

Ilia Zavidnyi

Research Engineer | LLM Post-Training & Robot Learning
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EXPERIENCE

JetBrains

Research Engineer

Researcher & Project Lead, JetBrains Research (Sep 2025 – Present)

Machine Learning Engineer (Aug 2024 – Sep 2025)

Prague, Czech Republic

Aug 2024 – Present

- Lead research projects on model-to-model communication, inference optimisation, continual and multi-task learning, and reasoning efficiency.
- Design and run post-training experiments (SFT + RLVR) for code and reasoning LLMs, including distributed RL on 64×H200 GPUs with NeMo-RL.
- Fine-tuned Mellum, JetBrains' code-completion model, and designed evaluations on proprietary repositories.
- Developed Step Rejection Fine-Tuning, from method design through training and evaluation: 32.2% SWE-bench Verified resolution vs. 30.9% with rejection fine-tuning, using Qwen2.5-Coder-32B and SWE-agent.
- Built data-generation, training, and evaluation pipelines for software-engineering agents.

Software Engineer (including internship)

Jul 2023 – Aug 2024

- Built ML-backed web-element detection for Aqua's locator completion, later reused in UI test generation.
- Rebuilt Aqua's Web Inspector using the Chrome DevTools Protocol; added Cypress support.

CIIRC, Czech Technical University

External Researcher

Prague, Czech Republic

Oct 2025 – Present

- Fine-tune vision-language-action policies for manipulation; compare full fine-tuning, LoRA, and continual pre-training of $\pi_{0.5}$ for new-skill acquisition and retention of prior capabilities.
- Generate demonstrations in REALM and co-train with real DROID data; evaluate policies in simulation and on real hardware. Research real-time RL for VLA policies (ongoing).
- Developed test-time sampling, filtering and averaging of VLA action chunks; improved π_0 -FAST success from 36.5% to 55.5% across eight REALM simulation tasks without retraining.

SKILLS

Research: Post-training, evaluation, inference optimisation, VLA fine-tuning, imitation and continual learning.

Frameworks & Infrastructure: PyTorch, JAX, NeMo-RL, Megatron-LM, Slurm, Kubernetes, Apache Iceberg.

Languages: Python, C++, Kotlin/Java, TypeScript, Go.

EDUCATION

Czech Technical University in Prague

M.Sc. in Cybernetics and Robotics

Sep 2025 – Jun 2027 (expected)

Charles University

B.Sc. in Computer Science, specialization in Artificial Intelligence

Sep 2020 – Jun 2024

SELECTED PUBLICATIONS & RESEARCH

I. Slinko, **I. Zavidnyi**, E. Bogomolov, Y. Zharov. *Step Rejection Fine-Tuning: A Practical Distillation Recipe*. ICML 2026, DL4Code workshop. arXiv:2605.10674.

I. Zavidnyi, M. Sedlacek, J. Sivik, V. Petrik. *Simple Baseline for Test-Time Scaling in Robotic Manipulation*. Manuscript under review, 2026. Code.