Kirill Lalayants

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AI Robotics Developer.

Education

BACHELOR | 2025 | ITMO, RUSSIA

- Robotics and AI, member of the international research center "Nonlinear and Adaptive Control Systems".
- Department of Control Systems and Robotics.
- TOEFL ADVANCED (106/120)

Experience

EMPLOYEE IN THE INTERNATIONAL SCIENTIFIC CENTER "NONLINEAR AND ADAPTIVE CONTROL SYSTEMS" | ITMO | 11.2022-PRESENT.

Contributed to real projects, R&D, grants:

- Researchs technologies of automatic inspection of objects by quadrocopters and quadropedes for Rosneft Oil Company.
- Develops the robot manipulator control program and computer vision system for RASK Design Bureau.
- Research and fine-tuning of ML models in manipulation tasks in dynamic environments for SBER Robotics.

Skills

ML & COMPUTER VISION

- Developed and presented at the conference XII Congress of Young Scientists of ITMO a system for analyzing the germination of crops from aerial images using YOLO and classical computer vision algorithms.
- Presentation at the conference XIII Congress of Young Scientists of ITMO on the topic of application of diffusion models in robotics
- Conceptualized and developed a system for receiving and processing point cloud from RGBD camera, for subsequent detection of the required object, to obtain its 6D-pose.
- Took Stanford University course CS231n, Neural Network and Computer Vision from Samsung AI Center, Deep Learning School from MIPT.

ROBOTICS

- Started visual odometry system for drones (VINS). Worked with navigation stack, wrote wrappers for ROS1.
- Developed a microservice architecture to run via Docker Compose.
- Conducted odometry comparisons of Qadruped Robot with real data using the OptiTrack system.
- Developed and troubleshoot a quadcopter controller for control via ROS2.
- Handled development on Jetson Xavier, Raspberry Pi 4, Arduino in my work.
- Experienced in Gazebo, PyBullet, MuJoco.