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OVERVIEW

Traditionally, factory worker training has focused primarily on textbook and video guidance. These 2D methods do not completely eliminate the chance of worker errors on the manufacturing floor.

Virtual Reality (VR) has emerged with a new method of training that has the potential to reduce the number of errors and be more time and cost effective.

Attributes of VR include its ability to simulate an environment not confined to reality. VR acts as an economical training environment that is explorative and provides alternative methods of instruction.

This prototype was developed to test the viability of using a head-mounted display for manufacturing assembly. The training tool is anticipated to be used to improve future training processes.

OBJECTIVE

The goal of this work is to evaluate whether VR is a feasible alternative for assembly training by developing a prototype simulating an assembly environment.

- 1. The Pennsylvania State University
- 2. Iowa State University
- 3. Georgia State University

METHODOLOGY







Problems:

- computation lag.

The prototype will need the addition of background sound and audio instructions which will provide an environment that makes training easier for users.

Additionally, including haptic feedback would be a beneficial step to consider as it immerses users into the virtual environment.

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IOWA STATE

UNIVERSITY





DISCUSSION

To create the assembly application, Unity was used as it allowed for key features of the Oculus Rift VR assembly to be implemented.

• Snapping accurately; a larger tolerance had to be used for smaller tool parts. Importation of SolidWorks® parts created

FUTURE GOALS