WUBEE: An Autism Destroying Avatar

Patel, Sapna

Various studies have showed that children with Autism Spectrum Disorder (ASD) have an affinity towards interacting with virtual avatars. Children with ASD are able to understand basic emotions and facial expressions in avatars more easily than complex expressions of humans in real-world interactions. Individuals with ASD are characterized by a marked difference in ability to communicate and form relationships. New technologies for communication and learning have been used to improve social communication for children with ASD. Interactive, virtual environments (VEs) are three- dimensional, real-time, computer-based representations of reality that simulate the real or imagined world. The therapeutic benefits of using mixed reality VEs have been established with some baseline studies, but the treatments are very expensive and rely on the subject's ability to establish a relationship with the avatar in the VE. Other studies have shown that even in purely virtual environments some subjects were able to exhibit empathy, this being a precursor to building a relationship. This project is focused on designing a low cost diagnostic test to identify subjects that are likely to benefit from the more expensive mixed-reality treatments. A device independent platform has been developed in a gaming environment to measure the subject's ability to recognize and respond to the emotional state of the virtual character, called a Wubee. It is hypothesized that through the playing of this game, children with ASD will show an increase in the ability to discriminate emotions and provide appropriate responses to basic needs.

Awards Won:

Third Award of $1,000