

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	Link	Implementation	Notes
Sarsa	Sutton & Barto	sarsa.py	Works well
TD-lambda	Sutton & Barto, Chapter 12	TD1amb.py	Requires tuning

Custom Environments

Following is the list of custom toy environments-

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

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}
}
```