

1 Parameters

The parameters used for training were:

- **Actions repeated** 5. The number of times a single decision is repeated before predicting the next action.
- **Learning rate** 0.01. The starting learning rate for the neural networks
- **Minimum learning rate** 0.001. The minimum learning rate for the neural networks
- **Discount** 0.99. The discount for the Q-update rule.
- **Learning start** 1000. The number of steps it takes before the agent starts learning.
- **Replay memory** 1000. The number of previous experiences that the system remembers for picking random training examples.
- **Update frequency** 30. The number of actions taken before each weight update.
- **Number of replays** 1. The number of times a batch is repeated.
- **Batch size** 128. The number of examples in a single batch.
- **Target Q-update** 20000. The number of steps before the target Q-network is updated
- **Completions** 1. The number of times the levels are being played through.
- **Number of steps per level** 100000. The number of actions decided on for each level.
- **Random action chance** 1. The starting chance of the agent doing a random action instead of their perceived best action.
- **Minimum random action chance** 0.3. The minimum chance that the agent will do a random action.

After the training, two set of tests were done with the following parameters being shared:

- **Actions repeated** 5.
- **Number of steps** 10000.
- **Number of completions** 1.