MICHIGAN STATE UNIVERSITY

Project Plan Presentation
PIG: Policyholder's Interactive Guide

The Capstone Experience

Team Auto-Owners

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From Students…
…to Professionals

Project Sponsor Overview

- Started in Mt. Pleasant, now based in Lansing
- Represented by 48,000 agents in 26 different states
- Offer auto, home, life, and business policies
- Member of the Fortune 500 since 2002
- Partner with independent agencies

Auto-Owners
INSURANCE

LIFE · HOME · CAR · BUSINESS

Project Functional Specifications

- The PIG aims to increase user understanding of loss prevention and insurance implications
- The user will be more informed about insurance aspects of the things they own
- The user will interact with virtual objects through the use of augmented reality
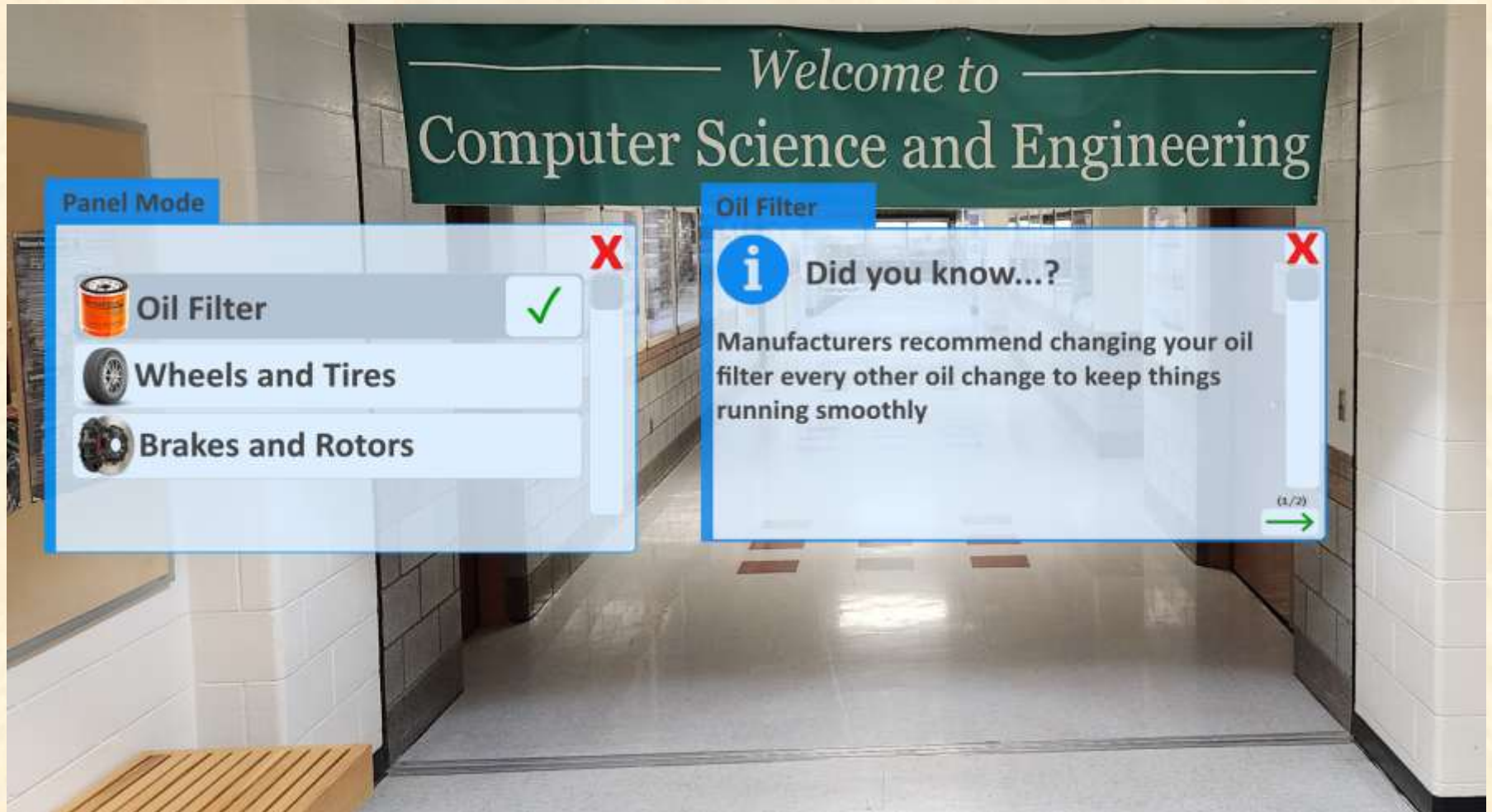- The user will be able to freely switch between the various interaction modes

Project Design Specifications

- Splash Page with main menu

- Panel Mode

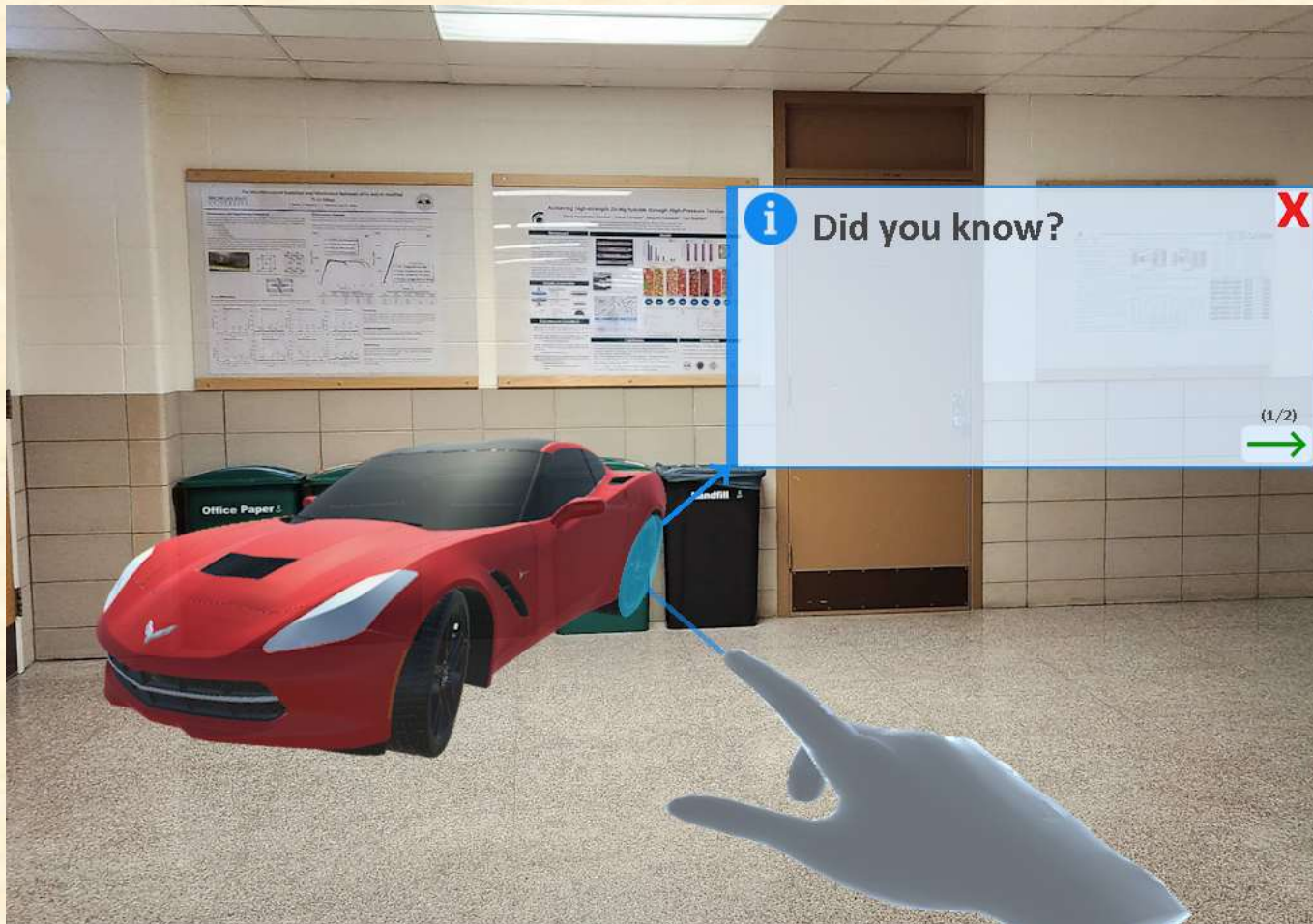- Full Virtual Object Mode

- Object Detection Mode
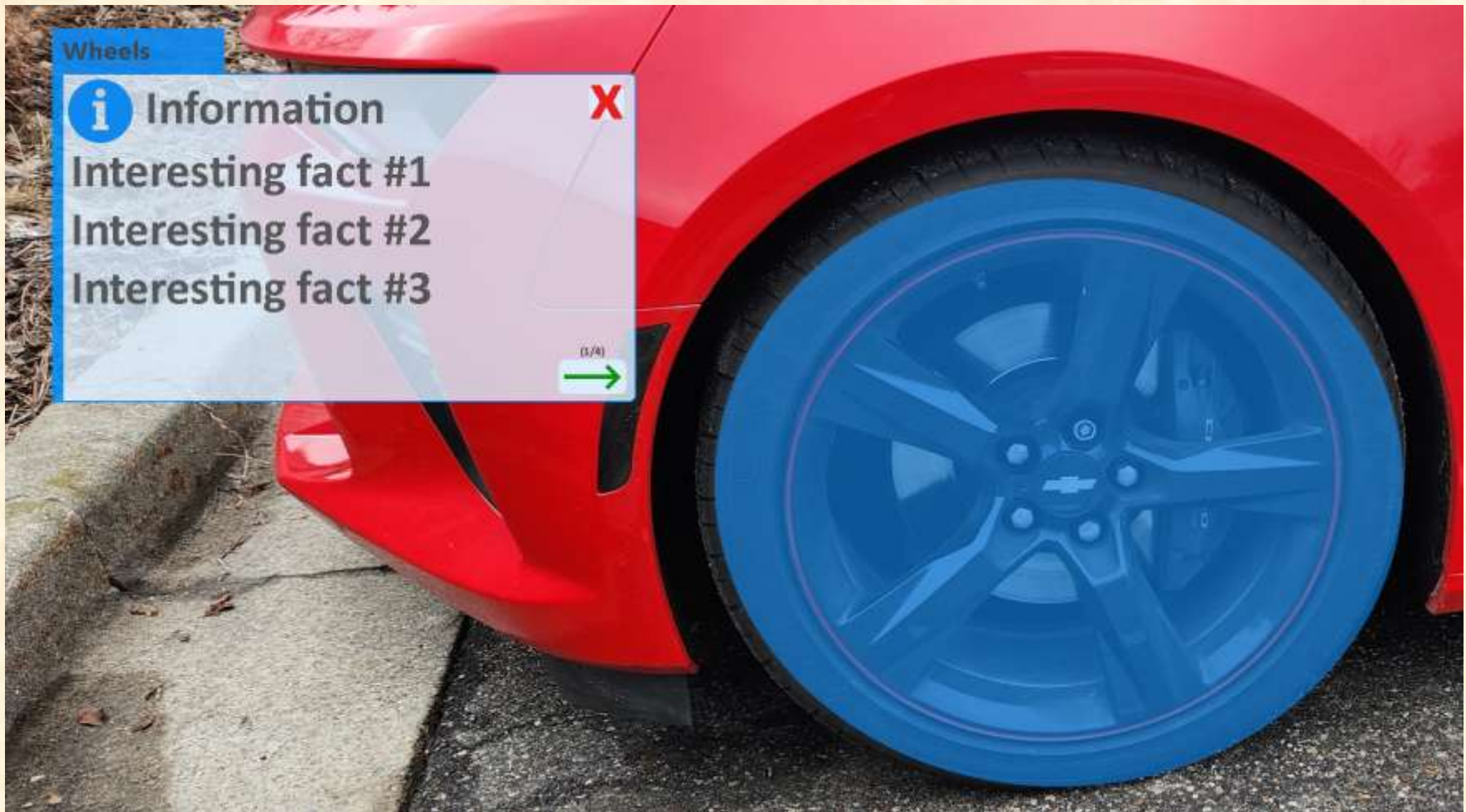
Screen Mockup: Panel Mode

Screen Mockup: 3D Interaction Spawn Menu

Screen Mockup: 3D Interaction Menu

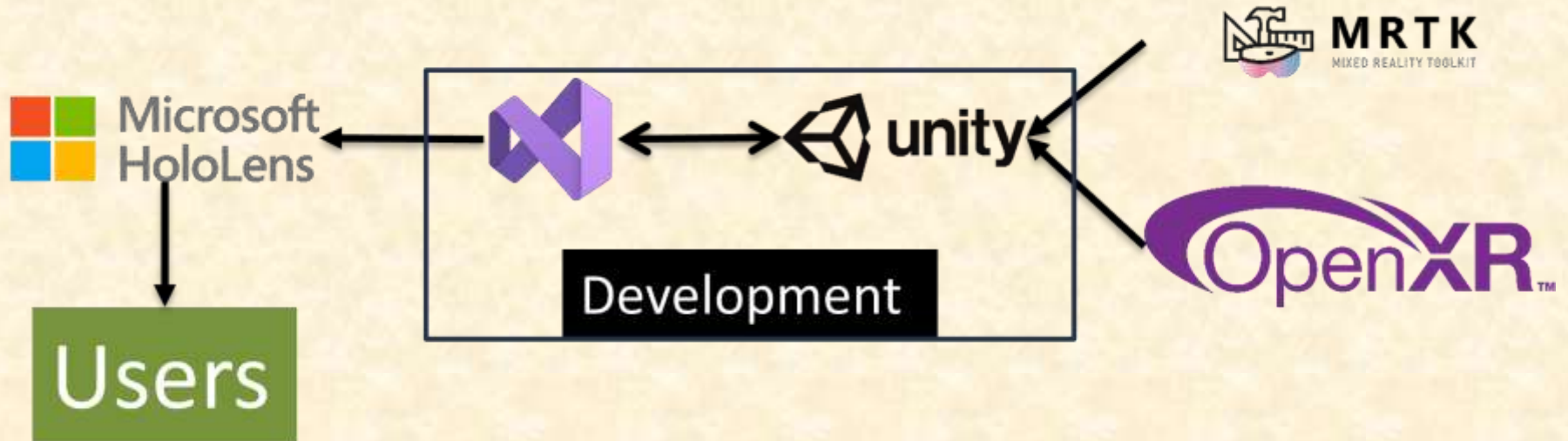# Screen Mockup: Object Recognition

Project Technical Specifications

- Spatial Mapping

- Marker Tracking

- Object Recognition

- User Interface Interaction

Project System Architecture

Project System Components

- Hardware Platforms
  - Microsoft Hololens 2
  - Computers compatible with software
- Software Platforms / Technologies
  - Unity 2022 LTS
  - Microsoft Windows 11 and SDK
  - Visual Studio 2022
  - Mixed Reality Feature Tool
  - OpenXR

Project Risks

Hololens2 Memory Limitations

- Low memory on the Hololens could limit virtual vehicle models
- Use low-poly models for the vehicles

Lab Computer Memory Limitations

- Limited by memory when using Unity and Hololens Emulator concurrently
- Minimize background tasks and use Unity and Emulator individually

Scalability of Items

- All items should be scalable, must account for UI stretching/compressing
- Establish an anchoring standard for different UI panel types, ensure team members follow the standard.

Developing AR in Unity

- Lack of experience developing AR in Unity
- Read documentation and complete tutorial courses for AR development

Questions?

Team Auto-Owners Project Plan Presentation