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VR PROGRAM TO IMPROVE SOCIAL SKILLS OF CHILDREN WITH ASD

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What is Autism Spectrum Disorder?

Autism spectrum disorder (ASD) is a complex developmental condition that involves persistent challenges in social interaction, and restricted/repetitive behaviors.

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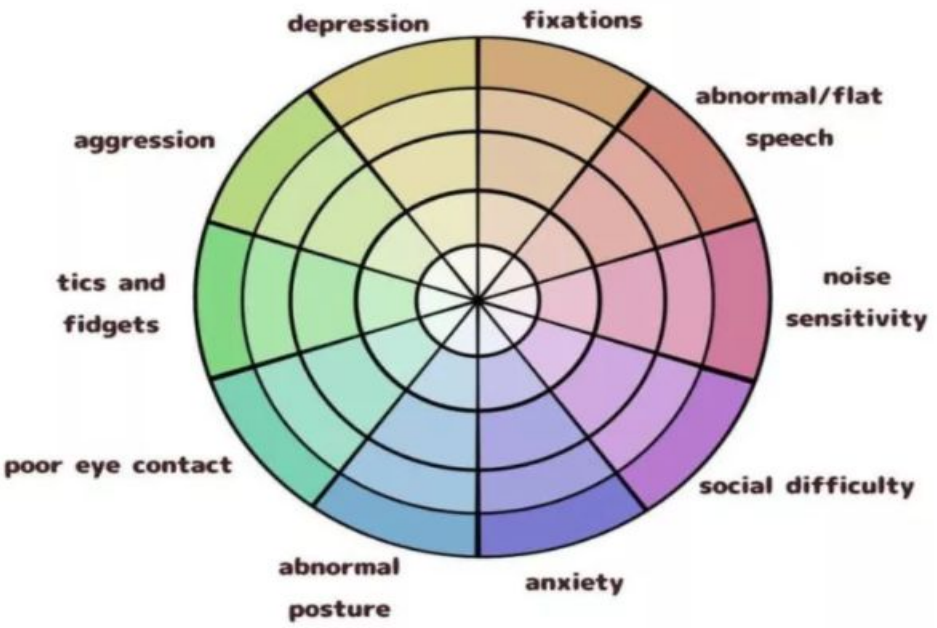
The Autism Spectrum



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Why This Needs Immediate Attention

- 222 per 10,000 children in the United States had autism spectrum disorder, one of the highest prevalence rates in the world.
- People in the United States diagnosed with autism increased from 1 in 150 (2000) to 1 in 68 (2010)..
- Over a million Americans live with autism today.

Our Goal

To build a Virtual Reality based application for enhancing social and communication skills in children diagnosed with the Autism Spectrum Disorder.

How This Program Will Work
(Front End)

Children will interact in a virtual representation of different areas like libraries, shops, etc that require good social skills in the real world.

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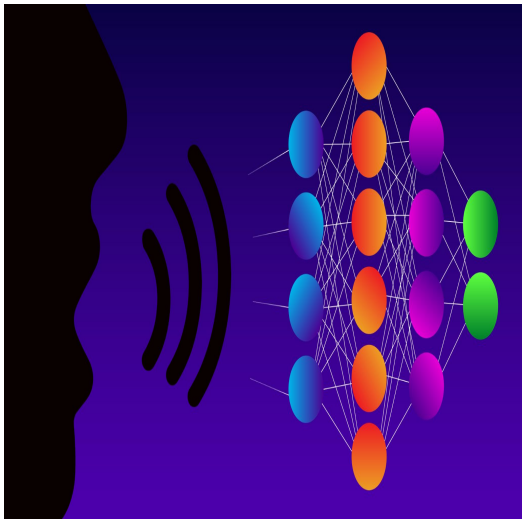
How This Program Will Work

(Back End)

A Natural Language Processing (NLP) AI will be used to extract keywords from the user to adapt and challenge them over time.



Technical Challenges

- Issues to do with interaction since different systems come with unique tracking technologies to track user movement.
- Dealing with probability and AI as words can have different meanings depending on the scenario or sentence structure
- Trying to implement an environment which mimics the real world setting.
- Teaching the bot how to understand the differences in speech patterns of different users with ASD

The Plan (Front End)

- The development environment. Develop an adaptable environment in a virtual reality.
- Using a rigged unity model
- Creating the virtual environment

The Plan (Back End)

- Evaluate existing systems and how they function with young people on the autism spectrum
- Study Python programming language associated with keyword some extraction programs
- Create a bot using existing systems or from the ground up
- Train the bot to understand the patterns of autism patients via machine learning