# Foundations of Deep Reinforcement Learning

#### 1st Edition

### by Laura Graesser and Wah Loon Keng

### Copyright © 2020 Pearson Education, Inc.

ISBN-13: 978-0-13-517238-4 ISBN-10: 0-13-517238-1

#### **Warning and Disclaimer**

Every effort has been made to make this book as complete and as accurate as possible, but no warranty or fitness is implied. The information provided is on an "as is" basis. The author and the publisher shall have neither liability nor responsibility to any person or entity with respect to any loss or damages arising from the information contained in this book or from the use of any programs accompanying it.

When reviewing corrections, always check the print number of your book. Corrections are made to printed books with each subsequent printing.

#### **Corrections for Third Printing**

Location	Error	Correction
Ch.2, sec. 2.2, pg. 26	Equation (2.1), right-most term: $t_{r'_t}$	t_{r_t'}
Ch.2, sec. 2.3.1, pg. 28	Equation (2.9): (chain-rule)	(product-rule)
Ch.2, sec. 2.3.1, pg. 30	Equation (2.21) has an incorrect term: $R_t(\tau)$	$R(\tau)$

NOTE: See authors' errata site (https://slm-lab.gitbook.io/foundations-of-deep-rl/book-errata/chapter-2-reinforce) for detailed explanation of this error.	
--	--

# **Corrections for Second Printing**

Location	Error	Correction
Ch.1, pg. 15	In 2016, researchers from DeepMind developed AlphaZero, which combined MCTS with learning \$V^\pi\$ and a policy \$\pi\$ to master the game of Go [127].	In 2016, researchers from DeepMind developed AlphaGo, which combined MCTS with learning \$V^\pi\$ and a policy \$\pi\$ to master the game of Go [125].
App.A, pg. 344	2017 Dec: AlphaZer [126]	2017 Dec: AlphaZero [126]
App.B, B.1.1, pg. 347	5. <b>Termination:</b> When the pole falls over (12 degrees from vertical)	5. <b>Termination:</b> When the pole falls over (>15 degrees from vertical)
App.B, B.1.3, pg. 347	1. <b>Objective:</b> Land the lander without crashing fuel.	1. <b>Objective:</b> Land the lander without crashing and conserve fuel.
App.B, B.1.3, pg. 348	4. <b>Reward:</b> -100 for crashing, -0.3 per time step when firing main engine, +100 to +140 for landing, +10 for each leg ground contact.	4. <b>Reward:</b> -100 for crashing, +100 for landing0.3 per time step when firing main engine, +100 to +140 for landing between the flags (landing pad) with zero speed, +10 for each leg ground contact.

**Corrections for First Printing** 

Location	Error	Correction
,	grayscaled image is 7kB, so 10 million	A typical frame of downsized and grayscaled image is 7kB, so 10 million frames will contain 10 million \$\times\$ 7kB, which is 70GB in total.

14.3, second	
paragraph	

This errata sheet is intended to provide updated technical information. Spelling and grammar misprints are updated during the reprint process, but are not listed on this errata sheet.