MICHIGAN STATE UNIVERSITY

Beta Presentation
Augmented Reality Mechanic Training

The Capstone Experience

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From Students…
…to Professionals

Department of Computer Science and Engineering
Michigan State University
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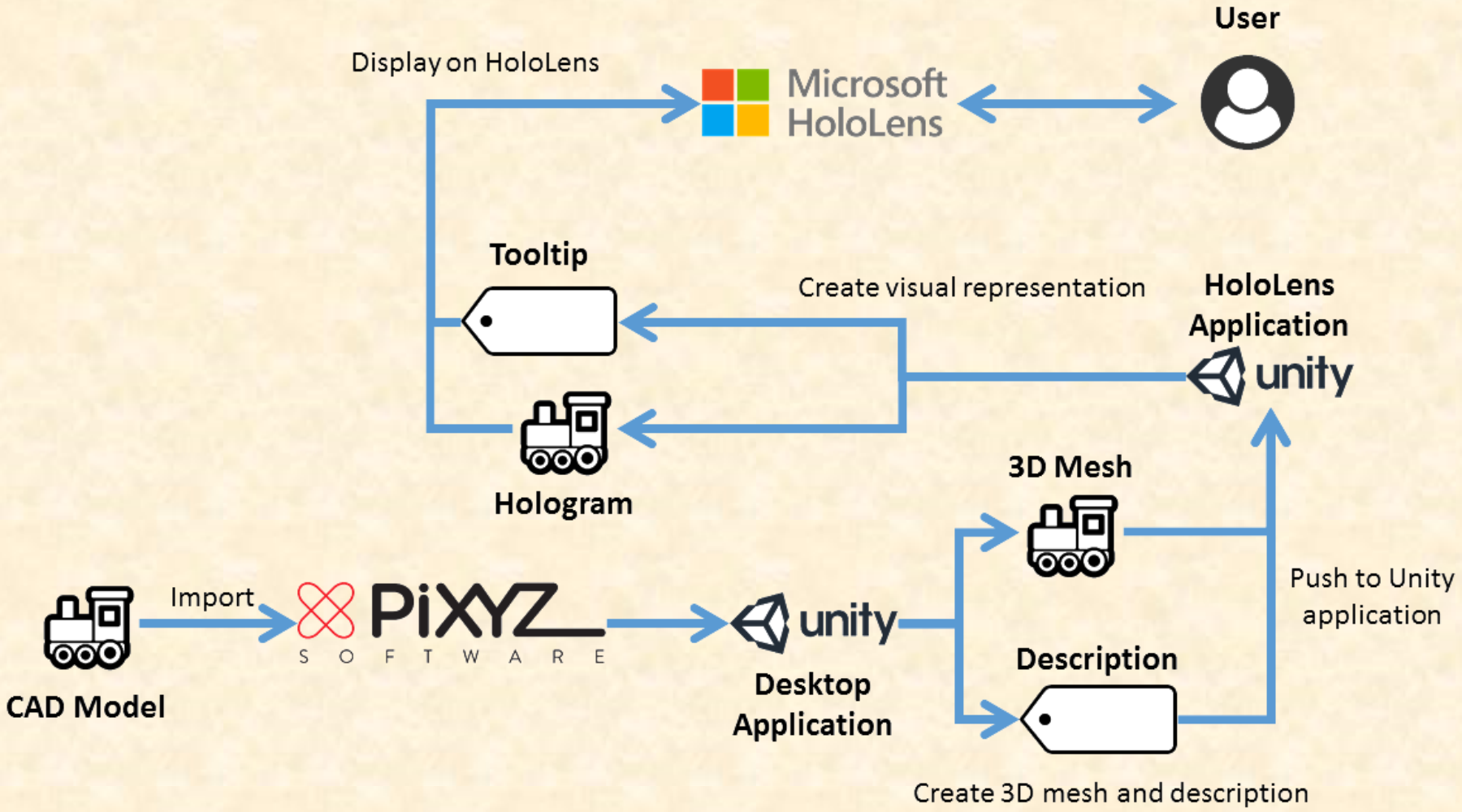
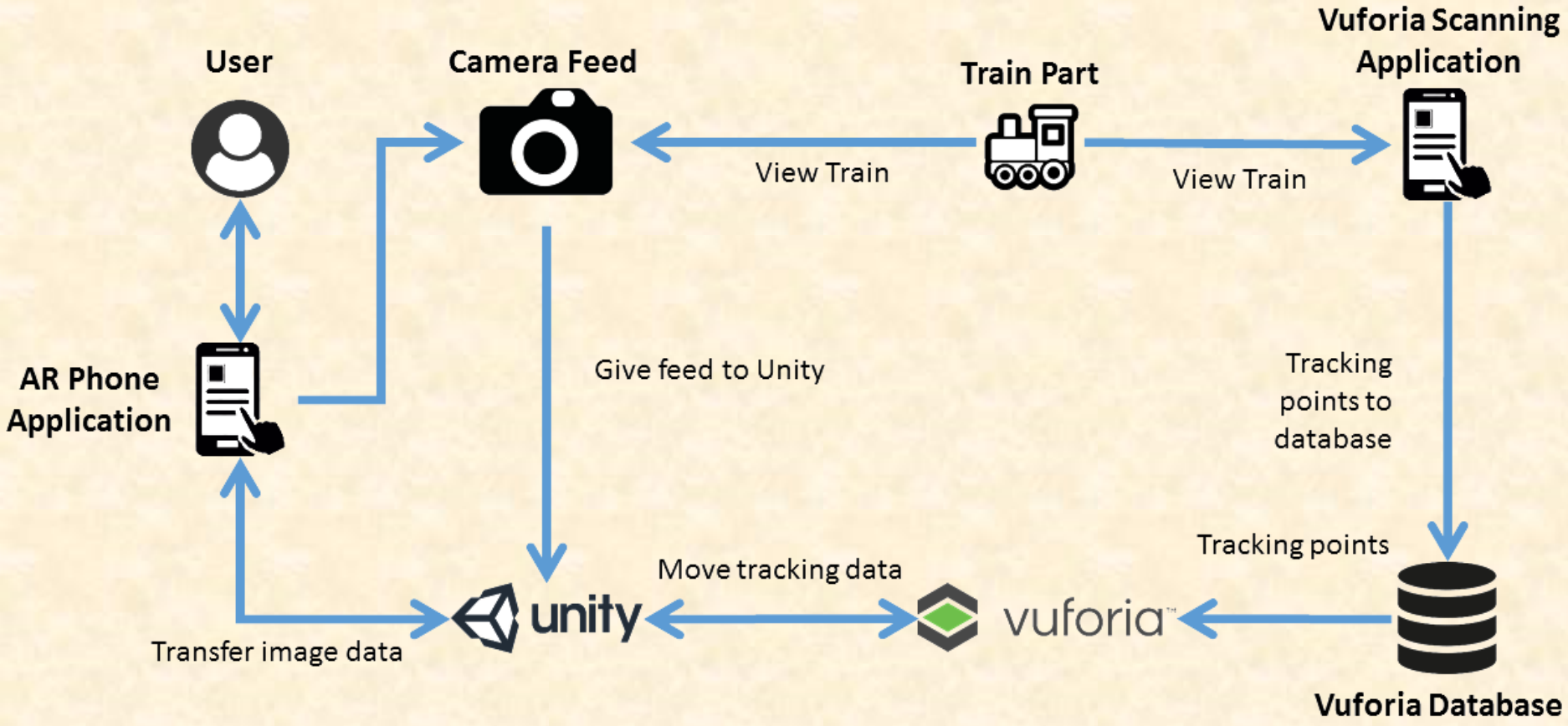
Project Overview

- Two immersive training experiences for mechanics
- *Learn About Machinery (HoloLens + PC)*
  - View labeled holograms of CAD models
  - Select parts to display information
  - Import CAD models through PC application
- *Build a Train (Android)*
  - Guides user through assembling a 3D printed train
  - Uses object recognition to locate train cars

System Architecture

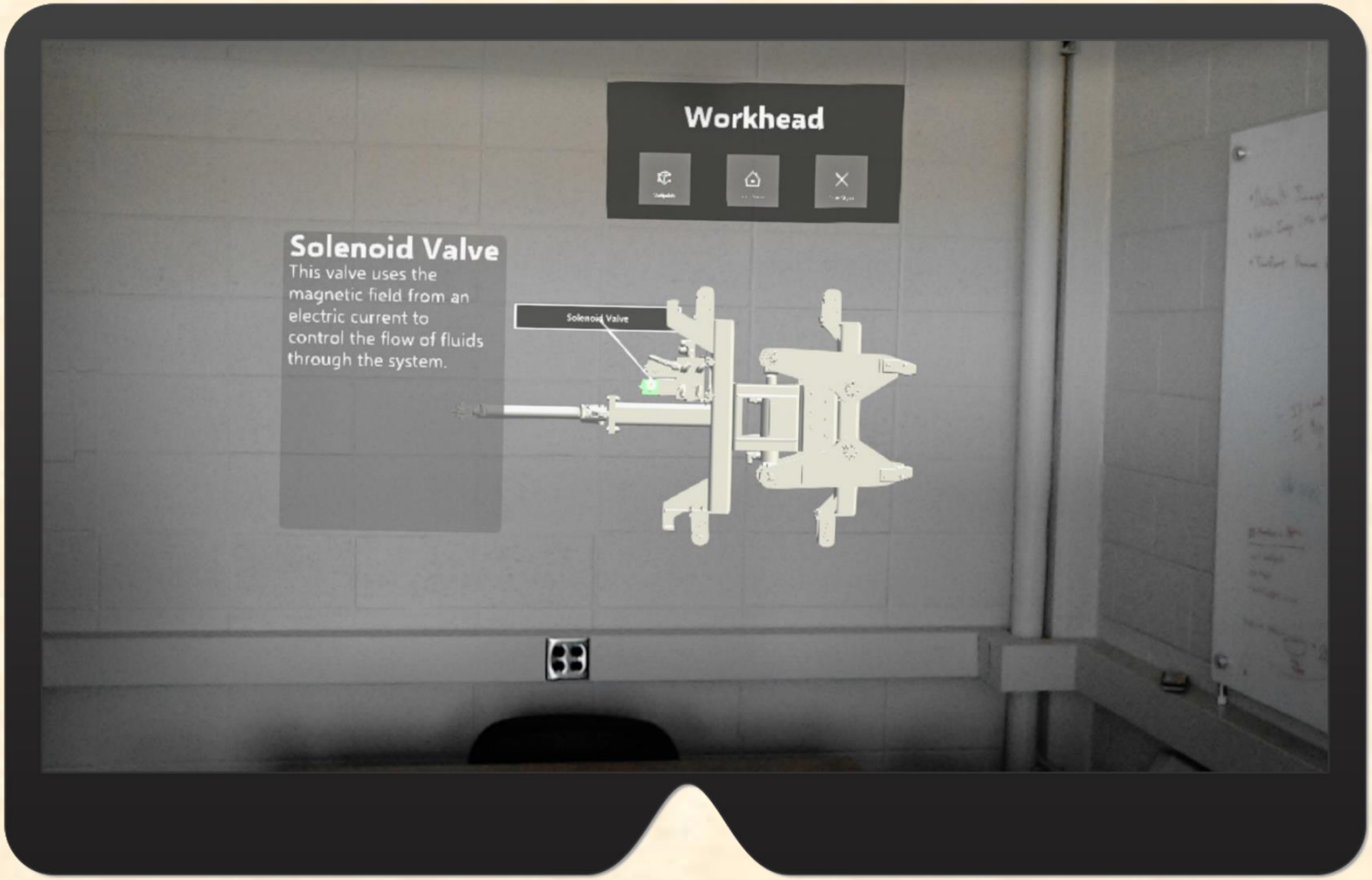


System Architecture

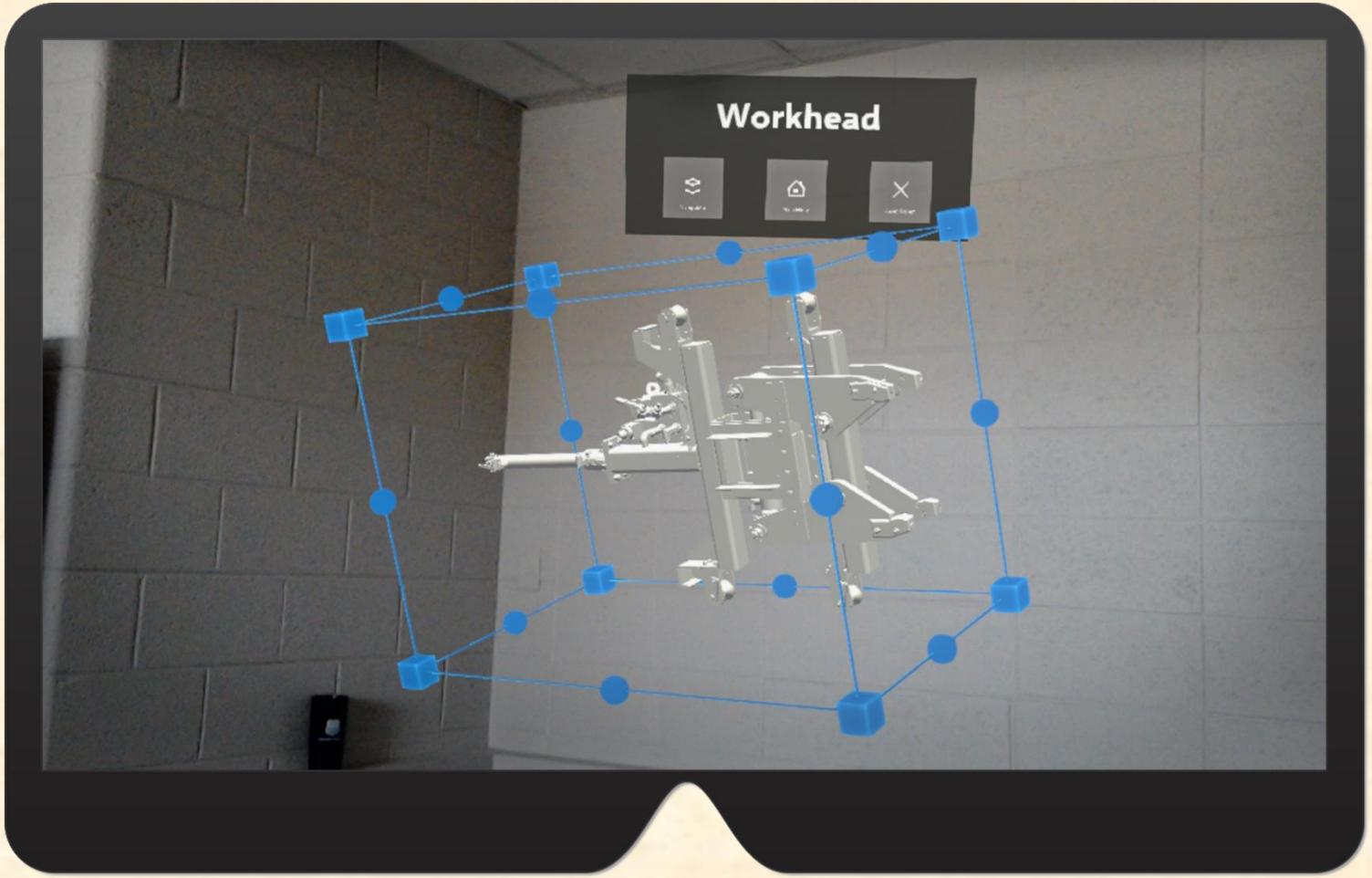


Learn About Machinery: HoloLens Main Menu

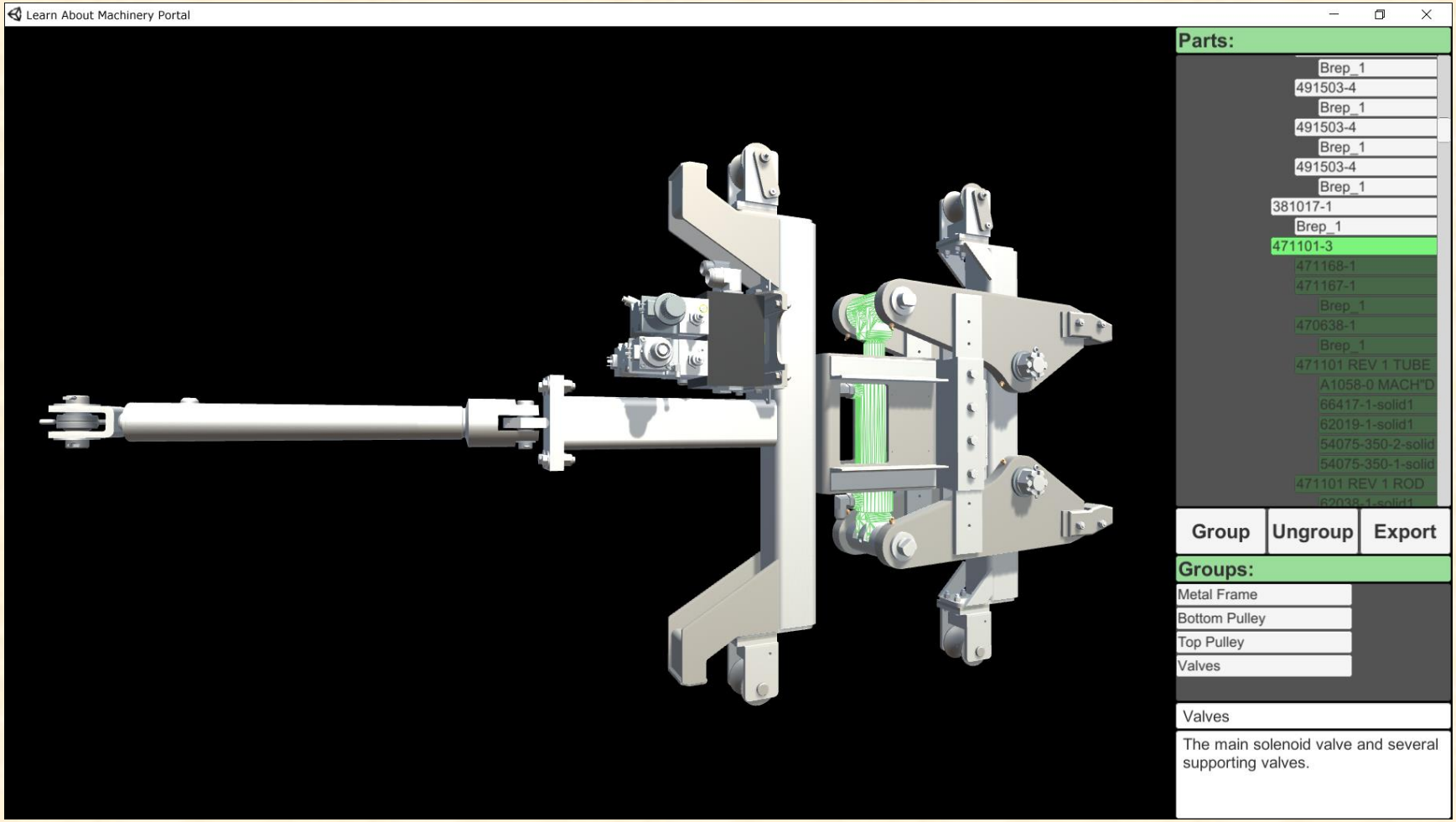
Learn About Machinery: Key Part Information



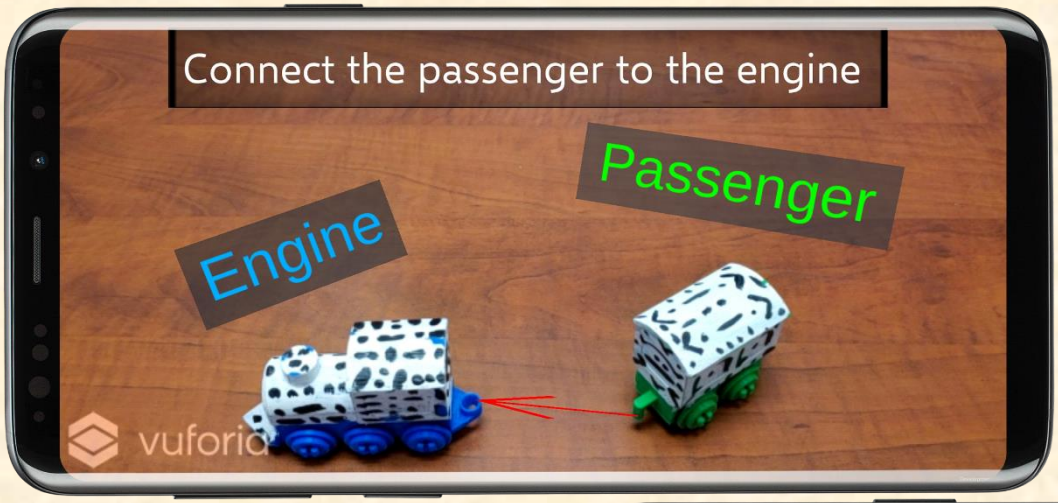
Learn About Machinery: Model Manipulation

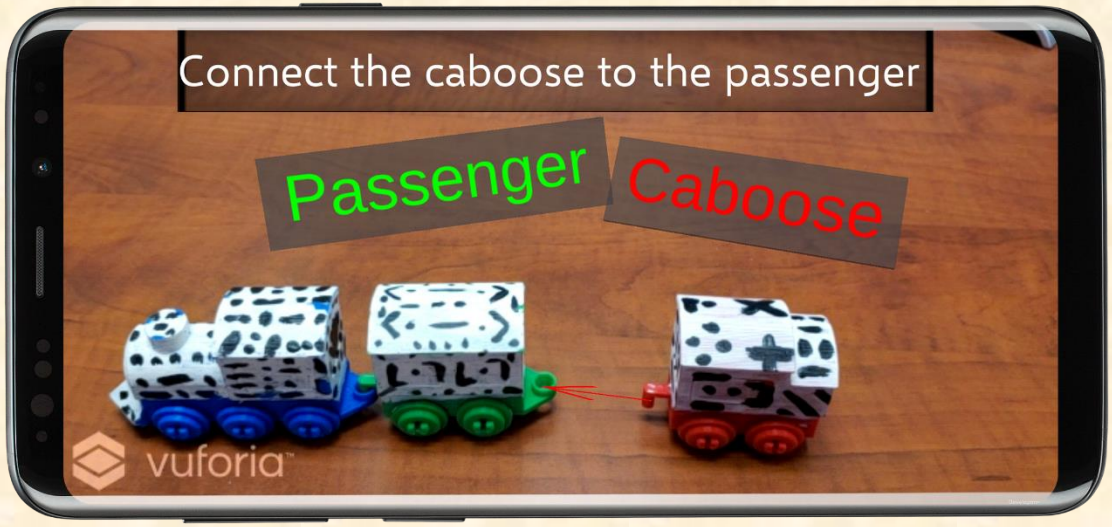


Learn About Machinery Portal



Build a Train: Instructions





Build a Train: User Error

Build a Train: Tutorial Complete

What's left to do?

- More extensive error handling and optimization of Learn About Machinery networking code
- Distinctive sound/vibration when errors detected in Build a Train
- User interface cleanup
- Final style guide pass on project code

Questions?