

Deep Eligibility Traces

Introduction

This repository consists of implementations of Eligibility Traces and corresponding algorithms in the deep learning setting. Algorithms are implemented in [PyTorch](#) and [Tensorflow 2.0](#) on a range of problems. Custom toy problems are provided in the [MDPs](#) folder.

Trace Algorithms

Following algorithms are available in the current version-

PyTorch

Algorithm	Trace	Link	Implementation
TD-lambda	<input type="checkbox"/> Accumulating Trace	Sutton & Barto, Chapter 12	TBA
	<input type="checkbox"/> Replacing Trace		
	<input type="checkbox"/> Dutch Trace		

Tensorflow 2.0

Algorithm	Trace	Link	Implementation
TD-lambda	<input type="checkbox"/> Accumulating Trace	Sutton & Barto, Chapter 12	TBA
	<input type="checkbox"/> Replacing Trace		
	<input type="checkbox"/> Dutch Trace		

Custom Environments

Following is the list of custom toy environments-

Environment Name	Link	Implementation
Cyclic MDP	ESAC	TBA
One-state MDP	Sutton & Barto	TBA
One-state Gaussian MDP	Sutton & Barto	TBA

Usage

Notes on running implementations to be updated soon.

Citation

If you find these implementations helpful then please cite the following-

```
@misc{karush17eligibilitytraces,  
  author = {Karush Suri},  
  title = {Deep Eligibility Traces},  
  year = {2021},  
  howpublished = {\url{https://github.com/karush17/Deep-Eligibility-Traces}},  
  note = {commit xxxxxxxx}  
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