



Team:

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OVERVIEW

Troublesome schemas can cripple a neurodivergent adult's autonomy. A schema, or a person's unique pattern of thoughts, beliefs, and behaviors on a subject, can create self-fulfilling prophecies and solidify poor behaviors.

Imagine purchasing water from your local grocery store. You walk inside, and then what? Do you head for the drink aisle to grab a case, stay outside to refill your 10-gallon jug, or reach for a bottle inside the checkout line refrigerator?

The actions you imagined are a product of one of **your** schemas. In adolescents, virtual reality has shown promising results in turning negative schemas into positive ones.

One child had a five-year history of anxiety attacks that occurred when he was stopped at a traffic light. The child received virtual reality-based schema therapy for two weeks and successfully resolved his internal struggles. The therapy was designed to accurately replicate the schema in virtual reality, give the patient control of the situation, ensure they felt as comfortable as possible, and encourage play.

Our research tests whether neurodivergent adults enrolled at a university can benefit from virtual reality-based schema therapy that emphasizes authenticity, autonomy, and play.

METHODS

1. Identify a schema for improvement.
2. Create a virtual reality experience about the schema.
3. Capture the initial performance level of the student.
4. Create a sensory profile for student.
 - a. Sensory profile consists of visual, auditory, and proprioceptive preferences.
5. Repeat test and record final performance level.
6. Have the student complete a qualitative exit survey.

PROJECT TIMELINE

October 2022

Research team assembled.

March 2023

Minimum viable product created.
Rapid iteration phase with target audience.

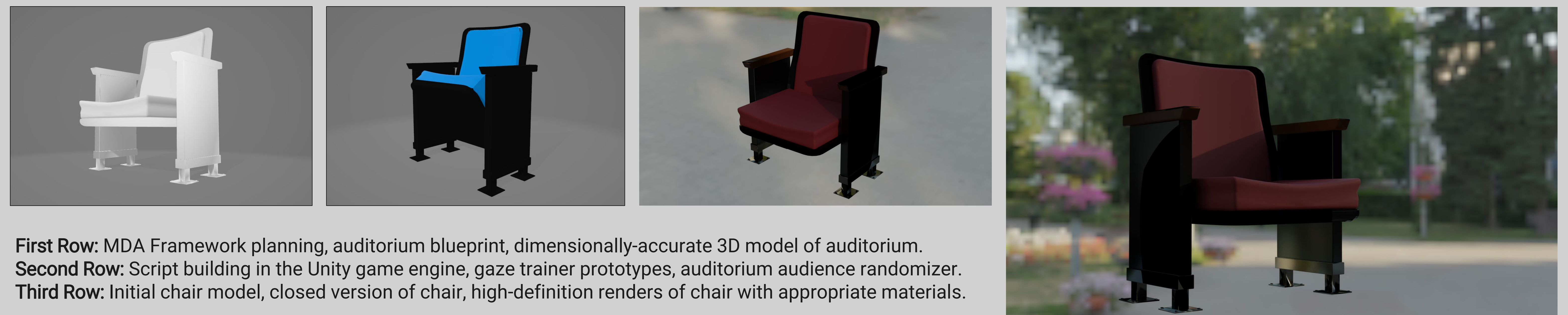
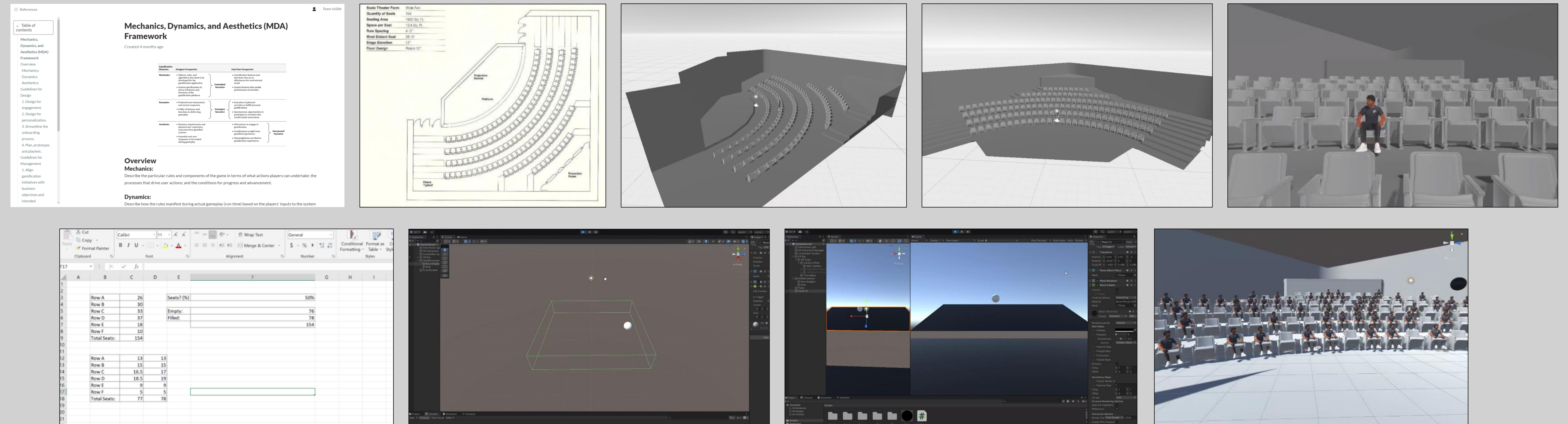
April 2023

Adjust minimum viable product based on feedback.
Conduct experiment and analyze results.



Helping Neurodivergent Adults Overcome Difficult Behaviors Using Virtual Reality.

PROJECT PHASES



First Row: MDA Framework planning, auditorium blueprint, dimensionally-accurate 3D model of auditorium.
Second Row: Script building in the Unity game engine, gaze trainer prototypes, auditorium audience randomizer.
Third Row: Initial chair model, closed version of chair, high-definition renders of chair with appropriate materials.

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View my 2-minute presentation:
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