Evaluating Imitation Behavior of Children with Autism Spectrum Disorder Using Humanoid Robot NAO

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Abstract : Autism Spectrum Disorder (ASD) is a neurodevelopment disorder. Such disorder is found in childhood life. Children with ASD have less capabilities in communication and social skills. Therapies are used to develop communication and social skills. Recently researchers have been trying to use robots in such therapies. In this paper, we have presented social skill learning test cases for children with ASD. Autism conditions are measured in 30 children in a special school. Among them, twelve children are selected who have equal ASD conditions. Then six children participated in training with humans, and another six children participated in training with robots. The learning session continued for one week and three hours each day. We have taken an assessment test before the learning sessions. After completing the learning sessions, we have taken another assessment test. We have found better performances from children who have participated in robotic sessions rather than the children who have participated in human sessions.
Keywords : children with ASD, NAO robot, human-robot interaction, social skills
Conference Title : ICSR 2023 : International Conference on Social Robotics
Conference Location : New York, United States
Conference Dates : June 05-06, 2023