



Case Study

Human Touch in a Driverless World: The Critical Role of Operators in AV Emergencies

How a Leading Autonomous Vehicle Company Built a Rapid Incident Response Team to Ensure Safety and Public Trust

The Challenge

Why AVs need humans in an emergency

When autonomous vehicles (AV) experience an incident — a crash, system failure, sudden road hazard — there's no driver to assess the situation. But this is precisely when a person is needed. Only a human operator can make the split-decision needed to remotely coordinate the right response — call 911, roadside assistance or medical teams.

For a leading AV company expanding into new cities, scaling this emergency response was essential to maintaining public confidence, regulatory compliance and market leadership. But simply hiring more people wasn't enough.

Rapid incident response requires highly skilled remote operators who can think fast, navigate diverse, complex safety regulations and guide first responders who may not have any experience with AVs. The operators must be technically proficient, calm enough to process high-stakes scenarios in real time and emotionally resilient to perform under extreme pressure.

To scale quickly without compromising quality, the AV company turned to TaskUs, expanding our existing partnership, which included optimizing its fleet operations and training in-house engineers. Building on this success, we were charged with creating and managing emergency response workflows.

The Solution

Stepping in with talent, tools and team well-being

We built a specialized hiring profile to ensure only the best candidates were hired. Many came from law enforcement or crisis management backgrounds, bringing with them deep expertise in emergency response. Others had experience in high-intensity gaming environments, excelling in multitasking, rapid decision-making and monitoring multiple screens simultaneously.

Even highly skilled teams need training. We designed a rigorous training program to equip teams with critical knowledge of AV systems — from sensor operations to complex hazards like battery fires and electromagnetic interference.



Creating an end-to-end response system

Beyond strong talent, we built a comprehensive incident response framework, combining advanced tools and human intervention across key areas:

- **Live monitoring and communication:** 24/7 staffed control centers, automated alerts and real-time data (e.g., vehicle status, incident details and precise location) enabled operators to swiftly coordinate with internal teams and emergency services.
- **On-scene coordination:** Clear, standardized protocols helped first responders minimize disruption and manage interactions with AVs, pedestrians and other emergency crews at the incident scenes.
- **Remote vehicle control:** Operators worked alongside fleet specialists to monitor vehicles, move cars to safer locations and reroute other AVs in the area to prevent further incidents.
- **Cybersecurity measures:** Security measures helped detect and prevent hacking attempts or malicious interference that could compromise vehicle operation or safety.
- **Post-incident data analysis:** Working closely with the company, we designed a system to collect and analyze incident data to improve system updates, vehicle safety features and existing emergency protocols

Preventing fatigue to raise accuracy

Constant high-stakes decision making demands unwavering mental acuity. To keep operators focused and sharp while preventing burnout, our in-house Wellness & Resiliency clinicians developed a specialized fatigue management program.

This initiative effectively combats screen fatigue and mental strain, resulting in improved reaction times, enhanced decision quality and superior accuracy — particularly critical during high-pressure emergency situations.

Results

<5 Seconds
Initial response time
to incidents

**99% True Positive
Confirmation Rate**
(Validates automated incident
detections in under 30 seconds)



About TaskUs

TaskUs is a leading provider of outsourced digital services and next-generation customer experience to the world's most innovative companies, helping its clients represent, protect, and grow their brands. Leveraging a cloud-based infrastructure, TaskUs serves clients in fast-growing sectors, including social media, e-commerce, gaming, streaming media, food delivery and ride-sharing, technology, financial services, and healthcare. As of December 31, 2024, TaskUs had a worldwide headcount of approximately 59,000 people across 28 locations in 12 countries, including the United States, the Philippines and India.

For more information, please visit:

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