# Robotic Arm Control with Neural Networks Using Genetic Algorithm Optimization Approach

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**Abstract :** In this paper, the structural genetic algorithm is used to optimize the neural network to control the joint movements of robotic arm. The robotic arm has also been modeled in 3D and simulated in real-time in MATLAB. It is found that Neural Networks provide a simple and effective way to control the robot tasks. Computer simulation examples are given to illustrate the significance of this method. By combining Genetic Algorithm optimization method and Neural Networks for the given robotic arm with 5 D.O.F. the obtained the results shown that the base joint movements overshooting time without controller was about 0.5 seconds, while with Neural Network controller (optimized with Genetic Algorithm) was about 0.2 seconds, and the population size of 150 gave best results.