Success Story

Accelerating Autonomous Innovation with a Simpler, Smarter Data Platform



VAST

An autonomous vehicle software company at the forefront of AI-driven mobility is transforming the future of transportation. With end-to-end ownership of the autonomous driving stack—from silicon design to advanced mapping, perception, and policy engines—this company is not just building a smarter car; they are building a smarter world. Behind the scenes, VAST Data is quietly powering the massive AI workflows that make it all possible.

A Future-Ready Foundation for AI and HPC at Scale

Over the past few years, this company has grown exponentially—from a startup to a global leader with thousands of employees and hundreds of petabytes of data. With such scale comes complexity, especially when building sophisticated models that require vast amounts of video data, sensor inputs, and simulation for both training and inference.

To fuel their progress, the company turned to VAST to consolidate legacy infrastructure and unlock a new era of simplicity and performance. Today, VAST supports both NFS and high-performance S3 object storage in a unified global namespace—enabling seamless data movement across on-prem and cloud environments.

AI-First Design Meets AI-First Storage

For a company that relies heavily on AI and HPC, performance is an absolute necessity. Their AI pipeline is powered by hundreds of GPUs and over 100,000 CPU cores, orchestrated across both on-premises and cloud environments. With VAST, they can feed these compute engines at scale with ultra-fast data access, significantly improving training throughput and inference performance.

Data preparation—often the most I/O-intensive part of the pipeline—is now dramatically faster thanks to VAST's support for high-performance S3 and multi-protocol access. Whether they're shuffling massive video datasets or randomizing clips for more effective training, VAST ensures that the company's compute resources stay fully utilized, maximizing ROI on GPU investments.

Performance Without the Pain

Before VAST, the company relied heavily on traditional HPC file systems like GPFS and managed their own S3 infrastructure. These systems were powerful, but complex and fragile at scale. VAST's disaggregated, shared-everything (DASE) architecture eliminated many of these operational burdens, providing a radically simplified path to scaling.

With native support for multi-protocol access (NFS, S3, SMB) and built-in data reduction delivering up to 12:1 efficiency on their code repositories, VAST simplified their infrastructure while reducing their overall footprint and cost.

Real-Time Mapping, Smarter Decisions

This company's AI models must understand the world in real time. To do that, they've pioneered ultra-precise mapping systems that can detect and share road hazards, construction details, or environmental changes between vehicles in real time—down to the centimeter. Processing these massive data volumes at the edge and feeding insights back into the training pipeline quickly and securely is critical.

VAST's global namespace and high-performance S3 object store allow them to dynamically burst compute workloads into public cloud environments when needed, and sync the results back to on-prem systems—all with minimal operational overhead. Whether they're training new models, testing edge cases, or refining autonomous policies, VAST provides the agility to move fast without compromise.

About VAST Data

VAST Data is the data platform company built for the AI era. As the new standard for enterprise AI infrastructure, organizations trust the VAST Data Platform to serve their most data-intensive computing needs. VAST Data empowers enterprises to unlock the full potential of their data by providing AI infrastructure that is simple, scalable, and architected from the ground up to power deep learning and GPU-accelerated data centers and clouds. Launched in 2019, VAST Data is the fastest growing data infrastructure company in history. For more information, please visit and follow VAST Data on X (formerly Twitter) and LinkedIn.

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