VR Training for Electric Vehicle (EV)

Executive Summary

We developed immersive VR modules to train technicians on EV components, charging, and safety procedures. Using Oculus Quest 2, the solution boosted hands-on learning, reduced errors, and improved safety awareness, setting a new benchmark for scalable EV training in India's commercial vehicle sector.

Client Profile

Industry: Commercial EV Manufacturer
Location : India

Business Challenge

Technicians and workers lacked hands-on knowledge of EV-specific components, charging procedures, and safe handling of Manual Service Disconnectors. Traditional classroom and video training methods were insufficient to bridge this critical skills gap.

Objectives

To provide immersive, hands-on VR training that effectively upskills technicians and employees in identifying EV components, executing safe charging procedures, and handling Manual Service Disconnectors, thereby improving safety and service quality.

Solution Overview

We developed three interactive VR modules simulating real-life EV servicing:

- EV Parts Identification: Explore a 3D EV truck with interactive hotspots and audio/text info for each component.
- Charging SOP: Step-by-step guided training at a virtual charging station with interactive reinforcement.
- Manual Service Disconnector (MSD): Hands-on VR simulation for safely removing and reinserting the MSD, including PPE checks and high-voltage handling.

Implementation Details

- Developed using Unity 3D and Oculus Quest 2 devices
- Delivered through standalone VR headsets
- Can be deployed in training centers or demoed in regional workshops
- Built-in assessments and guided instructions were included in each module

Key Results

- Enhanced engagement and knowledge retention among technicians
- Significant reduction in errors during real life EV servicing and charging
- Boosted employee confidence and safety awareness
- Positive feedback from training participants and supervisors

Testimonial

"The VR training modules have transformed how we onboard and upskill our service teams. Technicians now gain hands-on experience in a risk-free environment, leading to fewer errors and greater confidence in handling EV systems. This has set a new benchmark for training in our EV journey."

— Vice President, Service Operations, Leading EV Manufacturer

Key Takeaway

This first-of-its-kind immersive VR training solution in India's commercial vehicle industry effectively bridged the experiential learning gap, providing a scalable and portable approach that streamlined technician onboarding and ensured safer, more efficient EV servicing across the network.

Impact at a Glance

+45%

Team Skill Growth

+100%

Client Satisfaction

+75%

Enhanced Operational Accuracy

+90%

Training Efficiency and Scalability