Dan Ogawa Lillrank

Robotics Researcher/Software Engineer

Areas of specialization

Robotics Automation (Software)

- Manipulation
 - Inverse Kinematics
 - Trajectory Planning
 - · (Deep) IL/RL in robotics
- · Simulation:
 - IsaacSim
 - · Mujoco (sim2real)
 - Drake
 - pybullet
- Navigation:
 - SLAM
 - · Path Planning

Machine Learning

Reinforcement Learning (RL) Imitation Learning (IL) Computer Vision(CV) Deep Learning(DL) Vision Language Models

Programming

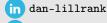


Technical

Linux, Pytorch, Llama, scikitlearn, ROS(Moveit!), OpenCV, PCL, CUDA, MPI, Docker, Git, Jira, Confluence, AWS

Languages

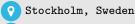
English Swedish Japanese Fluent Native Native







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WORK EXPERIENCES

2021-2024

Chief Researcher



ARAYA · ♥ Tokyo, Japan
Neurotechnology R&D Unit, Deep Reinforcement Learning research

Designed and implemented a comprehensive robotics stack utilizing ROS and Moveit! and Vision Language model for a Brain Machine Interface project, leading to successful integration of Franka robot arm controlled by human brain signals. Led a team of junior researchers and engineers. Team grew from 2 to 8.

Robotics manipulation, Python, pytorch, ROS, Mujoco, IsaacSim DL, RL, IL. CV. Diffusion models

2021-2022

Technical staff



AIST NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE & TECHNOLOGY · ♥ Tokyo, Japan

Technical Staff/Research at AIST Automation Research team, working closely with Ogata lab. Utilizing Deep Predictive models for robot manipulation tasks.

PyTorch, Object Segmentation, CUDA, ROS, Gazebo-sim

2020-2021



Robotics Software Engineer
Telexistence · ♥ Tokyo, Japan

Main software integrator for the automation team. Implemented Pick & Place workflow for the Model-T humanoid upper-torso robot by integrating perception and planning/control modules using ROS. Integration tested on the custom robot hardware. Integrated several custom grippers to the robot.

Humanoid robot, C/C++, Python, ROS, OpenCV, OpenRave

2019-2020



Robotics Software Engineer

Qвіт Rовотіcs · Р Tokyo, Japan

Engineered a robust facial recognition and multi-object tracking system using ROS, Docker, and Python. Proposed & created a pipeline to store the customer information in the cloud. Data-visualization was delivered to the sales team & store manager.

ROS, OpenCV, Object tracking, scikit-learn, panda, AWS

PUBLICATIONS

2024 A pragmatic look at deep imitation learning.

Asian Conference on Machine Learning

2024 A comparison of visual and auditory EEG interfaces for robot multi-stage task control

Frontiers in Robotics and Al

2019 Registration algorithms for matching laser scans in robotics application Thesis work in KTH diva portal

EDUCATION



M.Sc · Systems, Control & Robotics

KTH Royal Institute of Technology, Sweden

2017

B.Sc · Engineering Physics



KTH Royal Institute of Technology, Swede

2017

M.Sc · **Exchange student** Kyoto University, Japan