Markov Decision Process and RL

Pburra6

# Introduction

MDP can be

# MDPs

|  |  |  |
| --- | --- | --- |
| MDP Name | Type | State space size |
| Frozen Lake | Grid world  *Finite/discrete* | 16 \* 16 = 256 |
| Black Jack | *Infinite/ discrete?* |  |

What are the MDPs chosen?

Why is Frozen Lake interesting? - What is the type or problem and state space

Why is Black Jack interesting? - What is the type or problem and state space

How much time we have? – infinte or finite steps?

## Solve MDP

## Frozen Lake

### Policy iteration

### Value iteration

## Black Jack

### Policy iteration

### Value iteration

* *How many iterations does it take to converge?*
* *Which one converges faster? Why?*
* *How did you choose to define convergence?*
* *Do they converge to the same answer?*
* *How did the number of states affect things, if at all?*

# Reinforcement Learning

## Frozen Lake

## Black Jack