Feature compression for Meta-Reinforcement

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Abstract

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1 Introduction

Basic points to put here

- Exploration of high-dimensional state-spaces is costly
- Having a compact representation is necessary to efficiently transverse environments
- Reward signals are not symmetric in frequency: positive rewards are sparse and localized and negative rewards are diffused
- The brain processes positive and negative reward information through separate pathways
- How can we combine this into a more efficient RL algorithm?
- We combine graph representation learning techniques with reward sensitivity functions in order to speed up learning

2 Background

3 Representation Projection through state embeddings

Potential update rules to be applied to this:

4 Splitting Representations

4.1 Successor Features

4.2 Reward sensitivities

4.3 Combining multiple representations

5 Experiments

6 Conclusion