Kateryna Zorina

PhD in Robotics and Computer Vision

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Summary

I am a final-year PhD candidate at CIIRC, CTU in Prague, researching the learning of robotic manipulation skills from human instructional videos. My work focuses on extracting structured information from videos and applying it in the robot learning frameworks and planning algorithms. Currently, I am seeking a postdoc or research scientist role in robotics, AI, or embodied intelligence.

Education

Ph.D. in Computer Science, CIIRC, CTU, Prague, Czech Republic
2020 - Present

- Thesis: *Learning Robotic Skills from Human Video Demonstrations*
- Supervisors: Josef Sivic, Vladimir Petrik

M.Sc. in Data Science, Ukrainian Catholic University, Lviv, Ukraine
2017 - 2019

- Thesis: *Building segment-based revenue prediction for CLV model*
- Supervisor: Oleksandr Romanko

B.Sc. in Computer Science, IASA of the NTU "Igor Sikorsky Kyiv Polytechnic Institute, Kyiv, Ukraine
2013 - 2017

Selected Work Experience

Visiting Researcher, INRIA, Paris, France
2023
Worked with Justin Carpentier and Wilson Jallet on estimating the 3D human pose from video and integrating it into the optimal control pipeline. The pipeline included processing 2D video frames with sota methods, developing the evaluation metrics, developing custom costs for OCP setup and comparing with baselines.

Teaching Assistant, CTU, Prague, Czech Republic
2020 - 2025
Courses taught: PKR - Advanced Robot Kinematics (2020-2025); Geometry of Computer Vision and Graphics 2021.

Publications

Zorina, K.*, Priban, V.*, Fourmy, M., Sivic, J., Petrík, V.
Learning Temporally Consistent 6D Object Pose Estimation for Robot Control.
IEEE Robotics and Automation Letters (RAL), 2024

Zorina, K., Kovar, D., Lamiraux, F., Mansard, N., Carpentier, J., Sivic, J., Petrík, V.
Multi-contact task and motion planning guided by video demonstration
IEEE International Conference on Robotics and Automation (ICRA), 2023

Zorina, K., Carpentier, J., Sivic, J., Petrík, V.
Learning to manipulate tools by aligning simulation to video demonstration
IEEE Robotics and Automation Letters (RAL), 2021

Skills & Other

Programming: Python, ROS2, PyTorch, SciPy, bash
Tools: Git, Docker, LaTeX, Linux
Languages: English (fluent), Ukrainian (native), Czech (intermediate), French (beginner)
Awards: Best Poster Award, 2nd NAVER LABS Europe International Workshop on AI for Robotics
Reviewer: ICRA, iROS, TRO, UCU bachelor's theses