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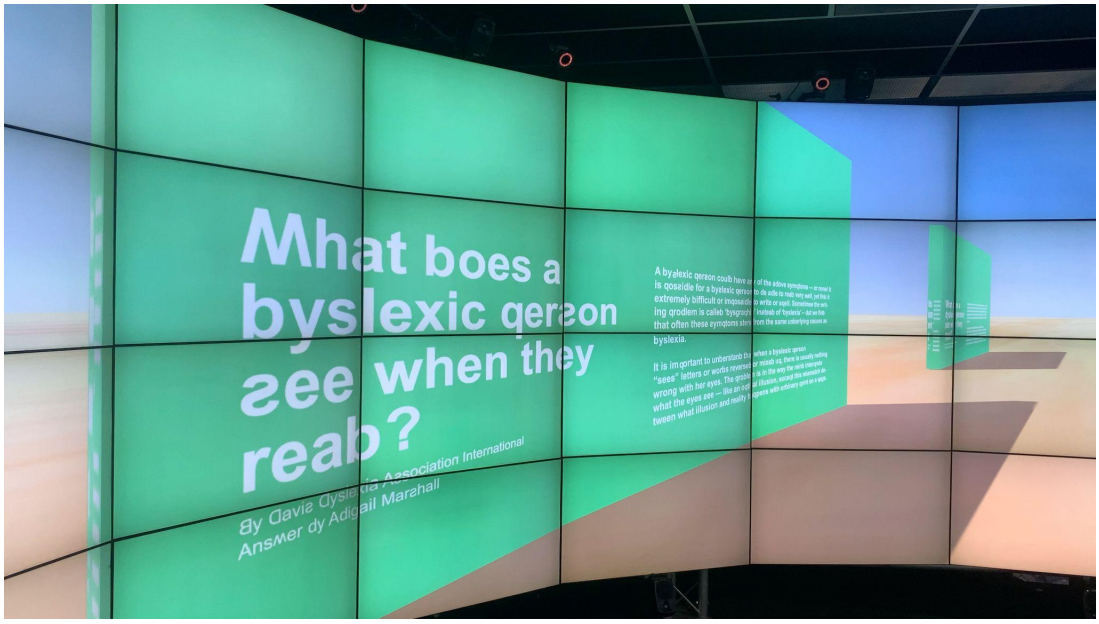
Dyslexia



Dyslexia is an immersive virtual reality piece aimed at mimicking the dyslexia experience. The piece is centered around a grocery store interaction through the lens of a dyslexic individual, with each aisle consisting of typographic elements depicting regular items one can find in a grocery store. The user enters the experience in the first aisle of the store, where they are subjected to randomly spinning items in all four directions, thus making it difficult to perceive the objects around them. Additionally, distorted voices playing in the background add to the confusion and unpredictability of the experience. As is often observed in individuals with dyslexia, an unfamiliar territory can result in difficulty to perceive their surroundings and that can be quite overwhelming, which is the feeling that this piece aims to capture.

Grocery aisles with typographic items such as bread, coffee, etc.

As the user makes their way to the other aisles, the speed of movement of items in the store reduces, and their size increases, along with the background noises transitioning into calmer tones. This is meant to mimic a dyslexic person's familiarity with the space and their increased comfort as time passes by. Panels on both sides of the aisles contain descriptive text about dyslexia, the texts of which initially appear as jumbled but start making sense as the user makes their way through the experience.

Items get bigger and move slower down the aisles

The main purpose of this experience is to raise awareness and empathy among people without dyslexia by directly immersing the user into what a basic grocery store looks and feels like to an individual with this condition. By spending time in this virtual space, our hope is that the user takes home a sliver of understanding of what it is like to try to read in a text dominant world.

Items in random rotation make it difficult to perceive objects

Acknowledgement

Dyslexia was developed on Unity for CAVE 2, a surround-screen, surround-sound, projection-based virtual reality (VR) system at the University of Illinois at Chicago. The project idea stemmed from the research thesis of Mikealy Thomas, who along with Shinkyung Do was responsible for creating the typographic elements used in the project. The grocery store scene was set up by Neil Chawla, along with the C# scripts responsible for moving the objects at different speeds and directions. Each script moved the object at a set speed and direction, and the different scripts were added randomly to all the objects in the store to create random movement. Neil also worked on adding the functionality towards changing the background music as the user progressed through the space, utilizing invisible objects to trigger area-specific audio, in addition to creating the project documentation.

Finally, we would like to thank our instructors Daria Tsoupikova, Andy Johnson, and Jeff Nyhoff, for their continued support and guidance towards bringing this project to life.