DisplayRide Joins Deepen Refinery to Expand Real-World Data for Physical AI

Curated and fully processed driving data ready to train and validate the next generation of Physical AI systems



A unified marketplace with built-in validation and transparent licensing.

SANTA CLARA, CA, UNITED STATES, September 29, 2026 / EINPresswire.com/ -- Physical AI has reached a turning point. The models are no longer the primary challenge. Modern architectures, and systems continue to improve as they learn from real-world experience. The constraint has shifted to the data that trains them, and there is not enough of the right kind.

The challenge is not one of volume, but of quality and coverage. Data used to train safety-critical systems must be accurately calibrated, consistently annotated, legally cleared for use, and fully traceable to its source. Much of today's available data falls short on at least one of those requirements. The rare scenarios that matter most for performance and safety validation are often the hardest to capture and the least likely to exist in a form that is immediately usable. As regulators in Europe and other regions move toward requiring stronger evidence for AI-enabled systems, the cost of poor-quality data continues to rise.

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>
> *Mohammad Musa, CEO of Deepen AI*

Deepen Refinery, launched last week by Deepen AI, was built to address this data flywheel challenge. The platform transforms real-world sensor data from contributing partners into training-ready curated datasets by applying calibration, annotation, quality validation, governance, and documentation required for safety-critical Physical AI development.

DisplayRide is joining Deepen AI as one of the data contributing partners. Its connected vehicle network spans rideshare, rental fleets, medical transport, driving schools, and commercial trucking across the United States, providing an instrumental coverage for metro cities and urban areas. Because these vehicles operate as part of everyday business rather than dedicated research programs, they capture a broader and more representative range of real-world driving conditions, particularly the rare and unpredictable situations that are costly and difficult to collect intentionally.

Both Deepen AI and DisplayRide are members of the NVIDIA Inception Program, which supports startups building next-generation AI technologies through technical resources, mentorship, and an ecosystem of industry innovators. The shared community is where the two companies first connected. NVIDIA is not a commercial party to this collaboration.

The collaboration expands the diversity of scenarios available through Deepen Refinery, including:
- Vulnerable Road Users, including pedestrians and cyclists
- Construction and active work zones
- Emergency Vehicle interactions
- Dense urban traffic and congestion
- High-speed highway driving
- Adverse weather, including rain, snow, and low-visibility conditions

"Coverage is what many teams underestimate. You can have millions of miles of driving data and still be missing the situations that matter most for building a credible safety case. Calibrated, verified data is what teams need to move forward with confidence and that's what we are doing with Deepen Refinery" - Mohammad Musa, Co-Founder and CEO, Deepen AI

"Every mile our vehicles drive captures how people, vehicles, and infrastructure behave in the real world. A pedestrian crossing at dusk. A construction zone that appeared overnight. An ambulance navigating heavy traffic. Through Deepen Refinery, those everyday moments become training data that helps build safer AI systems instead of remaining unused." - Abdul Kasim, Co-Founder & CEO, DisplayRide

Deepen Refinery is built on a simple premise: much of the data the industry needs already exists. It is distributed across fleet operators, mobility platforms, vehicle manufacturers, and other organizations that lack an efficient way to transform it into a usable AI asset. At the same time, AI developers repeatedly invest time and resources collecting similar data themselves. By bringing these datasets together under a common quality standard with consistent documentation and governance, the entire ecosystem benefits.

That opportunity extends in both directions.

Organizations that operate vehicles or own sensor data - including AV-ADAS automotive tech,

fleet operators, mobility companies, insurers, and vehicle manufacturers - contribute existing datasets and transform an underutilized asset into a resource that advances the broader physical AI ecosystem. Deepen AI continues to expand its network of contributing partners.

Meanwhile, companies building Physical AI across autonomous driving, ADAS, robotics, frontier labs and adjacent industries gain access to production-ready datasets that arrive calibrated, validated, documented, and ready for model development, eliminating months of manual data preparation.

Looking ahead, Deepen Refinery is set to further aid the advancement of Physical AI development by integrating advanced platforms such as NVIDIA Cosmos open world models and Cosmos-Dreams. This evolution enables the platform to generate highly diverse, photorealistic synthetic data, allowing developers to simulate complex edge cases and safety-critical scenarios with unprecedented fidelity. By bridging the gap between real-world capture and neural reconstruction, these future capabilities will significantly accelerate the training and validation cycles required for the next generation of autonomous systems and robotics.

To learn more about Deepen refinery, contact info@deepen.ai

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