ABSTRACT

One of the problems in mobile robot navigation is the detection and avoidance of obstacles in dynamic and unknown environments. This project is based on artificial neural network approach for the navigation of mobile robots in dynamic and unknown environments. The artificial neural network approach uses feed forward network for deep Q-learning controllers to simulate mobile robots for navigation and obstacle avoidance. This method is simulated on V-rep simulator. The result shows that this method is indeed an effective way for detecting and avoiding obstacles in real-time and avoiding the local minima problem.