

AI Workshop

머신러닝을 여행하는 예술가를 위한 안내서

Unity ML-Agents 환경 설치 방법

DADASMIMI

송하윤

머신러닝을 여행하는 예술가를 위한 안내서 - 실습

2. 비지도 학습을 위한

Unity ML-Agents 환경 설치 방법입니다.

Unity ML-Agents 환경은 Windows 10 OS 환경에서 설치하도록 합니다.

1. 실습 자료 다운받기

<https://github.com/hayun-dadasmimi/ai-workshop>

위의 링크로 이동하여 실습 자료를 다운로드 합니다.

압축 폴더를 압축 해제하여 내부의 UnityML 폴더를 바탕화면 혹은 원하는 경로로 이동해 줍니다.

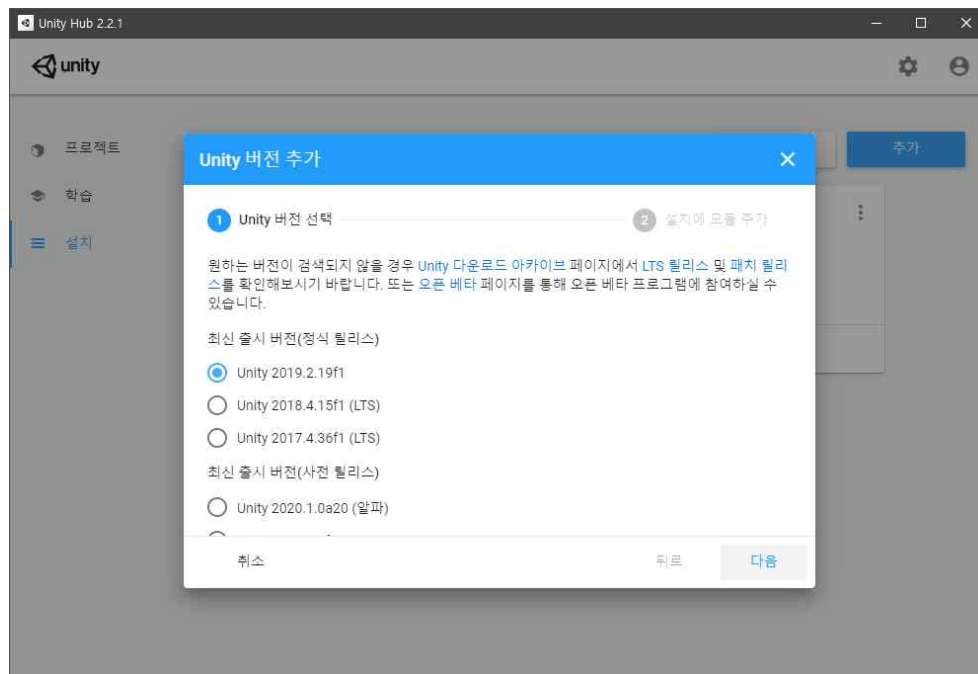
UnityML 폴더의 경로에는 한글이 없어야 합니다.

2. UnityHub 설치

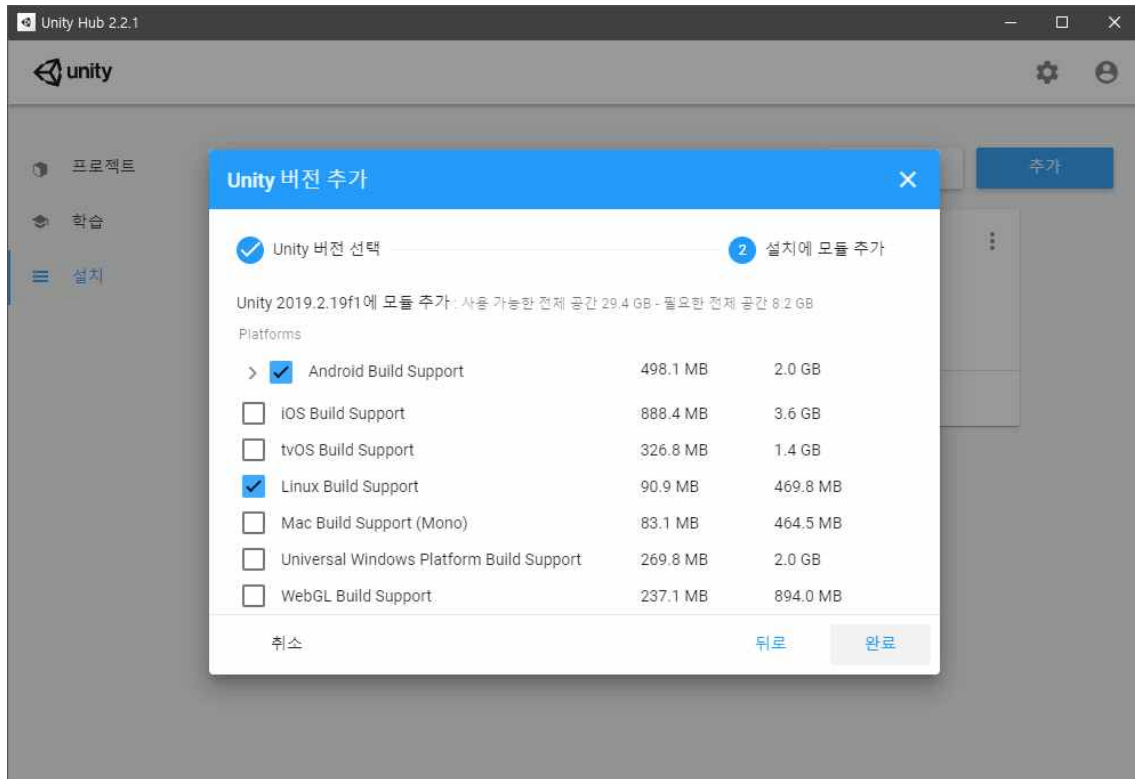
<https://unity3d.com/kr/get-unity/download>

위의 경로로 이동하여 UnityHub를 설치해줍니다.

UnityHub 설치가 완료되면 UnityHub를 실행 해 설치 탭에서 2019.2버전의 유니티 에디터를 설치합니다.



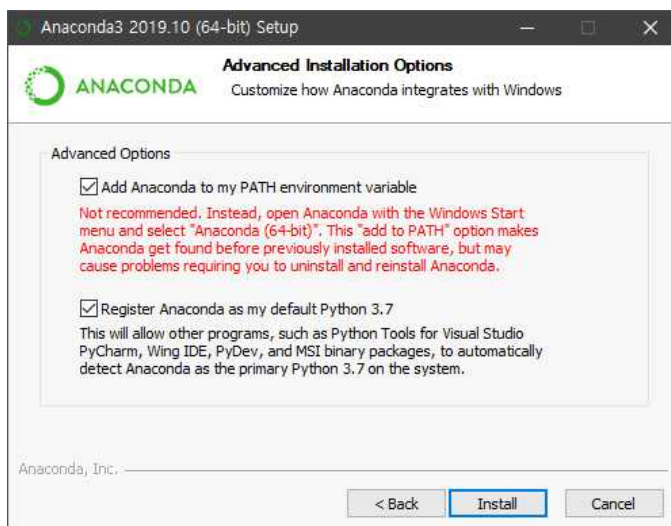
유니티 에디터를 설치할 때 Linux Build Support 항목에 체크 하고 설치합니다.



3. Anaconda 설치하기

<https://www.anaconda.com/distribution/>

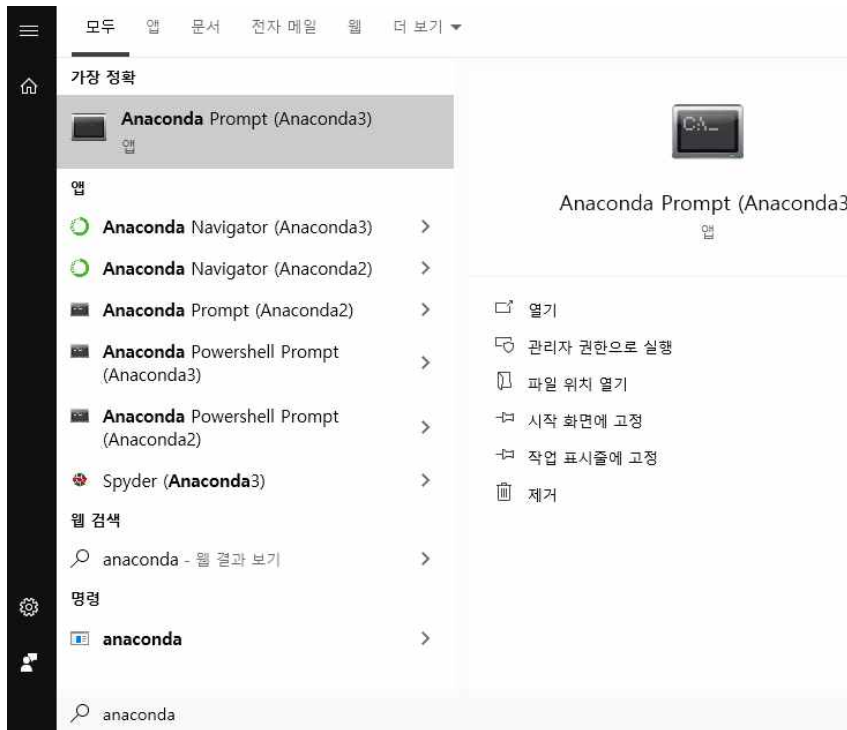
위의 링크로 이동하여 Anaconda 3.7version을 설치 합니다.



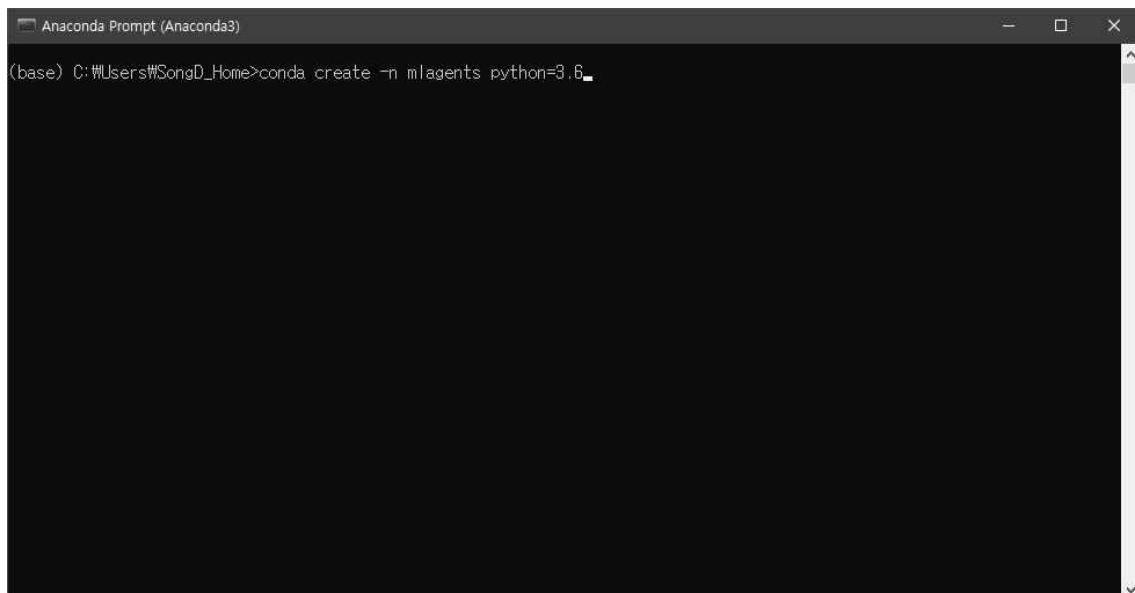
*Advanced Options에서 Add Anaconda to my PATH environment variable 항목을 체크하고 설치를 진행하도록 합니다.

4. Anaconda 가상환경 만들기

Anaconda 설치가 완료되면 Anaconda Prompt를 실행합니다.



아래와 같이 “conda create -n mlagents python=3.6” 입력 후 엔터.



아래와 같은 창이 뜨면 y를 누르고 엔터 합니다.

```
선택 Anaconda Prompt (Anaconda3) - conda create -n mlagents python=3.6

The following packages will be downloaded:

package | build | size
-----|-----|-----
certifi-2019.11.28 | py36_0 | 154 KB
pip-19.3.1 | py36_0 | 1.7 MB
python-3.6.10 | h9f7ef89_0 | 15.9 MB
setuptools-44.0.0 | py36_0 | 527 KB
sqlite-3.30.1 | he774522_0 | 627 KB
vs2015_runtime-14.16.27012 | hf0eaf9b_1 | 1.1 MB
wheel-0.33.6 | py36_0 | 58 KB
Total: 20.1 MB

The following NEW packages will be INSTALLED:

certifi | pkgs/main/win-64::certifi-2019.11.28-py36_0
pip | pkgs/main/win-64::pip-19.3.1-py36_0
python | pkgs/main/win-64::python-3.6.10-h9f7ef89_0
setuptools | pkgs/main/win-64::setuptools-44.0.0-py36_0
sqlite | pkgs/main/win-64::sqlite-3.30.1-he774522_0
vc | pkgs/main/win-64::vc-14.1-h0510ff6_4
vs2015_runtime | pkgs/main/win-64::vs2015_runtime-14.16.27012-hf0eaf9b_1
wheel | pkgs/main/win-64::wheel-0.33.6-py36_0
wincertstore | pkgs/main/win-64::wincertstore-0.2-py36h7fe50ca_0

Proceed ([y]/n)?
```

가상환경 설치가 완료되면 activate mlagents를 입력해 방금 생성한 가상환경을 활성화해줍니다.

```
선택 Anaconda Prompt (Anaconda3)

(base) C:\Users\SongD_Home>activate mlagents
(mlagents) C:\Users\SongD_Home>
```

5. mlagents 라이브러리 설치

“pip install mlagents” 입력 후 엔터 하여 mlagents 라이브러리를 설치합니다.

```
Anaconda Prompt (Anaconda3) - pip install mlagents

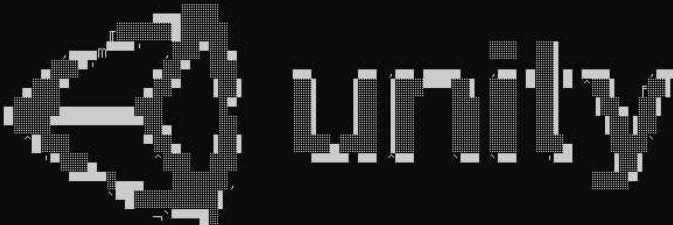
(base) C:\Users\SongD_Home>activate mlagents

(mlagents) C:\Users\SongD_Home>pip install mlagents
Collecting mlagents
  Using cached https://files.pythonhosted.org/packages/12/d2/0ff04b0e1a2ffa50426e767bf738901aa17080fe9da338b44e56b7f4d223/mlagents-0.13.1-py3-none-any.whl
Collecting mlagents-envs==0.13.1
  Using cached https://files.pythonhosted.org/packages/c3/b7/cbd47a9095b5030c19aaf9c84a19b8fef311b51afb29d5d0d24658862fd/c/mlagents_envs-0.13.1-py3-none-any.whl
Collecting tensorflow<2.1,>=1.7
  Using cached https://files.pythonhosted.org/packages/d3/af/296748d4c8d8987423231b93aeece5ab5952f6f2243cb6cedb88dd425397/tensorflow-2.0.0-cp36-cp36m-win_amd64.whl
Collecting jupyter
  Using cached https://files.pythonhosted.org/packages/83/df/0f5dd132200728a86190397e1ea87cd76244e42d39ec5e88efd25b2abd7e/jupyter-1.0.0-py2.py3-none-any.whl
Collecting pyyaml
  Using cached https://files.pythonhosted.org/packages/b9/b6/7f6a1c6a061d9d86ca39a3284ded68806c1d8542596bf76eefa9f65eddc/PyYAML-5.3-cp36-cp36m-win_amd64.whl
Collecting protobuf>=3.6
  Using cached https://files.pythonhosted.org/packages/90/c8/4e194807d23092a1bcfe0f2690b39b1b93ab3c4c0db3515d658c7420198a8/protobuf-3.11.2-cp36-cp36m-win_amd64.whl
Collecting grpcio>=1.11.0
  Using cached https://files.pythonhosted.org/packages/c8/06/b48791b09038afcf53ade40acb4a22b68cb8953ddff6b001df0ed06220baa/grpcio-1.26.0-cp36-cp36m-win_amd64.whl
Collecting matplotlib
  Using cached https://files.pythonhosted.org/packages/44/fb/132de6a4b803d8ce909a89043b7d3f775f64e0a39398fc98c02e3e144b61/matplotlib-3.1.2-cp36-cp36m-win_amd64.whl
```

“mlagents-learn --help” 입력 후 엔터 하여 아래와 같이 설치가 잘 되었는지 확인합니다.

```
Anaconda Prompt (Anaconda3) - deactivate

(mlagents) C:\Users\SongD_Home>mlagents-learn --help
WARNING:tensorflow:From c:\Users\SongD_Home\Anaconda3\envs\mlagents\lib\site-packages\tensorflow_core\python\compat\v2_compat.py:65: disable_resource_variables (from tensorflow.python.ops.variable_scope) is deprecated and will be removed in a future version.
Instructions for updating:
non-resource variables are not supported in the long term



Version information:
mlagents: 0.13.1,
mlagents-envs: 0.13.1,
Communicator API: API-13,
TensorFlow: 2.0.0
usage: mlagents-learn [-h] [--env ENV_PATH] [--curriculum CURRICULUM_FOLDER]
                    [--sampler SAMPLER_FILE_PATH]
                    [--keep-checkpoints KEEP_CHECKPOINTS] [--lesson LESSON]
```

Unity ML-Agents 환경 설치가 완료되었습니다.

머신러닝을 여행하는 예술가를 위한 안내서 - 실습 문서에서

2.비지도학습 실습을 진행할 수 있습니다.