

In this work I design and implement an adaptive oponent for the computer game Unreal Tournament for its Deathmatch mode. The agent has been designed using reinforcement learning and implemented on the Pogamut platform. A k-means clustering algorithm has been used for state abstraction. Furthermore an agent performance testing framework has been developed for the Pogamut platform aswell and used in this work. Several experiments testing different action-selection policies and different parameters of the Q-Learning algorithm were conducted. The resulting behaviour has a performance comparative to other implementations of reinforcement learning from other literature.