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3D Immersive Visualization: Expanding Human Sensation

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COMPUTER SCIENCE

3D Immersive Visualization
Expanding Human Sensation

CAPSTONE DESIGN EXPO 2016

Project Details

Goal: To design and develop a 3D simulation that immerses the user in an interactive environment.

- Selected the Oculus Rift and Novint Falcon
- Produced a showcase demo
- Demonstrated adaptability of devices

This project serves as a stepping stone to present the possibilities and experiences that come with immersion into virtual environments.

Potential Applications:
- Military Training
- Aerospace
- Surgery

Technologies

Oculus Rift:
- Virtual Reality
- Displays the simulation allowing the camera view to change based on head movements

Novint Falcon:
- "3D touch" controller which provides force-feedback and interactivity in the simulation

Unity:
- Graphics engine
- Renders the simulation

Simulation

The simulation is rendered to Rift.
Features:
- Can move and explore a virtual room
- Can pick, throw, or move objects within the room
- Each object has its own weight that can be

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Make it real.