

Common Debugging Solutions

Open Ai Gym Solutions

1. Create a folder with your Doom project and put the `gym` directory inside of it.
2. Even if everything is installed just repeat the installation procedure until `pip install` stuff.
3. Install the `pip2` by executing: `sudo apt install python-pip`
4. Now follow up with `pip install` commands, but using `pip2` instead of `pip` .

Please see the following link for additional information:

<https://www.udemy.com/artificial-intelligence-az/learn/v4/questions/2584938>

Ubuntu On Windows

1. Install Ubuntu 16.04 64 bit
 2. After installing Ubuntu please go to the terminal and type:
 - `sudo apt-get update`
 - `sudo apt-get upgrade`
 3. Install Anaconda 64bit Python 2.7 At the end of the installation when it asks “do you wish the installer to prepend the Anaconda2, “type yes” Close the open the terminal.
 4. Install PyTorch for Python 2.7
 5. Get the materials from [Superdatascience.com/artificial-intelligence](https://www.superdatascience.com/artificial-intelligence)
 6. Steps provided by this course
 7. Install OpenAI (make sure you’re using pip 9.0.1) do not use “pip2”, nor “pip3”
 - `sudo apt install git`
 - `git clone https://github.com/openai/gym`
 - `cd gym`
 - `pip install -e . #minimal install`
-
1. `sudo apt-get install -y python-numpy python-dev cmake zlib1g-dev libjpeg-dev xvfb libav-tools xorg-dev python-opengl libboost-all-dev libsdl2-dev swig`

2. `pip install -e '[all]'`

- 6.2 Install ppaquette to visualize Doom
- `pip install ppaquette-gym-doom`

6.3 Install ffmpeg to get the videos in a folder

```
conda install -c conda-forge ffmpeg=3.2.4
```

Errors:

Now when I go to spyder or execute in the terminal

Executing:

- `import gym`
- `from gym.wrappers import SkipWrapper`
- `from ppaquette_gym_doom.wrappers.action_space import ToDiscrete`

from line:

```
from ppaquette_gym_doom.wrappers.action_space import ToDiscrete
```

I get this error

1. `from ppaquette_gym_doom.wrappers.action_space import ToDiscrete`
2. Traceback (most recent call last):
3. File "<ipython-input-2-8e16159178c3>", line 1, in <module>
4. `from ppaquette_gym_doom.wrappers.action_space import ToDiscrete`
5. File "/home/braga/anaconda2/lib/python2.7/site-packages/ppaquette_gym_doom/__init__.py", line 4, in <module>
6. `from .doom_env import DoomEnv, MetaDoomEnv`
7. File "/home/braga/anaconda2/lib/python2.7/site-packages/ppaquette_gym_doom/doom_env.py", line 18, in <module>
8. `"with 'pip install doom_py.').format(e))`
9. DependencyNotInstalled: {}. (HINT: you can install Doom dependencies with 'pip install doom_py.')

And when executing:

```
import doom_py
```

I get the following error:

1. `import doom_py`
2. Traceback (most recent call last):
3. File "<ipython-input-3-68dfcef2a70e>", line 1, in <module>
4. `import doom_py`
5. File "/home/braga/anaconda2/lib/python2.7/site-packages/doom_py/__init__.py", line 1, in <module>
6. `from doom_py.vizdoom import *`

7. ImportError: `/home/braga/anaconda2/lib/python2.7/site-packages/numexpr/../../libstdc++.so.6: version `GLIBCXX_3.4.20' not found (required by /home/braga/anaconda2/lib/python2.7/site-packages/doom_py/vizdoom.so)`

7. Perform the following to install doom_py: (takes a while)

1. `git clone https://github.com/openai/doom-py.git`
2. `sudo apt-get install -y python-numpy cmake zlib1g-dev libjpeg-dev libboost-all-dev gcc libstdc++2-dev wget unzip`
3. `cd doom-py`
4. `python setup.py build`
5. `pip install -e .`

After step 9 I still get the same errors as before

8. Type in the terminal: (installs libgcc-5.2.0-0)

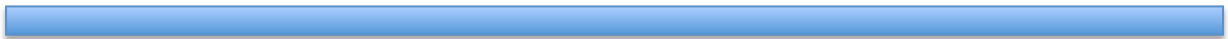
```
conda install libgcc
```

Or if it doesn't work try running:

1. `conda uninstall libgcc`
2. `conda install libgcc`

Now when I execute the following in python it works:

1. `import gym`
2. `from gym.wrappers import SkipWrapper`
3. `from ppaquette_gym_doom.wrappers.action_space import ToDiscrete`
- 4.
5. `import doom_py # To test`



Deprecation and Scoreboard related information

From Phil Paquette:

doom_py is just a wrapper around vizdoom, and it has always been tricky to install.

Your best bet is probably to install vizdoom directly (`pip install vizdoom`) and to replace calls to ``doom_py`` with ``vizdoom`` in the env source code.

Vizdoom installs fine, but not sure how to change references to doom-py in the source code of ppaquette-gym-doom that is required for the course.

(1) Cloned the git package. A gym-doom folder is created as part of the clone process (similar to gym)

git clone <https://github.com/ppaquette/gym-doom.git>

(2) In Spyder, navigated to the gym-doom directory

(3) Opened up every file and changed any reference to doom_py to vizdoom (Note that I had already installed vizdoom earlier using 'pip install vizdoom')

(4) In terminal: cd to gym-doom directory

(5) Run the following command within that dir –

(6) pip install -e .

```
import ppaquette_gym_doom
```

Traceback (most recent call last):

```
File "<stdin>", line 1, in <module>
```

```
File "ppaquette_gym_doom/__init__.py", line 2, in <module>
```

```
    from gym.scoreboard.registration import add_task, add_group
```

ImportError: No module named registration

OpenAI has end-of-lifed the scoreboard from their gym package.

You need to remove `add_task` and all scoreboard references in `ppaquette_gym_doom/__init__.py`.

Had to make a few changes to the ppaquette_gym_doom package.

From __init__.py :

Removed all references to scoreboard and related functions (add_task, add_group)

(Since I was not able to install doom_py)

From doom_env.py :

Changed references of doom_py to vizdoom, as well as commented out the doom_py specific code (as below)

try:

```
    import vizdoom
    from vizdoom import DoomGame, Mode, Button, GameVariable, ScreenFormat,
ScreenResolution #, Loader
    #from vizdoom.vizdoom import ViZDoomUnexpectedExitException, ViZDoomErrorException
```

Finally, a successful import of ppaquette_gym_doom.

Response PP which we would need to consider (below)

Loader contains helper functions to get full path to the scenarios and the freedoom file.

See https://github.com/openai/doom-py/blob/master/doom_py/__init__.py

You also need to replace those lines with whatever vizdoom is using to get the paths:

```
self.game.set_vizdoom_path(self.loader.get_vizdoom_path())self.game.set_doom_game_path(self.loader.get_freedoom_path())self.game.set_doom_scenario_path(self.loader.get_scenario_path(DOOM_SETTINGS[self.level][SCENARIO]))
```

Finally, was able to pursue a slightly alternative path to above to successfully complete the following step which has been failing -

```
from ppaquette_gym_doom.wrappers.action_space import ToDiscrete
```

Env: Win7, Anaconda, Python 3.6

Steps:

(1) Install vizdoom

(a) MacOS - Easy install by running 'pip install vizdoom'

(b) Windows - pip not available; needed to copy windows binaries (see vizdoom windows install instructions) to Anaconda site-packages folder (Anaconda3/Lib/site-packages) as well as to the doom_py folder (see below)

(2) Install doom-py

(a) Clone git package from github (clone git <https://github.com/openai/doom-py>)

(b) cd doom-py

(c) For Windows, Copy vizdoom binaries to doom-py/doom-py (without this, there was a failure such as 'cannot find doom-py.vizdoom')

(d) pip install -e .

(e) python import doom_py (just for a test - should work without failures)

(3) Install ppaquette-gym-doom

(a) Clone git package from github (clone git <https://github.com/ppaquette/gym-doom>)

(b) `cd gym-doom`

(c) All references to scoreboard have to be removed. This requires opening the `__init__.py` file and removing or commenting the following line

```
#from gym.scoreboard.registration import add_task, add_group
```

as well removing or commenting everything below the following line

```
# Scoreboard registration
```

```
# =====
```

(d) `pip install -e .`

I also realized that instead of copying the `vizdoom` folder to the `doom_py` package, all I needed was to change the line of code in the `doom_py` init from

```
from doom_py.vizdoom import * (this was erroring out during import of doom_py)
```

to

```
from vizdoom import *
```

Also the following line of code in `doom_env.py` from

```
from doom_py.vizdoom import ViZDoomUnexpectedExitException, ViZDoomErrorException
```

to

```
from vizdoom import ViZDoomUnexpectedExitException, ViZDoomErrorException
```

I still had issues and what finally made the trick was installing the very latest version of `doom_py` using `pip`. (the clone from github was giving me version 0.0.14)

```
pip install doom_py==0.0.15
```

<https://www.udemy.com/artificial-intelligence-az/learn/v4/questions/2610562>