Jakub Suliga

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Education

Karlsruhe Institute of Technology (KIT) — Karlsruhe, Germany
M.Sc. in Computer Science — *Oct. 2026 – Present*

Karlsruhe Institute of Technology (KIT) — Karlsruhe, Germany
B.Sc. in Computer Science — *Oct. 2022 – Sep. 2026*

- Thesis: *Few-Shot Residual Adaptation of Pretrained Latent World Models* (grade X)

Experience

Research Assistant — May 2025 – Present
Intuitive Robots Lab, KIT (Prof. Rudolf Lioutikov) — *Karlsruhe, Germany*

- Trained and evaluated VLA models, world models, and diffusion policies (X-VLA, GR00T N1.5, X-WAM, V-JEPA 2-AC, DUET-DINO) in simulation (LIBERO, RoboCasa, RoboTwin, RMBench, ManiFeel) and on real Franka robots.
- Built a control proxy and client–server communication for Franka robot control and improved the lab's real-robot controllers.
- Integrated tactile encoders into manipulation policies and evaluated them on offline datasets (RSS 2026 workshop); integrated a tactile simulation framework into Isaac Gym and Isaac Lab and explored audio as an input modality.
- Co-wrote the DAM-VLA paper and contributed simulation experiments and evaluations; collected data and ran evaluations for SPARC.

Working Student, Software Development — May 2024 – Apr. 2025
Vector Informatik — *Karlsruhe, Germany*

- Contributed to the open-source Eclipse JDT, Eclipse Platform, and Eclipse SWT projects.
- Designed and implemented a custom Eclipse IDE feature; profiled (VisualVM) and optimized the performance of Java applications.
- Investigated and fixed bugs in an Eclipse-based development environment.

Selected Projects

Few-Shot Residual Adaptation of Pretrained Latent World Models | *B.Sc. Thesis, NeurIPS 2026 Workshop Oral* — 2026

- Restored real-robot success from near 0% to 90% (center-of-mass shift) and 100% (friction shift) using only 3 adaptation episodes, while keeping the pretrained V-JEPA 2-based world model frozen.
- Designed self-supervised residual adapters that learn from latent prediction errors and correct both inside the predictor and on its output; this dual-site design beat single-site adaptation in ablations.

Visualization of Stated-Preference Survey Decisions | *Java, Git* — Oct. 2023 – Feb. 2024

- Built a tool that visualizes decision situations in stated-preference surveys for the KIT Institute for Transport Studies, in a team of 5 from concept to quality assurance (grade 1.0).

Publications

[1] **J. Suliga**, P. Vanjani, N. Nilavadi, W. Burgard, R. Lioutikov. *Few-Shot Residual Adaptation of Pretrained Latent World Models.* NeurIPS 2026 Robot Learning Workshop. **Oral.**

[2] N. Blank, P. Mattes, M. X. Li, **J. Suliga**, T. Roth, M. Reuss, P. Vanjani, R. Lioutikov. *SPARC: Reliable Spatial Annotations from Robot Demonstrations at Scale.* CoRL 2026.

[3] P. Vanjani, Z. Li, **J. Suliga**, M. Reuss, G. Geraci, X. Jiang, R. Lioutikov. *DAM-VLA: Decoupled Asynchronous Multimodal Vision Language Action Model.* arXiv, 2026.

[4] X. Jiang, J. Jiang, H. Zhou, P. Vanjani, A. Baki, **J. Suliga**, G. Li, Z. Li, G. Neumann, R. Lioutikov. *Correct Robots Before They Make Mistakes: Proactive Human-in-the-Loop Intervention via Preference Learning.* 2026.

[5] N. Leukroth, P. Vanjani, **J. Suliga**, K. Nakahara, R. Lioutikov, R. Calandra. *Touch Improves Learning Dexterous Grasping from Demonstration.* RSS 2026 Workshop on Dexterous Manipulation.

Technical Skills

Programming: Python, Java
ML & Robotics: PyTorch, LeRobot, Isaac Lab / Isaac Sim / Isaac Gym, LIBERO, RoboCasa, Franka robots
Tools: Git, GitHub, Linux, Docker, Slurm / HPC clusters, Eclipse, VisualVM
Research Areas: World Models, Robot Learning, Vision-Language-Action Models, Imitation Learning, Tactile Sensing
Languages: German (native), English, Polish