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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

