How to install (TF\_DoomBot\_LDQN)

1. Set up anaconda python (python3)
2. Set up Tensorflow (version 1.7)
3. Set up appropriate version of visdoom from <http://vizdoom.cs.put.edu.pl/tutorial> or a direct link to the github <https://github.com/mwydmuch/ViZDoom/blob/master/doc/Building.md>
4. When going through the setup for visdoom, pay close attention to any additional installs they ask as we did the same.
5. Place TF\_Doombot\_LDQN folder into the appropriate directory based on your install method. In our case this was under .../ViSDoom/examples. The .py files for DoomBot need to stay in the same folder together.
6. Place DEADCKR.wad , DEADCKR.cfg , and DEADCKR.dbs into the senarios folder located in the visdoom Folder.

How to run

1. By default DoomMain.py will run and load the model provided
2. Decide if you want to load the model provided
   1. If you do, in DoomMain.py, set load\_model to True
   2. If not, just leave or change it to False
3. Decide if you want to save the model
   1. If you do, in DoomMain.py, set save\_model to True
   2. If not, change it to False
4. Decide how many epochs you want to run then go to settings.py and change epochs to the desired number.
5. Run DoomMain.py

Troubleshooting

1. If you happen to overwrite the model you can do two things
   1. You can copy from the backup folder provided
   2. You can redownload the DoomBot package from GitHub

Additional Notes

The reward system goes as such:

(In DeadCKR – ASC script):

Kills – 1000 pts

Goal – 1000 pts

Position – (Your position – Goal position) (this is shown as the x axis on the map when in the Doom editor)

(In code):

Health loss – -20 pts

Living penalty – -3pts (on every game state change)

The Doom editor lets you customize scenarios like changing the reward values and goals as well as enemy placement