

Project 2: Reinforcement Learning agents

This project aims to develop a reinforcement learning (RL) agent, train and evaluate its performance in simulated environments.

[Gymnasium](#) provides an API for single agent reinforcement learning environments, and includes implementations of common environments: cartpole, pendulum, mountain-car, mujoco, atari, and more [Stable baselines 3](#) includes a PyTorch version of stable baselines implementations of reinforcement learning algorithms, which were originally developed by OpenAI.

Create a Reinforcement Learning environment and train an agent

– Env, stable baselines • You can start from an existing gym environment and introduce some changes – Train the agent using different RL algorithms, analyze results

What to do

- Create a reinforcement learning environment
Choose one of the environments in *Gymnasium*. Note that continuous environments are more demanding and pose additional challenges to algorithms and training.
- Train the agent
Use one or more algorithms in Stable baselines 3. Choose the most appropriate algorithms for the problem to be addressed.
- Modify algorithms' parameters and environments
Compare the results and draw conclusions.