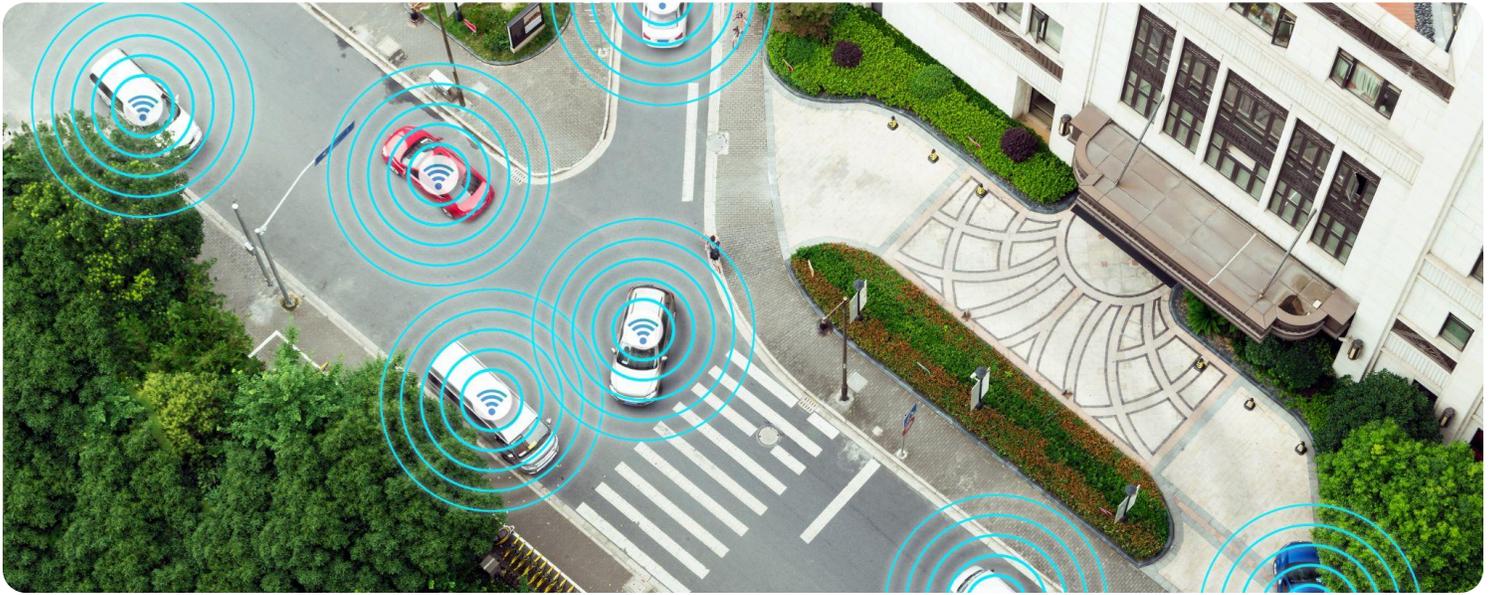




Case Study

Fueling Self-Driving Systems With High-Precision Training Data

How a leading AV company scaled complex AI data annotation processes with speed and accuracy



Training and refining AI models at scale

The Challenge

To win the race for market leadership, an autonomous vehicle company (AV) needed to scale AI model training and enhance accuracy for real-world deployment. This required meticulous data annotation across critical areas — semantic mapping, feature extraction, multilayer object classification and LiDAR sensor fusion — so cars could navigate roads and make split-second decisions to ensure safety.

But the company's in-house teams were overwhelmed by the sheer volume of data to process and the complexity of tasks. Previous outsourcing partners had failed to provide the scale, accuracy and agility required, leaving the company stuck with slow progress and inconsistent results.

Workflow inefficiencies were also adding to their struggles, for example:

- Manual queue management slowed annotation workflows.
- Frequent bugs and inefficiencies in proprietary tools reduced throughput and caused delays.
- Lack of accurate forecasting made it difficult to scale workforce capacity week over week.
- Dearth of standardized quality management framework led to inconsistent annotation accuracy.

That's where TaskUs came in, bringing deep data annotation expertise and operational rigor, streamlining workflows and delivering high-quality data.

Our approach: people, process, precision

The Solution

Building an expert team

The job required a strong understanding of road safety and driving simulation, so we developed custom, rigorous exams to measure attention to detail, roadway knowledge and decision-making skills. We also built training programs around the client's specific data nuances to ensure our annotators matched the expertise of their in-house team.

Optimizing capacity

We collaborated with the client to establish weekly headcount forecasts so that the right team members were assigned to the right tasks at the right time. Additionally, teammates received additional training and cross-training to enhance their adaptability and knowledge across evolving project requirements.

Raising quality standards

To establish consistency and accuracy, we developed a comprehensive quality management framework from the ground up. We integrated this framework into every workflow and conducted calibration sessions to refine annotation processes. We also created standardized quality parameters and scoring guidelines that the client later adopted across all their campaigns.

To further enhance quality control, we implemented a tiered approach. A select group of high-performing annotators who consistently maintained 100% accuracy scores across all quality metrics performed another round of audits before client review.

Results

98%
Accuracy Score
vs 90% target

115% to Goal
vs 90% target

24 Daily Tasks
per Teammate
vs. 20 target



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:

www.taskus.com/services/autonomous-vehicle-operations/

Copyright© 2025 TaskUs.
All rights reserved.