Supplemental Results Discussion for MLPerf Automotive v0.5

This information is under embargo until 8/27/25 8:00AM PT

MLCommons Supplemental Discussion

MLPerf Storage v2.0 Results Discussion

The submitting organizations provided the following 300 word descriptions as a supplement to help the public understand their MLCommons® MLPerf® Automotive v0.5 submissions and results. The statements **do not reflect the opinions or views of MLCommons.**

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Supplemental Key Principles - all supplementals must adhere to these key principles. All submitters should publicly review supplementals on Wednesday, 7/23, and feedback may be given for corrections if these principles are not followed.

- Be positive! Focus on why your submission is great.
- No negativity or comparisons, even implied comparisons. Don’t knock competitors.
- Help audiences understand the positive impact on the broader community.

Please note that all materials from MLCommons must be neutral and provide a fair environment

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GATE Overflow

GATEOverflow is pleased to announce our participation in the first round of the MLPerf Automotive benchmark. This milestone reflects our continued commitment to advancing open benchmarking and reproducible research in the machine learning community.

As part of this effort, we have been actively supporting the automation initiatives led by MLCommons through the MLCFlow automation framework. We are proud to contribute to this collaborative ecosystem by successfully running the MLPerf reference implementations provided by MLCommons for all three automotive models and submitting their results.

We look forward to continued collaboration with MLCommons and the broader community to promote transparent, standardized benchmarking practices that drive innovation in machine learning for automotive applications.

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NVIDIA

In MLPerf Automotive v0.5, NVIDIA submitted results using the NVIDIA DRIVE AGX Thor™ platform.

NVIDIA DRIVE AGX Thor is an in-vehicle compute platform architected for generative AI applications and highly automated and autonomous driving -- delivering up to 2000 teraflops of performance.

NVIDIA DRIVE AGX Thor is built on NVIDIA's cutting-edge Blackwell GPU architecture and AI software stack used in NVIDIA's datacenter platforms, bringing architectural consistency across cloud and embedded environments. Proven in MLPerf Training and Inference benchmarks, the Blackwell Architecture now extends its capabilities to automotive applications through NVIDIA DRIVE AGX Thor enabling carmakers to deploy state-of-the-art self-driving neural networks with greater efficiency and scalability. With integrated support for FP8 and FP4 precision formats, NVIDIA DRIVE AGX Thor delivers high-throughput, low-latency inference for Vision Transformers and Vision-Language Models. These capabilities power next-generation generative AI workloads, addressing the growing demand for more intelligent, context-aware systems in autonomous driving.

In this round of MLPerf Automotive, NVIDIA submitted results for the BEVFormer benchmark, a spatio-temporal Vision Transformer designed for autonomous driving perception. BEVFormer fuses multi-camera inputs into a bird's-eye view and incorporates temporal context across frames, making it representative of the advanced workloads in today's self-driving software stacks. With its flexible, programmable GPU architecture and a mature CUDA and TensorRT inference toolchain, NVIDIA DRIVE AGX Thor enables efficient deployment and optimization of attention-heavy models like BEVFormer. This allows carmakers to achieve production-ready deployment with class-leading performance.

MLCommons is helping advance the industry's understanding of state-of-the-art autonomous driving workloads. NVIDIA looks forward to submitting additional results and working with the MLCommons community to bring the latest innovations and workloads in the AV industry into the MLPerf Automotive benchmark.