openai gym

- gym is a simple, intuitive API that lets you interface with a wide range of environments, allowing you use the same simple API to interact with all of them.
- makes it super easy to get started training RL algorithms.
- Its very simple to use:
  - make an environment
  - set it to initial state with `env.reset()`
  - each `env`'s `step()` takes an action, makes the state transition and returns observations (at current state), possible actions in current state, reward from last state and a boolean flag to indicate end of an episode → `env.done`
- You can query the action space and observation space to get the shape of the tensor of each and to get the limits of observation space with `env.observation_space.high` and `env.observation_space.low`
- The environments are versioned to allow for comparisons. In order to ensure valid comparisons for the future, environments will never be changed in a fashion that affects performance, only replaced by newer versions.
- the following prints all available environments:

```
1   from gym import envs
2   print(envs.registry.all())
```

- That's it! The shortness of this document is a testimony to the simplicity of the Gym API!