

Toshinori Kitamura

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Education

Nara Institute of Science and Technology (NAIST)

2021

GRADUATE SCHOOL OF SCIENCE AND TECHNOLOGY, M1, GPA: 3.3/4.0

- **Keio University**, GPA: 3.3/4.0 — *Faculty of Science and Technology (System Design Engineering)*
- **University of California Davis**, GPA: 3.9/4.0 — *Dean's List, Exchange student 2018-2019*

Experience

NAIST Robot Learning Laboratory

2021

REINFORCEMENT LEARNING (RL) RESEARCH

- "Geometric Value Iteration: Dynamic Error-Aware KL Regularization for Reinforcement Learning"
 - **Toshinori Kitamura**, Lingwei Zhu, Takamitsu Matsubara, submitted to **ACML 2021**, under-review
- "Cautious Policy Programming: Exploiting KL Regularization in Monotonic Policy Improvement for Reinforcement Learning"
 - Lingwei Zhu, **Toshinori Kitamura**, Takamitsu Matsubara, submitted to **Journal of Neural Networks**, under-review
- "Cautious Actor-Critic: Stable off-policy deep reinforcement learning for continuous control"
 - **Toshinori Kitamura**, Lingwei Zhu, Takamitsu Matsubara, **JSAI 2021**

OMRON SINIC X Corporation

2021

RL RESEARCH INTERN

- Researching offline RL for robot automation.

Deep RL Summer School: https://deeplearning.jp/reinforcement_course-2020s

2021

TEACHING ASSISTANT

- Tutored students in deep RL, model-based RL, and entropy-regularized RL.

National Institute of Advanced Industrial Science and Technology (AIST)

2019-2020

RESEARCH INTERN

- Researched deep RL with model predictive control for mobile robot in human crowds.

Laboratory of Chen-Nee Chuah (UC Davis)

2019

RESEARCH

- Researched traffic congestion reduction using multi-agent RL and imitation learning.

Mira Robotics, Inc.

2018

SOFTWARE & HARDWARE ENGINEER INTERN

- Helped develop robots, LIDAR and Object Detection Algorithm. Developed fusion360 add-in for ROS.

Projects

ShinRL: <https://github.com/syuntoku14/ShinRL>

2020-2021

- A python library for analyzing reinforcement learning.

PyTorch-RL-IL: <https://github.com/syuntoku14/pytorch-rl-il>

2020

- A PyTorch Library for Building Reinforcement Learning and Imitation Learning Agents.

fusion2urdf: <https://github.com/syuntoku14/fusion2urdf>

2018

- A fusion360 add-in which converts fusion360 model to urdf(Universal Robotic Description Format) file.

Marlo Competition (UC Davis)

2018

- RL competition to solve Minecraft. Researched deep reinforcement learning techniques.

NHK robot competition (Keio university)

2018

- Developed Kinect-V2 software that can recognize and react to objects.

Skills

Knowledge Control system, Reinforcement Learning (RL), Deep Learning

Languages Python, C++, MATLAB, Rust

Frameworks PyTorch, Chainer, ROS, Docker, Google Cloud