

In this paper we propose a neural network based navigation for intelligent autonomous mobile robots. The proposed neural networks algorithm deals with unknown static obstacles. Neural Networks deal with cognitive tasks such as learning, adaptation generalization and they are well appropriate when knowledge based systems are involved. To solve navigation problems, neural networks prove interesting to deal with the behaviour of autonomous mobile robots near the human being in reasoning. This paper deals with an algorithm for two dimensional (2D) path planning to a target for mobile robot in unknown environment. A complete path planning algorithm should guarantee that the robot can reach the target if possible, or prove that the target can not be reached. Just as human being, a neural network relies on previously solved examples to build a system of “neurons” that makes new decisions, classification and forecasts. Networks of neurons can achieve complex classification based on the elementary capability of each neuron to distinguish classes its activation function. In designing a Neural Networks navigation approach, the ability of learning must provide robots with capacities to successfully navigate in the environments like our proposed maze environment. The simulation results display the ability of the neural networks based approach providing autonomous mobile robots with capability to intelligently navigate in several environments