

VR Illusion Mid-Point Report

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Project Summary

Goal: To investigate whether movement can induce stronger neural signal in humans, thus affecting their perception of visual illusions.

Method: In an controlled experiment, participants will view different visual illusions in two settings: stationary and movement

To measure the strength of the illusion, we ask the participants to tweak/adjust the illusion pattern to the point that the illusion disappear.

We then use statistic model to test our hypothesis with the data collected.

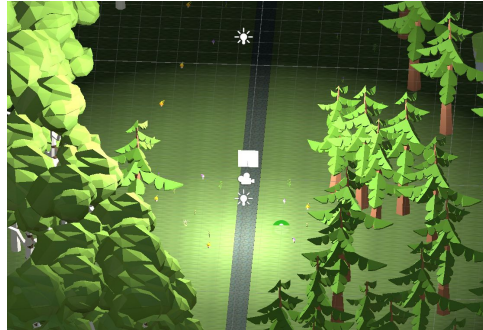
MVP

Three Scenes:

Welcome Scene



Stationary Scene



Moving Scene



Welcome Scene

Purpose:

Prepare Room/Warm up Room

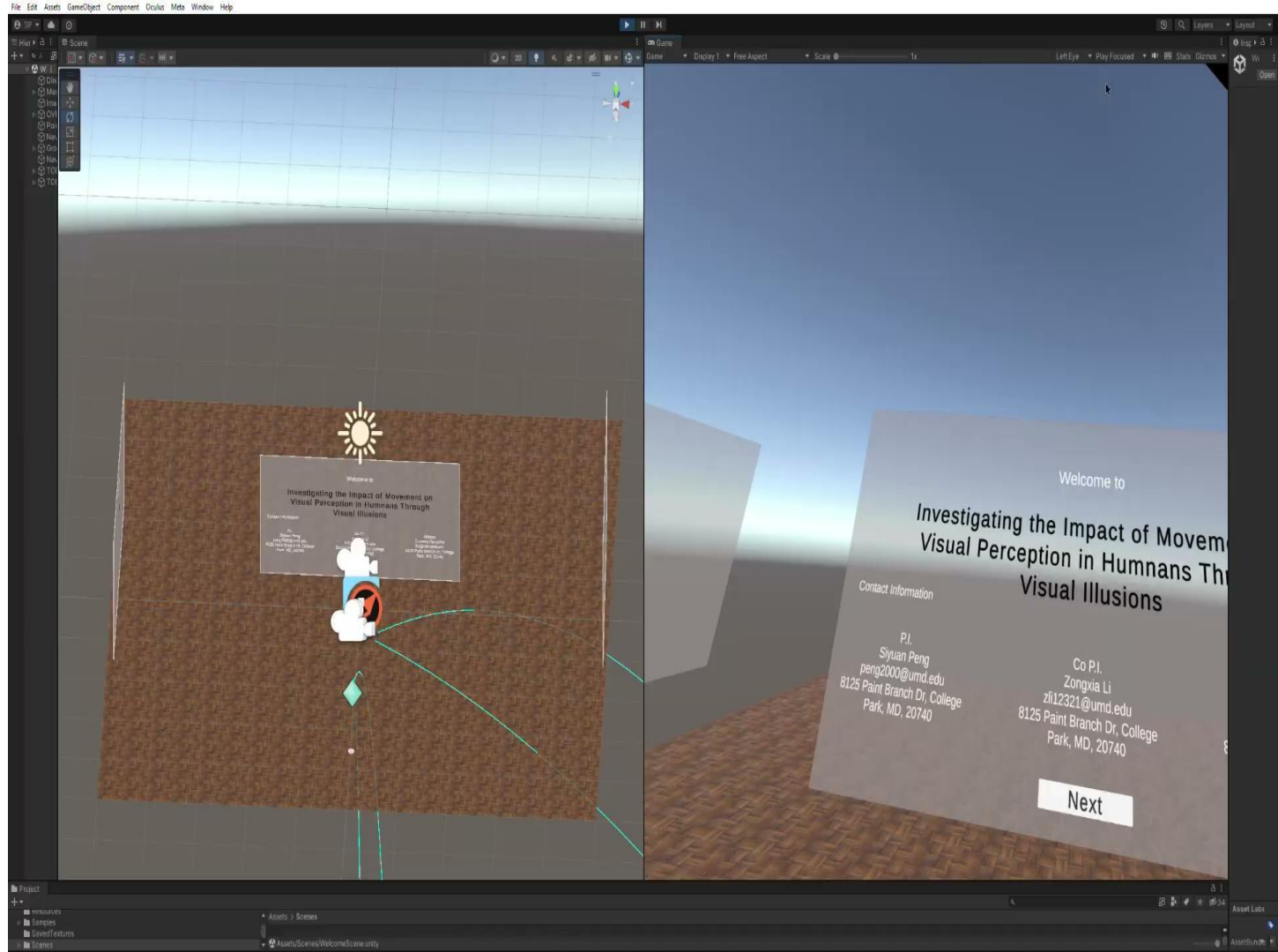
Feature implemented:

- Teleport (Hotspot)
- Pointable Canvas
- Interactable Canvas

Future development:

- Audio cue
- Audio narrative

Welcome Scene Demo



Stationary Scene

Purpose

Put participants in an stationary setting and conduct the illusion experiment.

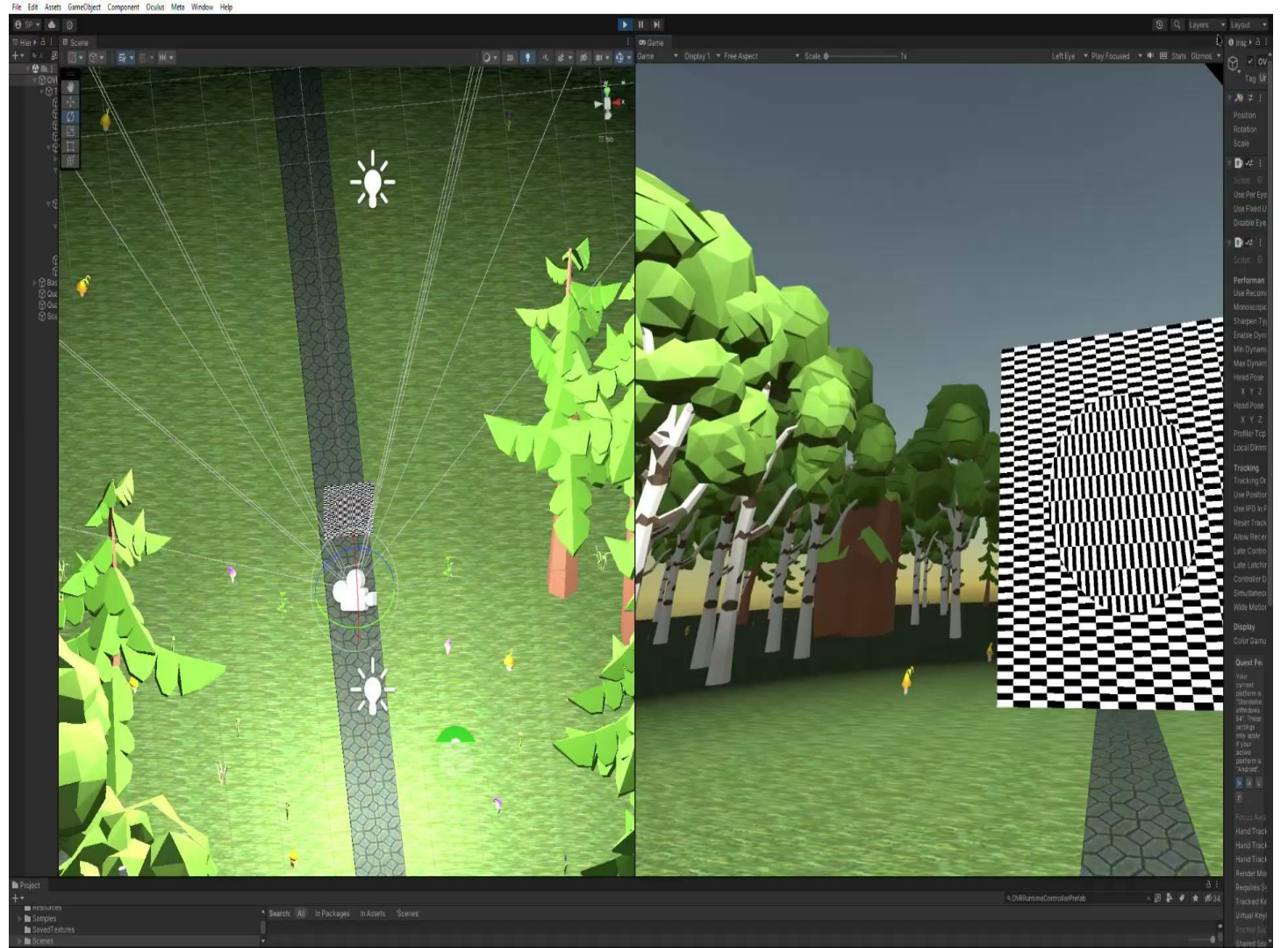
Feature implemented:

- Controller controlled illusion adjustment

Future development:

- Add a virtual slide bar
- Experiment result/value logger

Stationary Scene Demo



Moving Scene

Purpose:

Put participants in an moving environment, who will also be on a treadmill, and conduct illusion experiments

Feature implemented:

- Infinite moving scene

Future development:

- Add a menu (stopping mechanism in case of any discomfort)

Moving Scene Demo

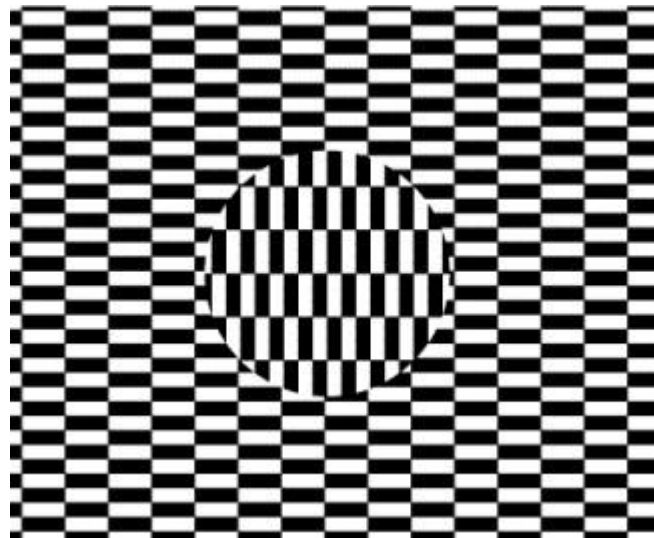
Future Plan

- Implemented: Ouchi Illusion
- Passed the IRB
- Have recruitment letter ready

Will implement four/five more in the future

- Add eye tracking feature
- Refine the simulated environment and
Add building blocks to make participants
Feel more real
- Find a treadmill to fit into IRB
- Start recruiting participants
- Already showed a demo video, any group who

Also needs to simulate movement -a treadmill can share with us. Participate in our study and we will also participate your study.



IRB

Revision/Approved

Estimated

Ask for volunteer participation, can trade to conduct your experiments.

Experiment Location: IRB 11XX