

Algorithm validation guide - Project Reinforcement Learning

Due to some substantial differences in group's gym environments, we have decided to setup a validation environment, so that we can objectively test every group's performance in a standardized setting.

The (gym) validation environment for the hydroelectric dam can be found in **TestEnv.py**. An additional file called **main.py** is added to show you how to use **TestEnv.py**.

Please look at how its done in the file **main.py**, so that we can run your code on the validation environment ourselves using:

```
- python3 main.py --excel_file validate.xlsx
```

Where validate.xlsx is the path to the validation file (2 years of price data).

Notes about the Environment

The environment *HydroElectric_Test* can be simulated using the gym notation. The action it expects is a value between -1 and 1, where a value of 1 will pump water at the maximum flow ($18000\text{m}^3/\text{s}$), and a value of -1 will release water at maximum flow ($18000\text{m}^3/\text{s}$).

An observation in *HydroElectric_Test* will give you the 7-dimensional tuple:

[volume, price, hour_of_day, day_of_week, day_of_year, month_of_year, year]

From which you can create your own features, and decide yourself how much of these inputs will go to your agent.

PS: Unless absolutely necessary, do not change the file TestEnv.py !!