UDACITY

‹ Back to Machine Learning Engineer Nanodegree

Teach a Quadcopter How to Fly

REVIEW

REVIEW

CODE REVIEW

HISTORY

Meets Specifications

Dear student,

Awesome job on a high quality project! As you can see this submission successfully meets all the requirements to pass.

I enjoyed reading the written parts about how your project developed. And the code and reward function in particular is very encouraging.

I hope you'll continue to excel in this field 😃

Define the Task, Define the Agent, and Train Your Agent!

The `agent.py` file contains a functional implementation of a reinforcement learning algorithm.

`agent.py` implements a DDPG agent. Good job!

The `Quadcopter_Project.ipynb` notebook includes code to train the agent.

notebook code successfully instantiates and trains an agent. Excellent!

Plot the Rewards

A plot of rewards per episode is used to illustrate how the agent learns over time.

plot of rewards is presented in the notebook

Reflections

The submission describes the task and reward function, and the description lines up with the implementation in `task.py`. It is clear how the reward function can be used to guide the agent to accomplish the task.

Great work on your reward function! Its quite unique and inspired 👍

The submission provides a detailed descriptio

The submission provides a detailed description of the agent in `agent.py`.

Nice work!

The replay buffer is actually smaller than usual, however maybe that actually has a positive impact?

Another possibility is to train every n timesteps. In this case you would be collecting experiences using a given poilcy, and then update the weights after say 20 timesteps. I've seen this not only speed up the process, since backprop is quite a heavy computation, but also result in more stable learning.

The submission discusses the rewards plot. Ideally, the plot shows that the agent has learned (with episode rewards that are gradually increasing). If not, the submission describes in detail various attempted settings (hyperparameters and architectures, etc) that

(hyperparameters and architectures, etc) that were tested to teach the agent.

A brief overall summary of the experience working on the project is provided, with ideas for further improving the project.

Very nice write up on your experience! Its encouraging to see that you were able to conquer the challenges. You've also raised some interesting points about the behavior in relation to optimization (exponential derivatives) and also the sporadic behavior of the agent. Excellent!

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RETURN TO PATH