

Senior Software Engineer - Simulation for Robot Learning (f/m/d)

100% Zürich

Hexagon Robotics is a division of Hexagon – a global leader in precision measurement. The division develops humanoid robots for industrial sectors to address labor shortages and accelerate the transition from automation to autonomy. Our first humanoid, AEON, was launched in June 2025 and is already in pilots with five customers.

We are looking for a **Senior Software Engineer - Simulation** for Robot Learning to build the simulation side of AEON's AI training: learning environments, synthetic data, policy evaluation and physics fidelity. You will work closely with our AI and robotics teams and help close the gap between simulation and the real robot.

Your Mission

- Build and maintain reinforcement learning (RL) and imitation learning (IL) simulation environments for AEON in Python on Linux, built on Nvidia Isaac Lab / Isaac Sim
- Build synthetic data generation (SDG) and demonstration data pipelines (teleoperation, scripted, randomized

Your Skillset

- BSc/MSc/PhD in Robotics, Mechanical Engineering, Physics, or a related field
- 5+ years of professional Python experience in a technically complex Linux environment
- Experience with physics engines (e.g. PhysX, MuJoCo, Bullet, Newton) and tuning them for contact-rich tasks

scenes) and deliver data in the formats our AI teams train on
- Build automated policy evaluation benchmarks that score policies in simulation, running locally, in CI and in the cloud
- Measure and close the sim-to-real gap: compare simulation and real-robot results, and improve physics fidelity (contact, grippers, sensors, domain randomization)
- Partner with AI and robotics engineers (learning, data generation, motion control, perception) and turn their needs into reusable simulation tooling; they own the models, you own the simulation side
- Evaluate new physics engines and simulation technology (e.g. Newton) and work with Nvidia on bug reports and feature requests
- Deliver reliable software through code reviews, CI/CD, automated testing and reproducible experiments
- Thrive in a startup-like environment within a global company, with flat hierarchies and high personal impact

- Solid software quality practices: test strategies, CI/CD, debugging, and reproducibility
- Self-driven communicator, comfortable working with ML engineers, robotics engineers and DevOps
- Fluent in English
- Startup mindset: iterative work with focus on usable solutions for the end user
- Hands-on experience training or evaluating robot policies with RL or IL is a strong plus
- Experience with PyTorch and robot learning frameworks (e.g. Isaac Lab, MuJoCo, Gymnasium, LeRobot, robomimic) is a strong plus
- Experience with Nvidia Omniverse / Isaac Sim or Replicator is a strong plus
- Experience modelling physical systems (e.g. multibody and contact dynamics, friction, actuators and drivetrains, sensor models) and validating these models against real measurements is a plus
- System identification or robot dynamics modelling experience is a plus
- Synthetic data for perception, OpenUSD or URDF experience is a plus
- C++ or CUDA experience is a plus

What You'll Get

- Flexible working hours and a hybrid model for real work-life balance
- Generous vacation: 25–30 days depending on age
- CHF 500 mobility credit for sustainable commuting
- Bonus system & strong pension contributions
- Tailored training & development opportunities
- Relocation support for a smooth start
- Discounts on health, mobility & entertainment
- Team events and a flat hierarchy where your voice counts
- A warm, international culture built on respect and collaboration

Great robots need great people.

Apply Now

Contact

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