Genetic Algorithm Based Deep Learning Parameters Tuning for Robot Object Recognition and Grasping

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Abstract : This paper concerns with the problem of deep learning parameters tuning using a genetic algorithm (GA) in order to improve the performance of deep learning (DL) method. We present a GA based DL method for robot object recognition and grasping. GA is used to optimize the DL parameters in learning procedure in term of the fitness function that is good enough. After finishing the evolution process, we receive the optimal number of DL parameters. To evaluate the performance of our method, we consider the object recognition and robot grasping tasks. Experimental results show that our method is efficient for robot object recognition and grasping.
Keywords : deep learning, genetic algorithm, object recognition, robot grasping
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020