build
    ---------------------------|-----------------
    python-3.8.18              |h2469fbe_1_cpython        12.8 MB  conda-forge
    setuptools-69.0.3          |      pyhd8ed1ab_0        460 KB  conda-forge
    ------------------------------------------------------------
                                           Total:        13.3 MB

The following NEW packages will be INSTALLED:

  bzip2             conda-forge/osx-arm64::bzip2-1.0.8-h93a5062_5
  ca-certificates   conda-forge/osx-arm64::ca-certificates-2023.11.17-hf0a4a13_0
  libffi            conda-forge/osx-arm64::libffi-3.4.2-h3422bc3_5
  libsqlite         conda-forge/osx-arm64::libsqlite-3.44.2-h091b4b1_0
  libzlib           conda-forge/osx-arm64::libzlib-1.2.13-h53f4e23_5
  ncurses           conda-forge/osx-arm64::ncurses-6.4-h463b476_2
  openssl           conda-forge/osx-arm64::openssl-3.2.0-h0d3ecfb_1
  pip               conda-forge/noarch::pip-23.3.2-pyhd8ed1ab_0
  python            conda-forge/osx-arm64::python-3.8.18-h2469fbe_1_cpython
  readline          conda-forge/osx-arm64::readline-8.2-h92ec313_1
  setuptools        conda-forge/noarch::setuptools-69.0.3-pyhd8ed1ab_0
  tk                conda-forge/osx-arm64::tk-8.6.13-h5083fa2_1
  wheel             conda-forge/noarch::wheel-0.42.0-pyhd8ed1ab_0
  xz                conda-forge/osx-arm64::xz-5.2.6-h57fd34a_0


Proceed ([y]/n)? y


Downloading and Extracting Packages:

Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
#     $ conda activate myenv
#
# To deactivate an active environment, use
#
#     $ conda deactivate
```

❸ 가상환경 목록 조회

```
conda info --envs
```

▼ 결과

```
[(base) jubi@Joohyunui-MacBookPro ~ % conda info --envs
# conda environments:
#
base                   *   /Users/jubi/miniforge3
myenv                      /Users/jubi/miniforge3/envs/myenv
```

③ 가상환경 활성화

```
conda activate myenv
```

▼ 결과

```
[(base) jubi@Joohyunui-MacBookPro ~ % conda activate myenv
[(myenv) jubi@Joohyunui-MacBookPro ~ %
```

④ requirements.txt 설치

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

```
Collecting opencv-python==4.3.0.38 (from -r requirements.txt (line 4))
  Using cached opencv-python-4.3.0.38.tar.gz (88.0 MB)
  Installing build dependencies ... done
  Getting requirements to build wheel ... done
  Preparing metadata (pyproject.toml) ... done
ERROR: Ignored the following versions that require a different python version: 1.25.0 Requires-Python >=3.9; 1.25.0rc1 Requires-Python >=3.9;
  1.25.1 Requires-Python >=3.9; 1.25.2 Requires-Python >=3.9; 1.26.0 Requires-Python <3.13,>=3.9; 1.26.0b1 Requires-Python <3.13,>=3.9; 1.26.0
rc1 Requires-Python <3.13,>=3.9; 1.26.1 Requires-Python <3.13,>=3.9; 1.26.2 Requires-Python >=3.9; 1.26.3 Requires-Python >=3.9
ERROR: Could not find a version that satisfies the requirement torch==1.1.0 (from versions: 1.9.0, 1.10.0, 1.10.1, 1.10.2, 1.11.0, 1.12.0, 1.
12.1, 1.13.0, 1.13.1, 2.0.0, 2.0.1, 2.1.0, 2.1.1, 2.1.2)
ERROR: No matching distribution found for torch==1.1.0
```

- python version 3.9 이상으로 해보기
- torch 1.1.0 은 찾을 수 없음

  1.9.0, 1.10.0, 1.10.1, 1.10.2, 1.11.0, 1.12.0,1.12.1, 1.13.0, 1.13.1, 2.0.0, 2.0.1, 2.1.0, 2.1.1, 2.1.2

5 miniforge 가상환경 & python 3.9 & 직접 설치

① python 3.9 가상환경 생성

```
conda create -n "myenv39" python=3.9
```

② 가상환경 활성화

```
conda actiavte myenv39
```

③ librosa

```
conda install conda-forge::librosa
```

- 필요한 버전 : 0.7.0
- 설치된 버전 : 0.10.1

④ numpy 다운그레이드 : 설치 불가능하다

- 이미 설치된 버전 : 1.26.3
- 필요한 버전 : 1.17.1
  - python 3.5-3.7 만 지원한다
  - 설치 불가능!!

```
!pip install numpy==1.17.1
```

6️⃣ intel 환경으로 세팅

[Python] M1 맥북에서 Python 설치하기
Apple M1 ARM 아키텍쳐에서 파이썬 3.9.1 미만의 버전을 설치하는 방법을 공유합니다.

▶️ https://chrisjune-13837.medium.com/python-m1-맥북에서-python-설치하기-4f0907dd5da8

**Install Python3.X
on
Apple M1**

조유성
TL;DR
https://cys.wo.tc/blog/84/