Deep Reinforcement Learning Nanodegree
Project 2 – Continuous Control Report

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July 24, 2020

1 Introduction

1.1 Environment Overview

Figure 1: A snapshot of the continuous control Unity-ML Reacher environment.

2 Approach

2.1 D4PG

2.2 Implementation

hyperparameter	values
ϵ_{decay}	$[0.99, 0.996, 0.999, 0.9999, 0.99999]$
α	$[0.00005, 0.0001, 0.0005, 0.001, 0.005]$
τ	$[0.005, 0.01, 0.1]$
γ	$[0.8, 0.9, 0.95, 0.99]$

Table 1: Hyperparameters experimented with to train an agent using DQN.

3 Results and Discussion

3.1 Learning Performance

Figure 2

- $\epsilon_{decay} = 0.996$,

- $\alpha = 0.001$,

- $\tau = 0.01$,

- $\gamma = 0.99$.

4   Conclusion