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Tutorial RL4AA

Challenges of RL (in the real world)

1. Problem formulation - capturing the problem in an MDP

➡ State representation, Markov Property (e.g. non stationarity)

➡ Reward engineering

2. RL - core issues:

➡ **Sample efficiency**

➡ **Stability**

➡ Run time

➡ **Hyper-parameter tuning**

➡ Exploration

➡ Safety

➡ **Robustness to Changes, Generalisation**

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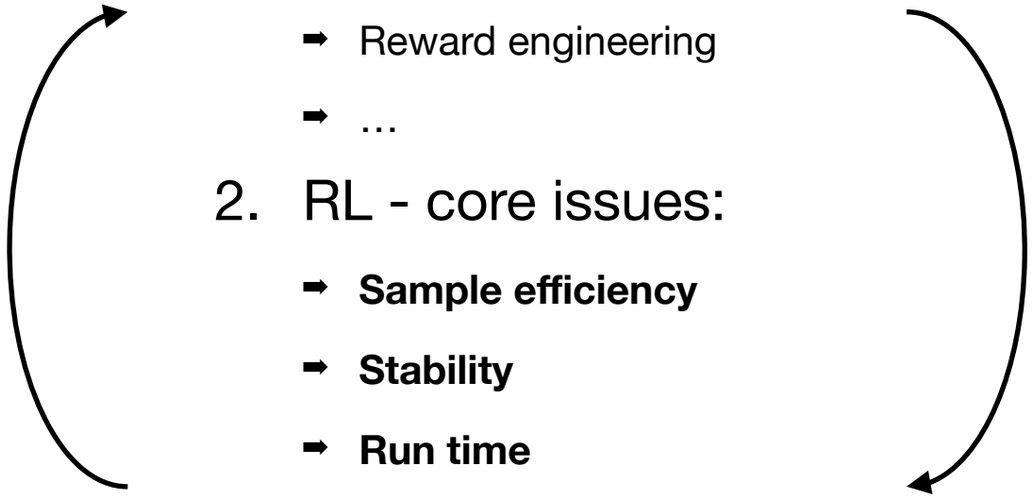
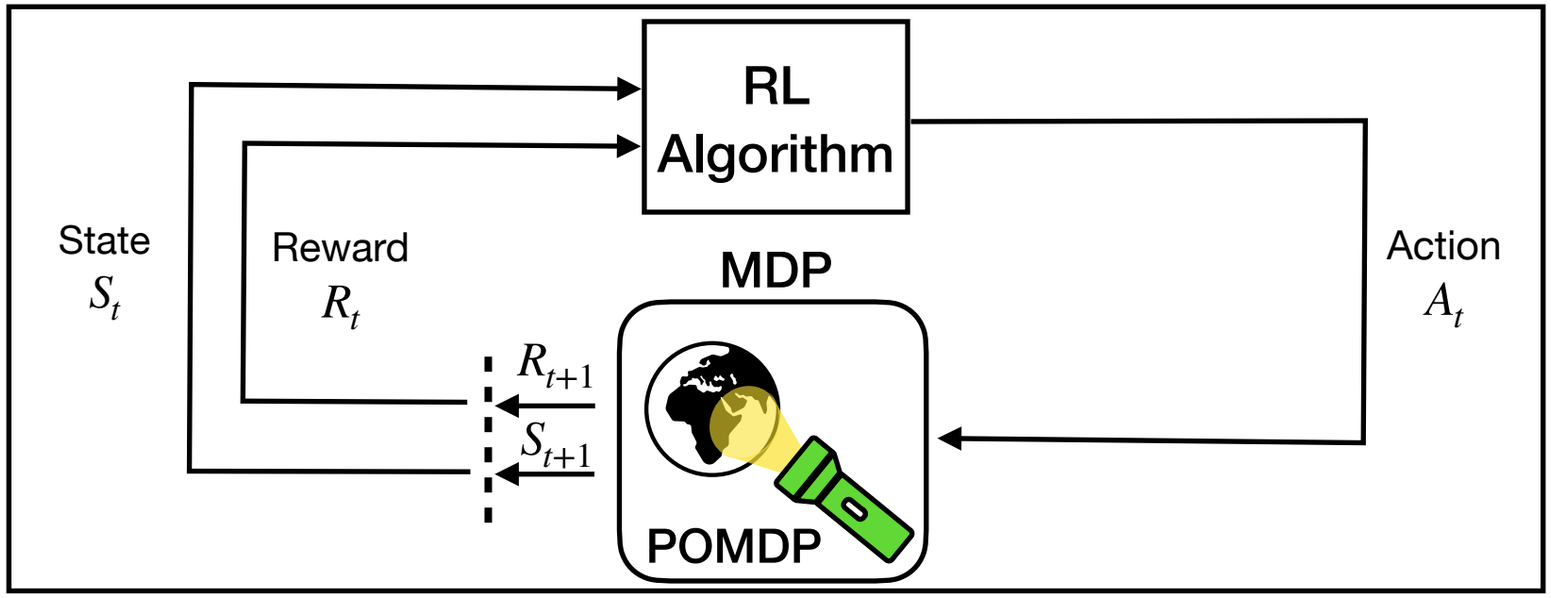


The entire problem



MDP Markov decision process
POMDP Partially observable Markov decision process