Improving Mental Health with Safebubble VR

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Abstract

Our Grand Challenge attempts to tackle the topic of mental health with the use of virtual reality, or VR. There has been a lot of stigma surrounding mental health that resulted in people neglecting their mental wellness due to a lack of information and accessible treatment programs. We have researched aspects of cognitive behavioral therapy (CBT), as well as created an application using a combination of Unity and VR that is designed to be a safe space for users.

Introduction

- The field of VR and its impacts on mental health is still relatively new
- VR allows for individuals to be repeatedly exposed to fears or traumas in a controlled environment
- Some people do not have direct or easy access to a physical safe space where they can calm down
- When integrated into therapy and treatments, studies have shown VR has positive results in patients suffering from various mental illnesses
- Built an application that can help users by giving them a safe space to take a step back and calm down
- Created multiple environments that the user can choose from
- Integrate meditations, both guided and unguided
- Integrate music with the option of having it on or off

Methods

For our project, we merged VR and mental health, created an app, using Unity. First, we did thorough research about VR and how it can contribute to mental health. We used the results as a guideline to plan of our own project. We contacted specialists in the field. We interviewed Dr. Stearns, from Chapman, to give us insight on the mental health aspect of our project. We also contacted Dr.Greenleaf from Stanford University, who is one of the leading people in the field of merging VR and medicine. Each member of the group chose the part of work that best suits their ability, and made sure our work combined as a whole by frequent communication with each other as a team. Which would be, designing, programing, managing the meetings, research, and gathering the data need for the app. We created VR environments using Unity. Inside each environment there are options for nature sounds, and guided meditation practices. The user is able to look around and orient in any direction they please.

Results

Figures 1. First semester mock flow chart of the menu
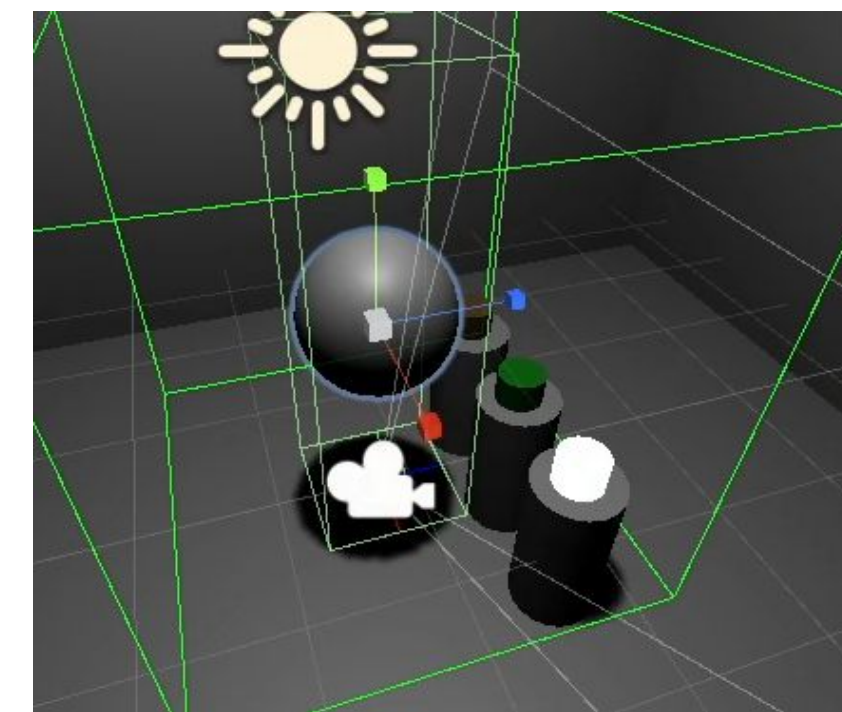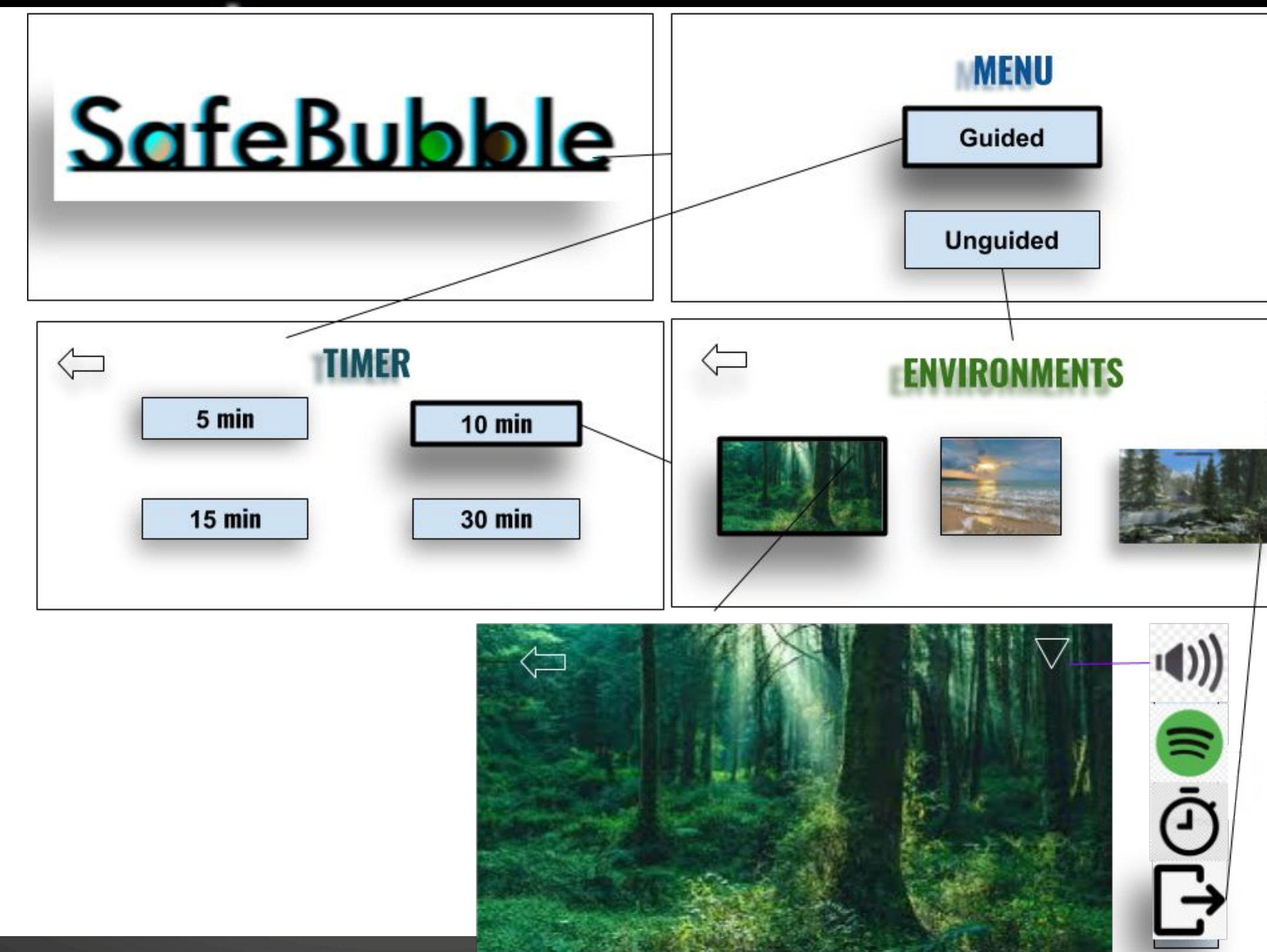
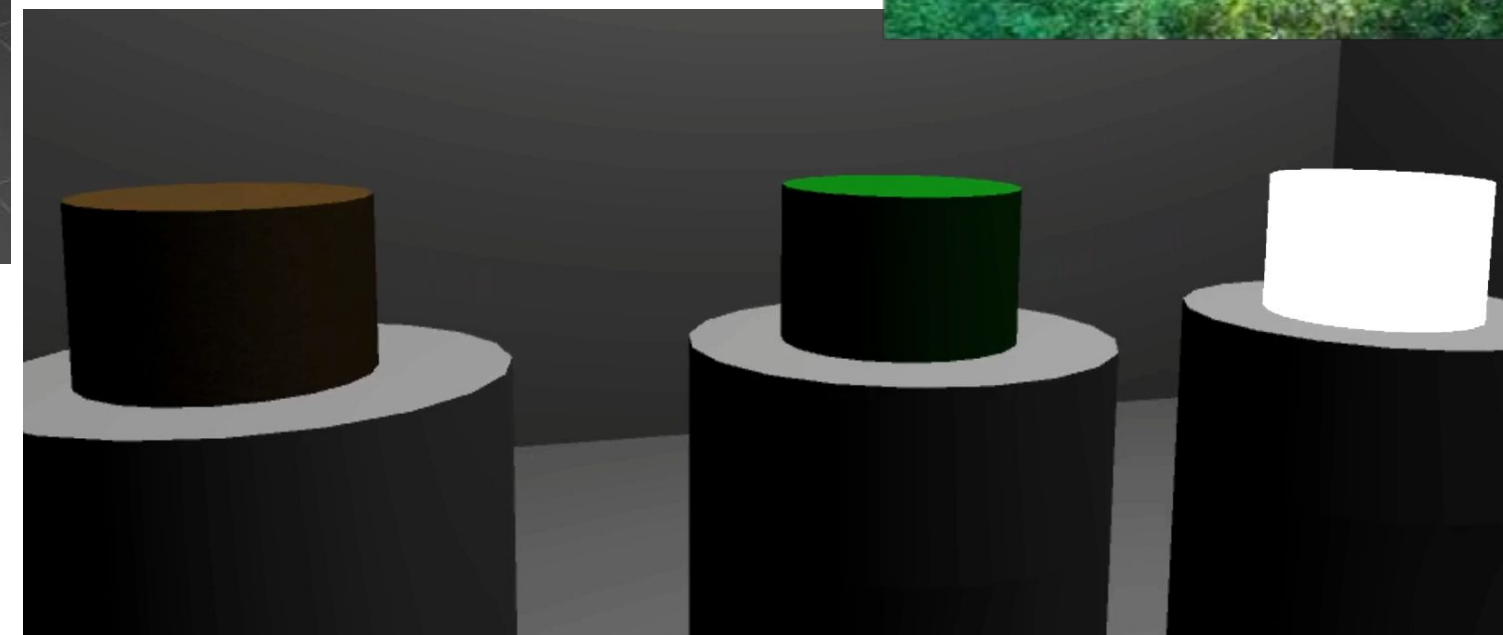Figures 2. This is the functional (very beta-like Environment selection room in VR)

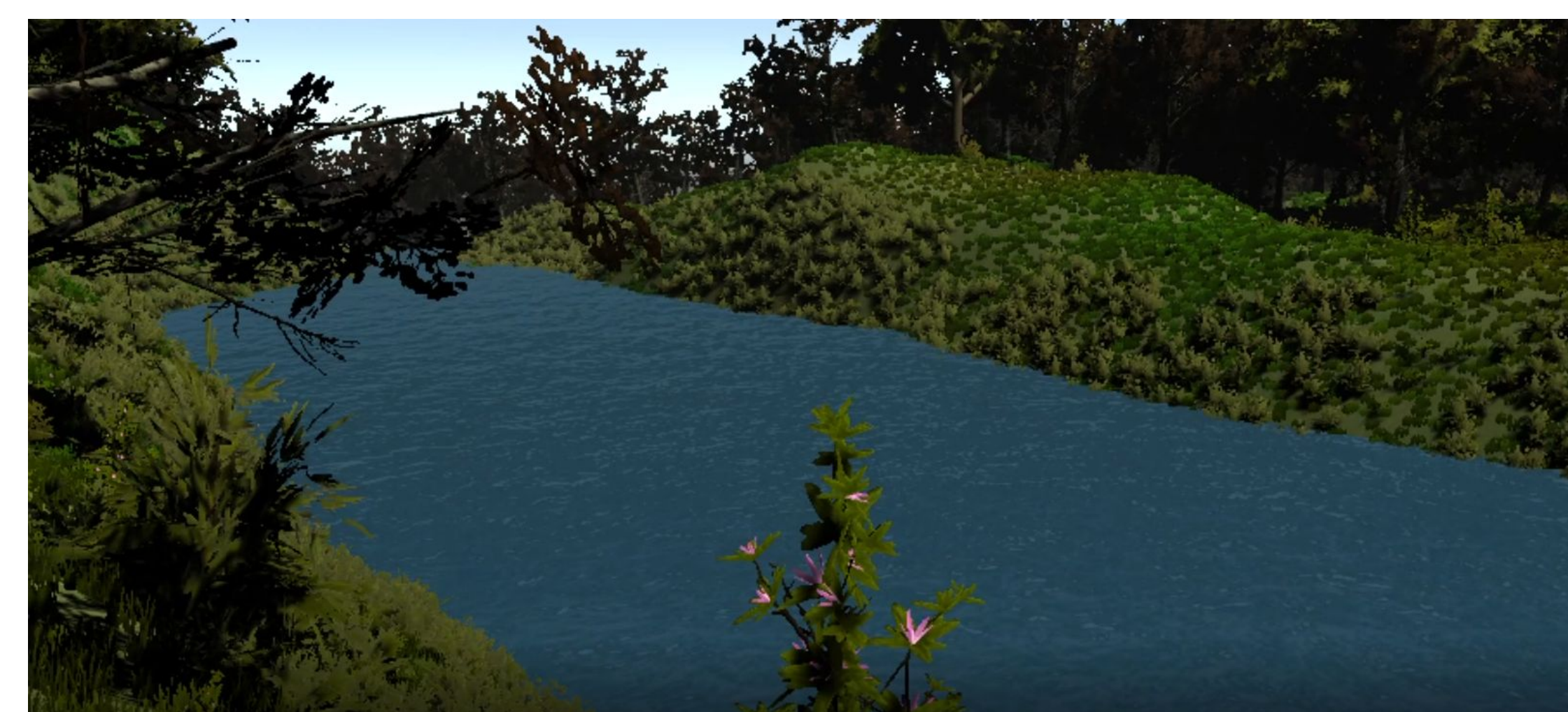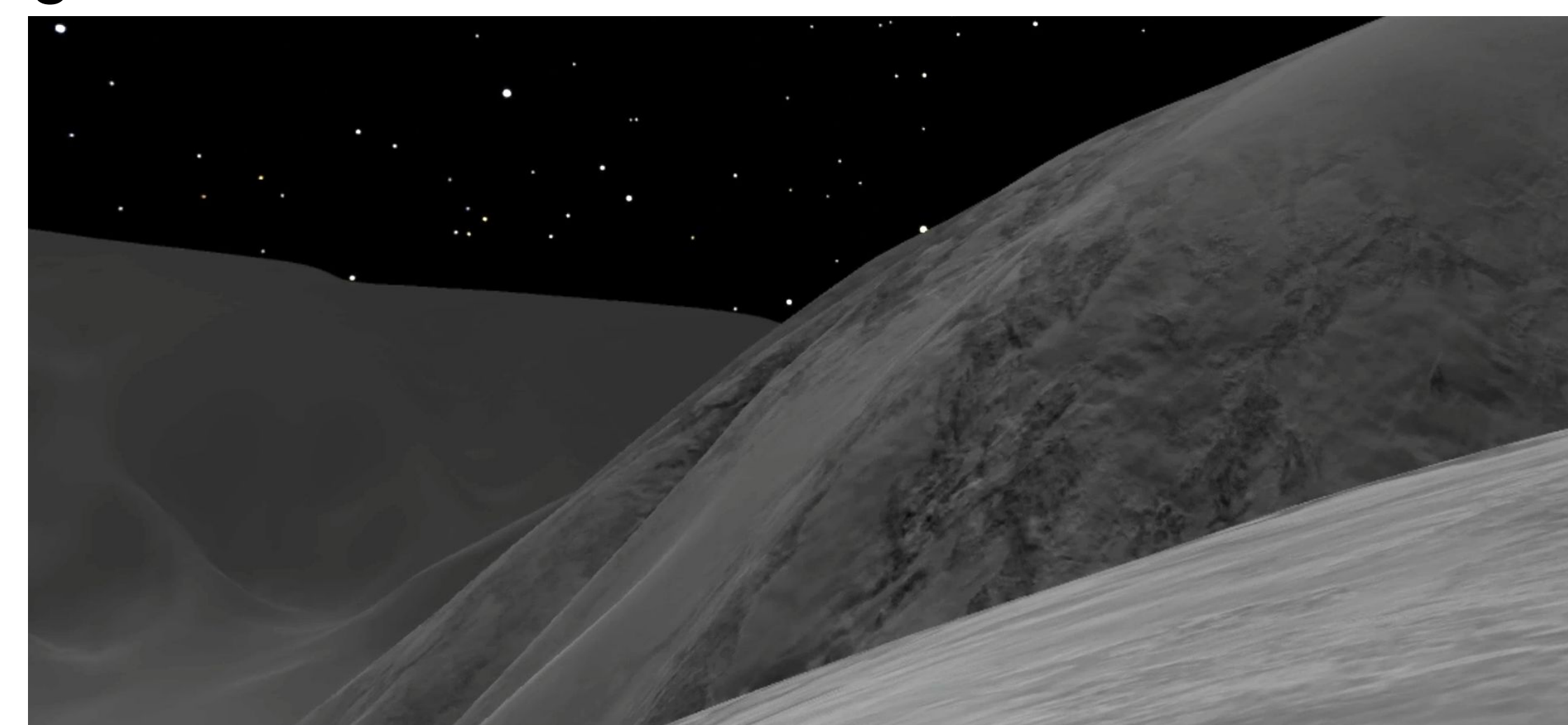Figure 3. Desert island beach

Figure 4. Forest with river

Figure 5 . Snowy mountain with starry night sky

Conclusions

Our mission was to determine how virtual reality can be used as a tool to promote a soothing and relaxing atmosphere for people. From our research, we discovered that reality could elicit emotions from consumers (Gou, 2019). We used this information to create an application where users can ease down. Exposure to nature/a different world than the one you are in could help you recover from a lack of concentration by enhancing positive feelings, promoting relaxation, and reducing the time it takes to recuperate from activities that need a lot of focus (deBloom, 2014). The environments we created will hopefully be soothing, tranquil, and stimulating to the general public. We were able to incorporate sounds to facilitate a relaxing surround sound for the users to be better immersed and an optional guided meditation.

We also hope to create:

- More environments

- More methods of personalization for the user such as allowing them to construct their own environment.

There are many significant impacts that our application may have in our society:

- Help advance non-medical or diagnosed mental health

-Be a tool that diagnosed people could use.

-Provide accessibility to people who do not feel comfortable disclosing their condition due to mental health stigmas within our society.

Acknowledgements

Literature Cited

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