

What is xLand-minigrid?

Along with the environments, XLand-MiniGrid provides pre-sampled benchmarks with millions of unique tasks of varying difficulty and easy-to-use baselines that allow users to quickly start training adaptive agents.

Can xLand-minigrid help practitioners perform meta-reinforcement learning experiments faster?

ck time. While we do not introduce any novel algorithmic improvements in our work, we hope that the proposed highly scalable XLand-MiniGrid environments will help practitioners perform meta-reinforcement learning experiments at scale faster and with fewer r

What is xLand-minigrid environment interface?

Similar to Jumanji (Bonnet et al.,2023),XLand-MiniGrid Environment interface is inspired by the dm_env API(Muldal et al.,2019),which is particularly well suited for the meta-RL,as it separates episodes from trials by design (see Section D.1). Thus,each environment should provide jit-compatible reset,reset_trial and step methods.

Is xLand-minigrid a asynchronous vectorization?

For single-tasks environments we consider random policy and PPO. As can be seen, compared to the commonly used MiniGrid (Chevalier-Boisvert et al., 2023) environments with gymnasium (Towers et al., 2023) asynchronous vectorization, XLand-Minigrid achieves at least 10x faster throughput reaching tens of millions of steps per second.

How many rules can xLand-minigrid use?

Full-scale XLand environment can use more than five rulesaccording to the Team et al. (2023). To test XLand-MiniGrid in similar conditions we report simulation throughput varying number of rules. For testing purposes we just replicated same NEAR rule multiple times in the PutNear environment.

Does xLand-minigrid support recurrent PPO?

aselinesWith the release of XLand-MiniGrid,we are providing near-single-file implementations of recurrent PPO(Schulman et al.,2017) for single-task environments and its extension to RL2 (Duan et al.,2016; Wang et al.,2016) for meta-learning as b

Inspired by the diversity and depth of XLand and the simplicity and minimalism of MiniGrid, we present XLand-MiniGrid, a suite of tools and grid-world environ-ments for meta-reinforcement learning research. Written in JAX, XLand-MiniGrid is designed to be highly scalable and can potentially run on GPU or TPU acceler-

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We present XLand-100B, a large-scale dataset for in-context reinforcement learning based on the XLand-MiniGrid environment, as a first step to alleviate this problem. It contains complete learning histories for nearly 30,000 different tasks, covering 100B transitions and 2.5B episodes.

XLand-MiniGrid ??????, ???? ?????? ??? ????», -- ?????? ??????? ???? ? T-Bank AI Research. ?????????? ?????? «????????? ??????» ?????????? ???????, ??? ?????????? ?????????????? ?????? ...

XLand-Minigrid is written in JAX, designed to be highly scalable, and can potentially run on GPU or TPU accelerators, democratizing large-scale experimentation with limited resources. To demonstrate the generality of our library, we have implemented some well-known single-task environments as well as new meta-learning environments capable of ...

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Minigrid contains simple and easily configurable grid world environments to conduct Reinforcement Learning research. This library was previously known as gym-minigrid. Toggle site navigation sidebar. MiniGrid Documentation. Farama Foundation Hide navigation sidebar. Hide table of contents sidebar ...

XLand-MiniGrid is a suite of tools, grid-world environments and benchmarks for meta-reinforcement learning research inspired by the diversity and depth of XLand and the simplicity and minimalism of MiniGrid. Despite the similarities, XLand-MiniGrid is written in JAX from scratch and designed to be highly scalable, democratizing large-scale ...

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introduce XLand-MiniGrid, a library of grid world environments for meta-RL research. It does not compromise on task complexity in favour of affordability, democratizing large scale experimentation with limited resources. 2 XLand-MiniGrid We present an initial release of XLand-MiniGrid(v0.0.1), a suit of tools and grid world environments

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