C++ developer/Robotics Engineer

Kirill Artemov   +7 (921) 926-06-58 / kaartemov@gmail.com

linkedin.com/kirillin / github.com/kirillin / youtube.com/@kaartemov

Skills

C++ | Python | linux | control theory | robotics

Experience

- 2023-present **Lead Robotics Engineer**, ITMO University

  `stack: pinocchio, casadi, mushroom, python3, linux`
    - Design RL algorithm for mobile manipulator.
    - Assemble a bipedal robot, and make it stand up.
    - Design trajectory optimization module for manipulator dynamics identification problem.

- 2021-present **Lecturer**, ITMO University (Linux, Robot programming)

  `stack: linux, docker, ROS, gazebo, python, sim`
    - Design and lecture "Robot programming course" for graduate-level students.

- 2019-2024 **C++**/**Python developer**, Roboforces - is an e-learning platform for ROS and Robotics (roboforces.ru)

  `stack: tornado, sqlite, docker, python, ROS, gazebo`
    - Design a project roadmap.
    - Design MVP and apply it for a robotics challenge.

- 2019-2024 **Robotics competition organizer**, ITMO University

  `stack: ROS, gazebo, docker, python`
    - Design a robotics problem set: more than 50 test tasks and 9 simulation scenarios (cooperative control, force control, navigation, line following, grasping, active slam).
    - Design documentation for even supporting and evaluating participants' solutions.

- 2023 **Robotics engineer**, Ural Construction Robotics

  `stack: fanuc710, moveit, ROS, gazebo, docker, python, c++, sockets`
    - Design simulation for robotic walls builder for construction industry.
    - Design socket based communication ROS-haskell legacy code using Python.
    - Design moveIt interface for Fanuc 710.

- 2019-2023 **Research engineer**, ITMO University

  `stack: iiwa7, moveit, ROS, gazebo, docker, python, c++, pHRI`
    - Design physically safe control algorithm for robot manipulators and published scientific paper on IROS2021.
    - Implement gravity identification algorithm and test it on KUKA youBot robot.

- 2016-2019 **Robotics Engineer**, ITMO University

  `stack: kuka youbot, nav stack, ROS, python, c++, sockets`

- Led a group of students implemented an algorithm for grasping objects in a complex environment.
- Design navigation and parking of hand-made car-like robot.
- Design elastic gripper software driver.
- Design trajectory control for underactuated systems (inverted pendulum).

Competitions

- Russia 2024, **1st place** in StarLine Hackathon 2024.
- Japan 2017, Canada 2018 **Computer vision developer**, RoboCup@Work
- Kazakhstan 2014-2018 **Robotics competition judge**, Roboland

Education

- 2022 PhD in Engineering, ITMO University, Saint-Petersburg, Russia
- 2018 Master of Science in Robotics, ITMO University, Saint-Petersburg, Russia
- 2014 Bachelor of Science in Device engineering, Kazakhstan