

**MICHIGAN STATE**  
**UNIVERSITY**

# Alpha Presentation

## IMAGINE: IMAGE INtake Experience

The Capstone Experience

Team Auto-Owners

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*From Students...*  
*...to Professionals*

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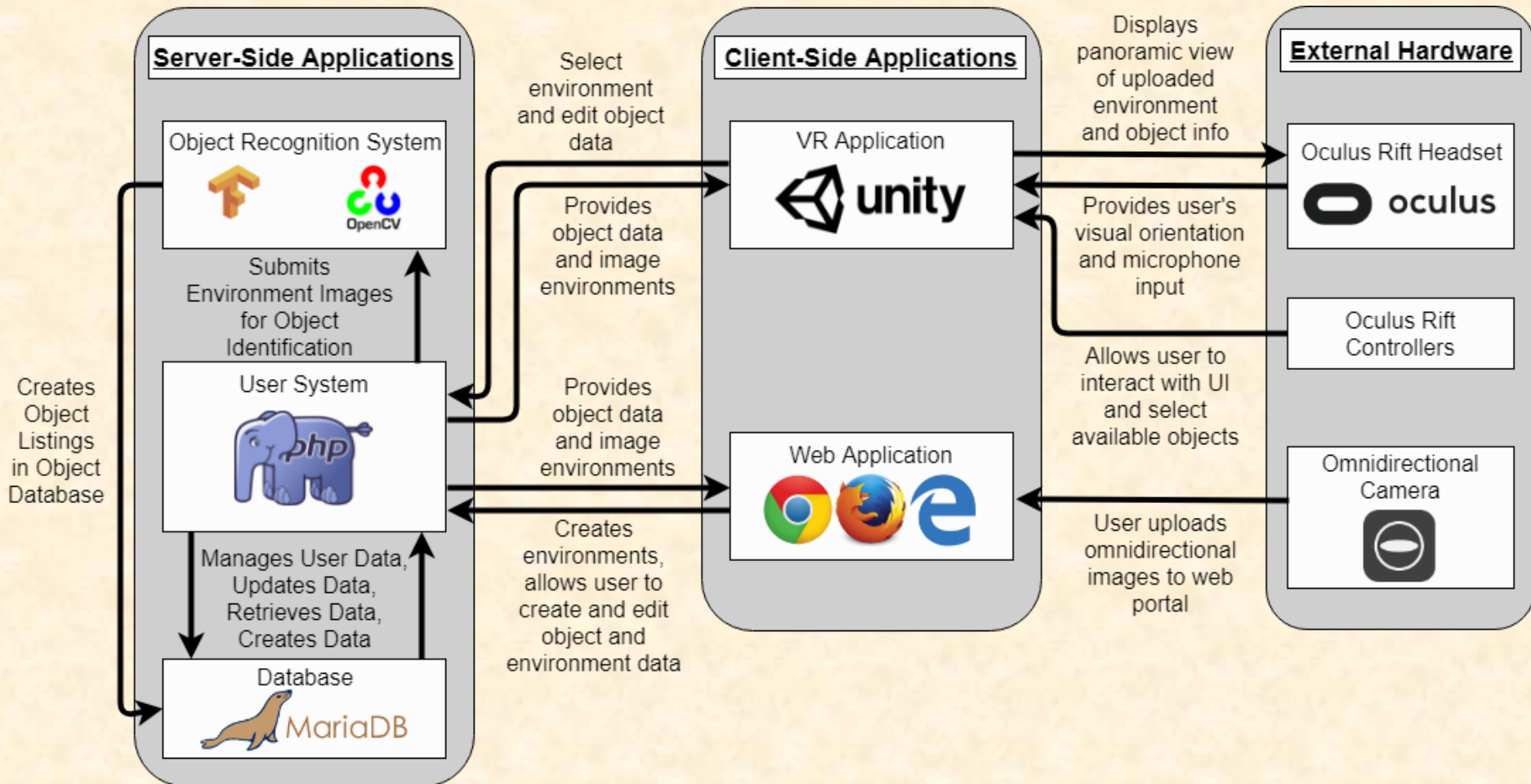


# Project Overview

- Auto-Owners wants a way to easily Evaluate Physical Environments
- Virtual Reality Application
  - View 360° Images as if you are On Location using an Oculus Rift
  - View Info and Make Notes on Objects using the Oculus Controllers
- Web Application
  - Upload Images and Create Environments
  - View and Edit Environment and Image Information
  - View Inventory of Objects in an Environment
  - Add or Edit Objects and their Information
- Object Detector/Classifier
  - Identify Objects in an Image
  - Classify General Types of Environments

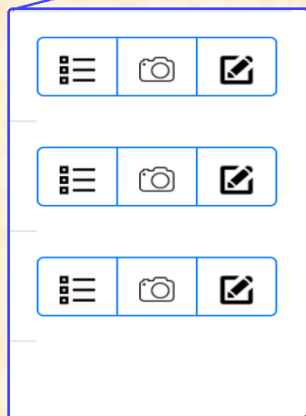
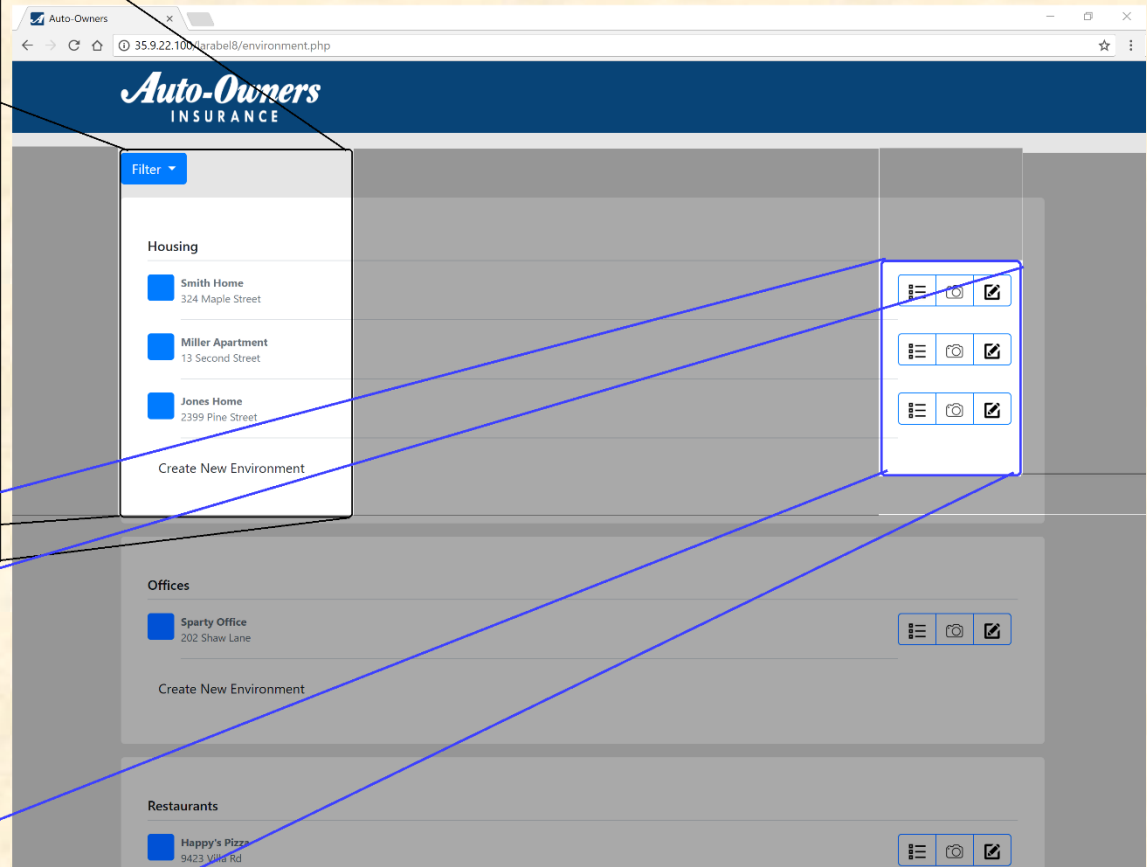
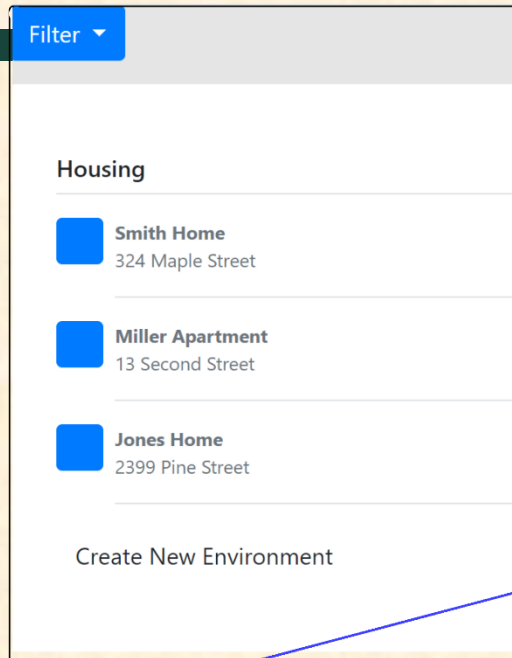


# System Architecture





# Web: Environments List





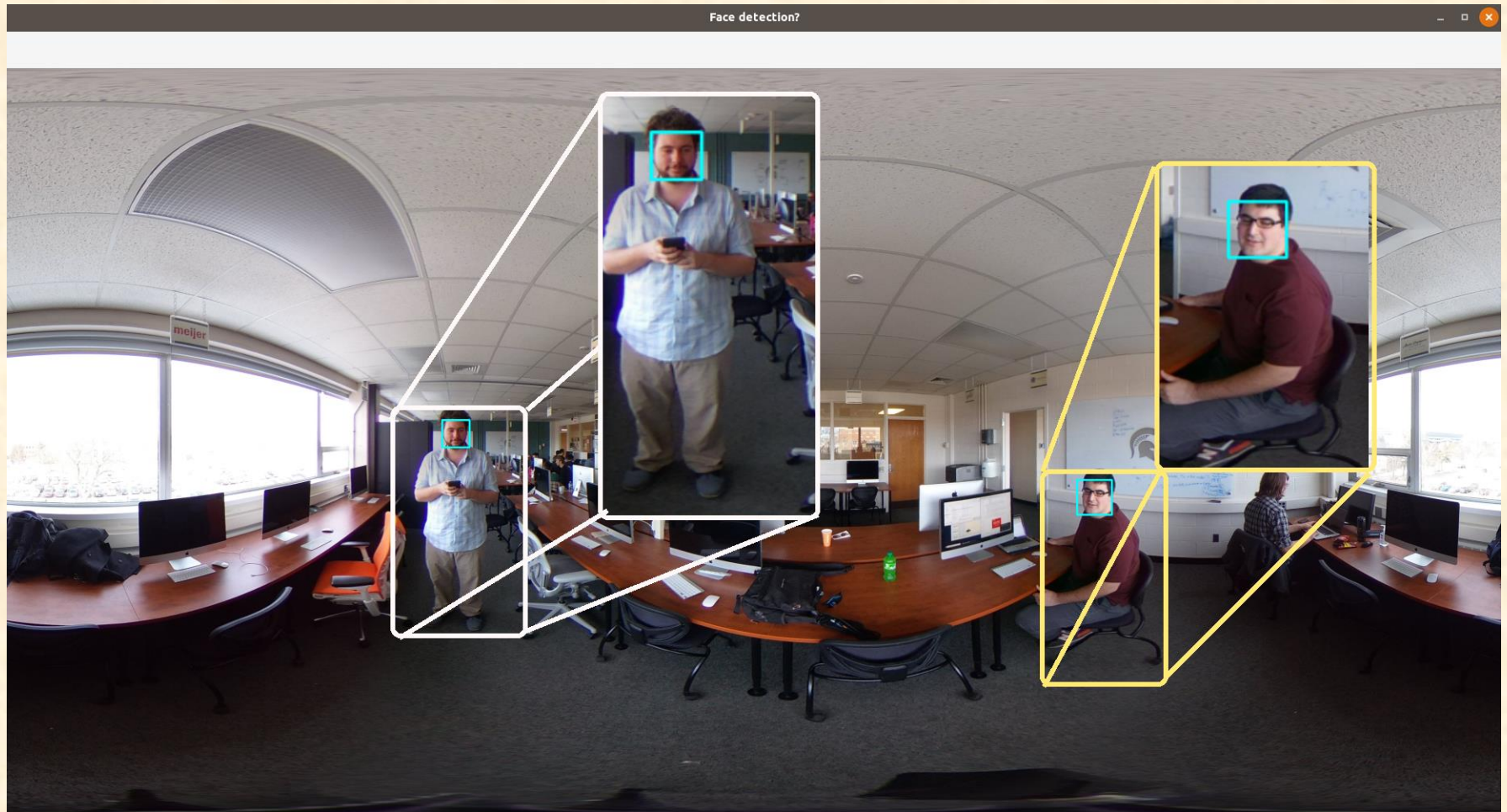
# Web: Inventory List

The screenshot shows a web browser window with the URL `webdev.cse.msu.edu/~larabel8/autoowners/inventory.php?id=1`. The page features the Auto-Owners Insurance logo in a dark blue header. Below the header, the page is titled "Inventory View" and includes buttons for "Environments" and "Export". The main content area displays the address "Smith Home" and "324 Maple Street". A table lists inventory items with columns for Image, Object, Room, Characteristics, and Notes. Each row has a small edit icon in the final column.

Image	Object	Room	Characteristics	Notes	
1	sink	bathroom #1	Pedestal		
2	Shower/Tub	Bathroom #2			
2	Mirror	Bathroom #2			
3	Bed	Bedroom #1	Queen		
3	Drawer	Bedroom #1			

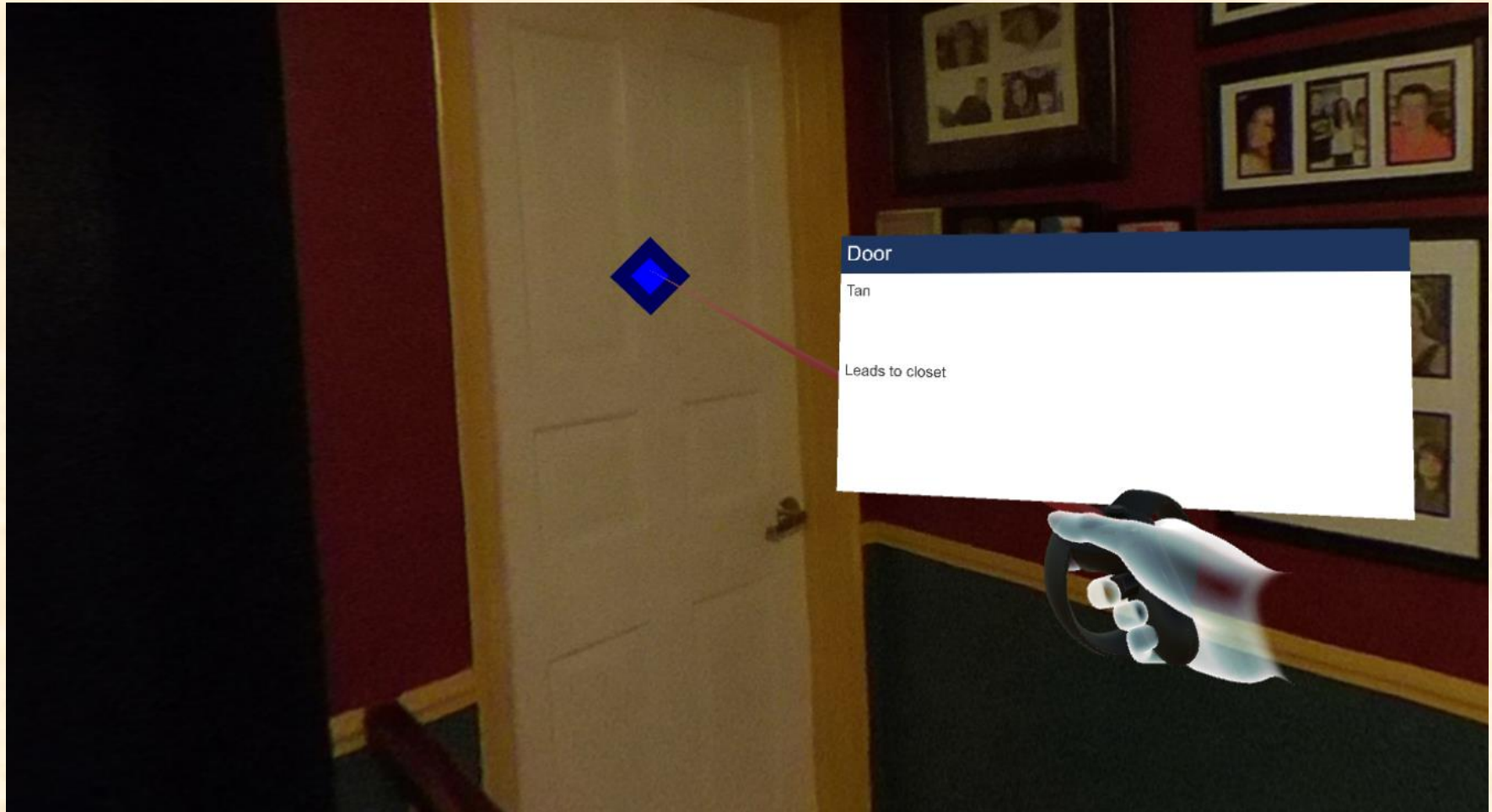


# Object Detection





# VR: Selecting Object Nodes





# What's Left To Do?

- **Object Detection**
  - Implement Classification Abilities for Additional Objects
  - Implement Environment Classification Abilities
  - Overcome Effects of Warping in 360° Images
- **VR Application**
  - Complete UI Elements
  - Fix Image Distortion Issues
- **Web Application**
  - Add Image Gallery
  - Implement Exporting of Object Inventory to Other File Formats (i.e. csv, xml, json, etc.)
- **Integrate Web and VR Clients with Server Backend**



# Questions?

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