Path planning for autonomous mobile robot using transfer learning-based Q-learning

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***Abstract*—Transfer learning is the process of reusing the experience of agents in source tasks to improve the performance in new target tasks. In recent years, transfer learning has received more and more attention over the reinforcement learning settings. However, when applied to reinforcement learning, many problems will be exposed, such as how is the target task different from the source task, if the mappings between the tasks are required**

requirement of environment information, it has been widely used in path planning. There are primarily three methods in the reinforcement learning: Monte Carlo method, dynamic programming method and TD (time difference) method. TD method also includes Q-learning algorithm and sarsa algorithm. Maja J matari'c [8] firstly applied reinforcement learn-