# Workshop 7

In this workshop we are going to build a basic RL agent and solve some typical RL benchmarking problems. These problems and many more can be found as part of the AI Gym – which should already be installed in the lab.

1. Work through the following tutorial: <https://keon.io/deep-q-learning/>

On way of comparing performance in RL problems is to look at plots of cumulative reward over time. The slop of the line at any point will tell you the average reward per time step, but in addition you have a nice way to visualise how quickly each agent has reached this level of performance.

1. Create a plot of cumulative reward for your agent
2. Modify RL parameters and compare performance
   * Learning rate
   * Discounting factor
   * Exploration
3. Try repeating the tutorial with the ‘Acrobot-v1’ environment