

Homework 03 Review for Group 08

General Feedback

- Since this isn't a colab notebook it would have been nice to have something like an `environment.yml` file that provides the necessary packages to run it locally
- Nice comments!
- Code looks clean, maybe indication what part of the code is for which task
- Docstrings are missing the explanation for arguments and returns

Task 01 - Experience Replay Buffer

- It's not necessary to create a new environment everytime you call `"create_trajectory"`
- Just as an idea, you could have also combined your two functions for generating the data, by collecting the `s,a,r,s'` samples in individual lists and then just creating a `tf.dataset` from it, which can easily be batched afterwards. Also it should make training a bit more efficient.

Task 02 DQ Network

- The model looks a little too large, a smaller model should suffice for the lunar lander as it is a rather simple problem
- Instead of hard coding the output neurons, you could have also dynamically set them by using `"env.action_space.n"` (though only necessary for a bonus point)

Task 03 DQN Training

- Great that you included polyak averaging, it might make sense to use a smaller averaging rate
- A training visualization (loss and reward) would have been nice → this way we could have seen whether your training was successful or not