



## Case Study: Enhancing Autonomous Vehicle Perception with Databae

### Overview

A leading autonomous vehicle company faced challenges in efficiently labelling vast amounts of sensor data, including images and videos, to train its AI models. Manual annotation was time-consuming, costly, and inconsistent, impacting model accuracy. To overcome these obstacles, the company integrated Databae's **serverless data labelling platform**, leveraging its **AI-powered workflow** and **in-app quality control** to streamline the annotation process.

### Challenges

1. **High Annotation Volume** – Autonomous vehicles generate massive datasets from cameras, LiDAR, and radar, requiring extensive labelling.
2. **Accuracy & Consistency** – Inconsistent annotations reduced model reliability in real-world driving conditions.
3. **Manual Effort & Costs** – Traditional labelling was labour-intensive and costly, slowing down AI development cycles.

### Solution: Implementing Databae's AI-Powered Labelling System

The company adopted **Databae's scalable, AI-driven workflow** to automate and enhance its data annotation pipeline. Key features used included:

- **Object Detection & Tracking** – Using bounding boxes and polygon segmentation to label vehicles, pedestrians, and road signs across frames.
- **Video Frame-by-Frame Annotation** – Enabling precise object tracking in dynamic environments.
- **AI-Powered Workflow** – Reducing manual intervention by assigning tasks based on user expertise through Databae's **levelling mechanism**.

- **Two-Way Swipe QC & Rectification Tools** – Ensuring high annotation accuracy with built-in validation and correction features.

## Results

✅ **50% Reduction in Annotation Time** – AI-assisted workflows and task automation significantly accelerated labelling. ✅ **30% Cost Savings** – Optimized resource allocation and automated quality control lowered operational costs. ✅ **Improved Model Performance** – Higher-quality labelled datasets led to a **20% increase in AI model accuracy** for object recognition. ✅ **Scalability & Flexibility** – Serverless architecture allowed the company to scale up seamlessly as data needs grew.

## Conclusion

By integrating Databae, the autonomous vehicle company **streamlined its data labelling process**, improving accuracy while reducing time and costs. This allowed the AI team to focus on enhancing vehicle perception models, accelerating their path to safer, more efficient self-driving technology.

**Want to optimize your AI training pipeline? Explore Databae today!**