

GRID: A Platform for General Robot Intelligence Development

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Developing machine intelligence abilities in robots and autonomous systems is an expensive and time-consuming process. Existing solutions are tailored to specific applications and are harder to generalize. Furthermore, scarcity of training data adds a layer of complexity in deploying deep machine learning models. We present a new platform for General Robot Intelligence Development (GRID) to address both of these issues. The platform enables robots to learn, compose and adapt skills to their physical capabilities, environmental constraints and goals. One of the components of GRID is a state-of-the-art simulation system that models robot physics and the machine intelligence processes. This system in turn is tightly coupled with a multitude of Foundation Models that enables rapid prototyping, design, debugging and refinement of robot AI models. GRID is designed from the ground up to be extensible to accommodate new types of robots, vehicles, hardware platforms and software protocols. In addition, the modular design enables various deep ML components and existing foundation models to be easily usable in a wider variety of robot-centric problems. We demonstrate the platform in various heterogeneous robotics scenarios and demonstrate how the platform dramatically accelerates development of machine intelligent robots.



Ashish Kapoor is the CEO and Chief Scientist for Scaled Foundations. Ashish's focus for the last decade has been to lower the barrier to entry in Robotics by building Safe General Robot Intelligence for applications that positively influence the society. Ashish formerly founded and led Autonomous Systems and Robotics Research at Microsoft Research, where he co-invented AirSim and pioneered use of near-realistic simulation for robotics. Ashish has a PhD from the MIT Media Laboratory and a Bachelor of Technology from Indian Institute of Technology Delhi.

FRIDAY
Feb 7
10-11AM

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