The OpenEnv Challenge: SOTA Environments to drive general intelligence

Sponsors: PyTorch team at Meta, Hugging Face, and Unsloth

Prizes:
- Prize pool: $10k in credits from HF
- An invitation to publish to the PyTorch.org blog about what you built

Description

As AI systems evolve from static predictors into fully agentic learners, high-quality general reinforcement learning (RL) environments have become core infrastructure. They serve as the world in which agents explore, reason, and acquire new skills. The OpenEnv Student Challenge invites participants to design and build innovative, open-source RL environments that push the boundaries of what today's agents can learn.

Using **OpenEnv**, the emerging standard for environment creation and interoperability, students will develop environments that are modular, reproducible, and seamlessly integrated with modern PyTorch-native RL tooling like torchforge, TRL, and Unsloth

Participants will build production-ready environments that span coding tasks, interactive simulations, robotics-inspired control problems, multi-agent dynamics, computer use, or entirely new categories of agentic challenges. Submissions will be evaluated on creativity, clarity of design, scalability, and alignment with OpenEnv's standard API and hub ecosystem. Winning projects will contribute directly to the broader open-source community, helping advance the tools and benchmarks that shape the future of agentic AI research and post-training.

This challenge offers students hands-on experience with frontier AI development and the opportunity to influence how the next generation of RL systems learn, adapt, and generalize.

Tasks & Deliverables

The goal of this competition is to create a real-worldRL environment and then attempt to solve it using your favorite LLM. Examples of en

To enter the challenge:
1. Add your environment to the HF Hub
2. Publish training notebooks/scripts on Github (can be your own personal GitHub)
3. Write a blog on Huggingface

Evaluation Criteria

The main evaluation criteria will be based on the submission blog, we will have a judging panel that will grade submissions based on:

- Creative and Robust use of OpenEnv
- Technical Excellence
- Story-telling
- Open Source Demo
- Green Agent wrapper for the environment

Resources & Getting Started

- Hello world tutorial: https://colab.research.google.com/github/meta-pytorch/OpenEnv/blob/main/examples/OpenEnv_Tutorial.ipynb
- Github: https://github.com/meta-pytorch/OpenEnv
- Docs: https://meta-pytorch.org/OpenEnv/
- Environment hub: https://huggingface.co/openenv

Support

- Discord: https://discord.gg/ktH3zDxw