PEBBLE: Setup Guide August 2024

You will require a Nvidia graphics card and a Linux operating system. An Nvidia driver with a Linux virtual machine also works.

1. Clone the PEBBLE repository using ‘git clone https:// <https://github.com/rll-research/BPref>’
2. Install and activate a base anaconda virtual environment. I used anaconda3 – 2022.05 but other versions will work
3. Inside the BPref folder update the conda\_env.yml file so that any instances of ‘git+git’ are replaced with ‘git+https’
4. Run ‘conda env create -f conda\_env.yml – In my experience this produced quite a few errors so for now ignore them.
5. Run ‘pip install -e .[docs, tests, extra]’
6. Navigate to custom\_dmcontrol sub-folder
7. Run pip install -e .
8. Back out of custom\_dmcontrol and navigate to custom\_dmc2gym sub-folder
9. Run ‘pip install -e .’
10. Run ‘pip install git+https://github.com/rlworkgroup/metaworld.git@master#egg=metaworld’
11. Run ‘pip install pybullet’
12. Navigate to custom\_dmc2gym sub folder
13. Run ‘pip install git+https://github.com/denisyarats/dmc2gym.git’
14. According to the PEBBLE github the code should now be ready to run however due to libraries being updated I needed to install the following libraries individually / downgrade versions specified by the repository. It may also benefit to manually install pip libraries listed in the conda\_env.yml file.
    1. Pip install dm\_control==1.0.20
    2. Pip install termcolor==2.4.0
    3. Pip install numpy==1.23.5
    4. Pip install scikit-image==0.22.0
    5. Pip install omegaconf==1.4.1
    6. Pip install gym==0.22.0
    7. Pip install mujoco==3.1.6

\*If you continue to get errors pertaining to libraries being incorrect then trying a different version may help with compatibility or needing to install a completely new library. Unfortunately, it becomes like trial and error when trying to have the correct libraries installed in my experience.

\*If using the pip install does not work trying to install from the GitHub of the library sometimes works.

15. To run the PEBBLE algorithm navigate into the scripts folder, choose your environment, choose max budget, choose teacher type, execute the run\_PEBBLE.sh file.

e.g. ‘./scripts/walker\_walk/1000/oracle/run\_PEBBLE.sh’

16. To then see the results look in the exp file which is automatically created, then navigate to your environment, navigate through a number of folders until you can see folders named with the parameters you ran PEBBLE with. Inside this folder will be .csv files which store key information about the program along with other files containing data.