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author={A. M. Howard and L. Roberts and S. Garcia and R. Quarells},   
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abstract={Obesity is a growing health problem in the United States, especially among children. Indicators show that the rate of obesity for children age 12-19 years old has risen from 5% percent to 18% over the last ten years. To deal with the obesity epidemic, a number of technology interventions, including the use of robotics and virtual reality games, have arisen to motivate youth to become physically active. The difficulty though lies in providing a tool for health professionals to embed established clinical health protocols into these technologies. As such, in this paper we present a mixed reality system that translates physical demonstrations of various exercise protocols into movements for a robotic agent. This is accomplished by mapping real-time data from an RGB-D sensor to a robotic exercise coach. Details of the system are discussed and results from evaluation with 20 human subjects are provided.},   
keywords={augmented reality;computer games;humanoid robots;mobile robots;protocols;robot kinematics;sensors;RGB-D sensor;clinical health protocols;exercise protocols;health problem;health professionals;human exercise demonstration mapping;mixed reality system;obesity epidemic rate;physical demonstration translation;robot exercise coach;robotic agent;united states;virtual reality games;Humans;Joints;Obesity;Pediatrics;Robot kinematics;Robot sensing systems;1.2.9: Artificial Intelligence—Robotics},   
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**Bibliography**

Now a day’s exercise and health are two most important things in a human life. Here we are presenting a mixed reality system that translates physical demonstrations of various exercise protocols into movements for a robotic agent.

People who need physiotherapy treatment may not be able to afford the medical expenses. All these issues can be solved by creating a virtual human that can train you anywhere, anytime just by learning how to use a Mixed Reality device. In this paper, I am presenting a mixed reality system that translates physical demonstration of various exercise protocols into movements which can be done by a holographic human.

The goals of this paper are utilizing robotic technologies which are still limited in scope. Since a typical pattern of interaction between an exercise coach and a child involves switching between child-led versus robot-led behaviors, the next step required for pilot development of the robot coach with younger subjects is to enable scenarios where either the robot or the human can initiate movement.

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"This is entirely my own work, except as disclosed in the documentation. I gave help to the following persons:  
None  
Signed Kiran C Shettar"