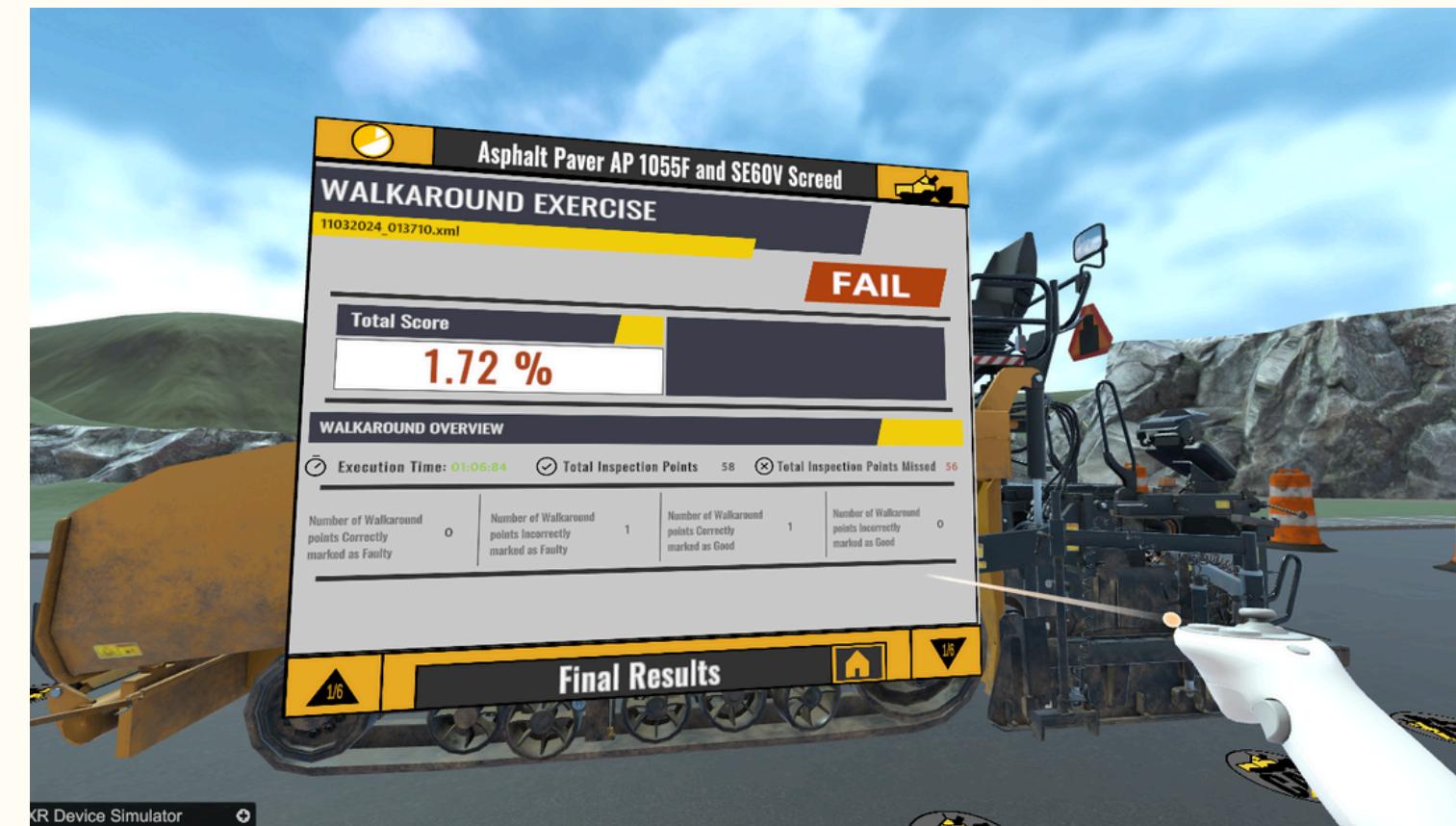


Cato® Simulators VR Paving



- **Role:** Scrum Master and Unity Developer
- **Highlights:**
 - Spearheaded project coordination from inception, establishing a structured Product Increment Plan (PIP) and overseeing task assignments.
 - Designed multiplayer infrastructure using Unity's **Netcode for GameObjects** to support collaborative paving simulations.
 - Modeled and simulated realistic asphalt unloading mechanics in **Blender** and **Unity**, applying **advanced physics** for a lifelike experience.
 - Implemented **gesture recognition** and **AI features**, enhancing interactivity and user immersion.
 - Applied **design patterns** to improve performance and ensure long-term maintainability.



PickPack

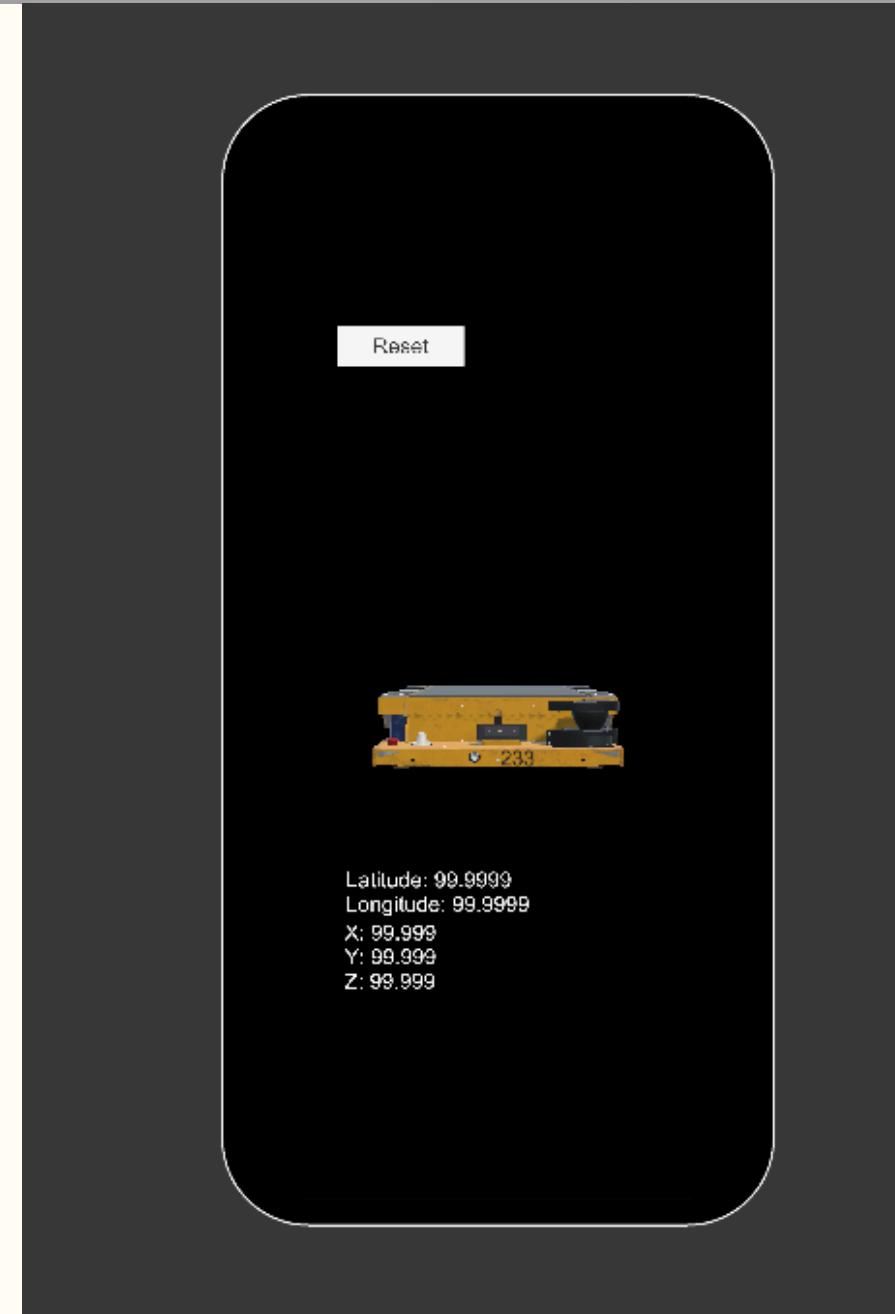
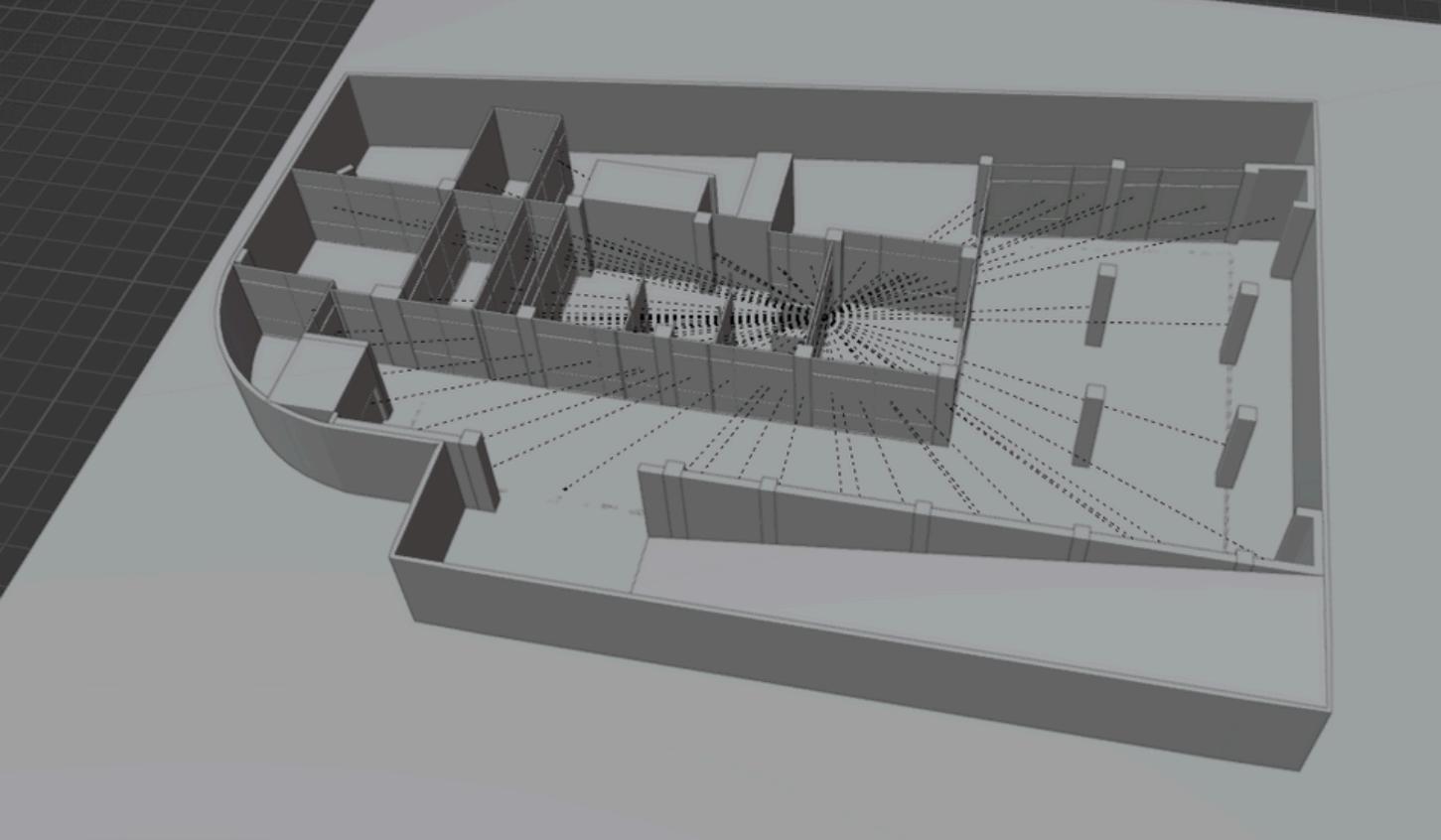
- **Role:** 3D and Unity Developer
- **Highlights:**
 - Developed a virtual showcase in **Unity** to visualize Rolls Royce carsets with precise scaling and fidelity.
 - Integrated interactive controls, allowing users to manipulate the carsets and export configurations seamlessly.
 - Created a **ThreeJS-based** model viewer with **Angular** for real-time carset loading and interactive manipulation on the web, optimizing loading times and enabling high-resolution model rendering.

Carset Name...
Name your carset and assign a car model.

Car Model...
Name your carset and assign a car model.

Continue >





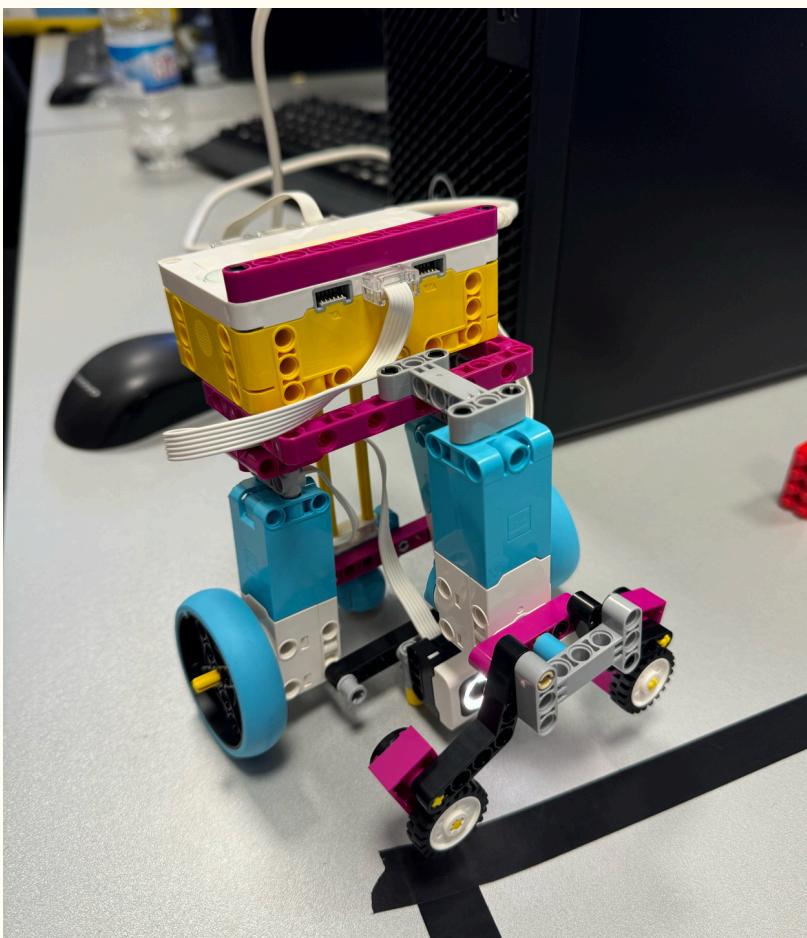
ExaRobot

- **Role:** AR Developer
- **Highlights:**
 - Created an AR application using Unity and Vuforia, focusing on SLAM (Simultaneous Localization and Mapping) for real-time spatial scanning.
 - Enhanced AR performance, ensuring responsive interactions across a variety of devices and environments, allowing for smoother user experiences.



Extracurricular

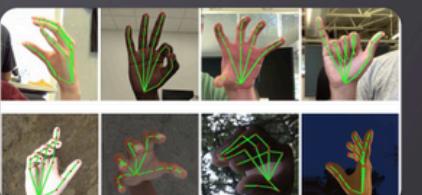
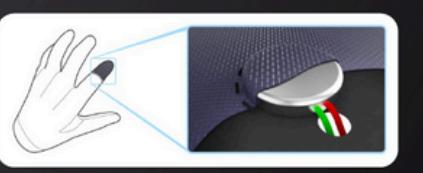
- **Role:** Touch and Feel in Virtual and Augmented Reality & Robotics Instructor (2022-2024)
- **Highlights:**
 - Led software development for an immersive VR/AR platform in Unity, incorporating an advanced hand-tracking system using OpenCV in Python to map hand points into Unity, eliminating the need for traditional VR controllers.
 - Instructed robotics and VR/AR concepts at a summer school, designing hands-on challenges with LEGO Spike PRIME and Vex VR for middle and high school students, fostering understanding of robotics and interactivity.



REAL FORCE FEEDBACK IN VIRTUAL REALITY

Dr. Evan Fakhoury

Spring 2023
VIP+ Project Pitch
Lebanese American University

OBJECTIVE	SOFTWARE	HARDWARE
Develop A Glove That Simulates Realistic Force Feedback Sensation In Virtual Reality Environments	ACCURATE HAND TRACKING (COMPUTER VISION)  DEVELOP VR SCENES (UNITY + BLENDER) 	GLOVE + VIBRATION (COIN MOTORS) 
PROGRESS TO DATE: <ul style="list-style-type: none">Hand Tracking Using Webcam & OpenCV (V1.0)VR Environment With Multiple TexturesGlove Material, Sensors And Motors Ordered But Yet To Arrive	INTEGRATION (CV + UNITY) 	REALISTIC FORCE FEEDBACK 
		FINAL INTEGRATION (PROTOTYPE 2.0) 

TRAINING SKILL LEARNING REHABILITATION EDUCATION