

Case Study

VR Driving Training for CDL Semi Tractor Trailer

Project Overview

Another Reality Studio developed a virtual reality driving training simulation experience with feedback and alarm systems. The application was developed in the Unreal Engine platform. Immersive 3D training environments include a freeway level where you enter from an onramp or pass large trucks, parking lot with ally dock, parallel parking, emergency stop/ braking. See this product demo video (<https://youtu.be/VlhNfITNl0Q>) to visualize the VR Training.

Key Features

- VR Project Setup
- VR Driving Simulation
- Multiple weather scenarios
- Truck and trailer physics simulation
- Pass/Fail each level
- Feedback and alarm systems
- Scoring system to train users
- NPCs humans and vehicles with Basic AI
- Audio and Voiceover Integration
- Multi-level design: freeway, parking lot, ramp, alley dock
- Accurate representation of driving features and functionality/ layout to best train drivers.
- Equipment is functional, including steering wheel drive, rack, Quest 2 VR headset, shifter, link cable, gaming laptop, and foot pedals
- Laptop shows bystanders what user is experiencing in the headset



Challenges and Core Considerations

- Client works with underprivileged communities to help them with job training. They saw the need for a VR training application so their community could virtually train and would be comfortable with real world CDL training.

Impact: The ARS Solution

- VR Application reduces expensive onsite training and gets people interested in a career with many job opportunities.
- Gamified training environments are scored and users can take multiple times to improve their skills
- Allows for muscle memory training and real world driving test experiences

