Kentaro Wada

5-14-24 Sendagi, Bunkyo-ku, Tokyo, 1130022, Japan www.kentaro.wada@gmail.com • +81 (80) 6177-5221 • wkentaro.com Date of birth: 31st January 1994 • Nationality: Japan

EDUCATION University of Tokyo April 2012 – Present

MS in Information Science and Technology

BE in Mechano-Informatics

Advisors: Prof. Masayuki Inaba, Associate Prof. Kei Okada

PORTFOLIO wkentaro.com

Extensive listing of cocurricular and research projects.

DISTINCTION University of Tokyo, Toyota Dwango Advanced AI Fellowship 2017

Google Summer of Code Student 2016

Completed an open source project from Open Source Robotics Foundation.

5th Place Winners (Pick Task) at the Amazon Picking Challenge

An internationally recognized permier robotics competition.

PUBLICATIONS

Kentaro Wada, Shun Hasegawa, Shingo Kitagawa, Yuto Uchimi, Naoya Yamaguchi, Kei Okada, and Masayuki Inaba, "Few-shot Learning based on Context-aware Network Expansion with Artificial Training Data for Picking in Warehouse Automation", in *Under review at IEEE International Conference on Robotics and Automation (ICRA*), 2018. [Paper] [Movie]

Kentaro Wada, Kei Okada, and Masayuki Inaba, "Probabilistic 3D Multilabel Real-time Mapping for Multi-object Manipulation", in *Proceedings of the 2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2017. [Paper] [Movie] .

Shun Hasegawa, **Kentaro Wada**, Yusuke Niitani, Kei Okada, and Masayuki Inaba, "A Three-Fingered Hand with a Suction Gripping System for Picking Various Objects in Cluttered Narrow Space", in *Proceedings of the 2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2017. [Paper] [Movie]

Kentaro Wada, Makoto Sugiura, Iori Yanokura, Yuto Inagaki, Kei Okada, and Masayuki Inaba, "Pick-and-Verify: Verification-based Highly Reliable Picking System for Various Target Objects in Clutter", *Journal of Advanced Robotics*, 2017. [Paper] [Movie]

Kentaro Wada, Masaki Murooka, Kei Okada, and Masayuki Inaba, "3D Object Segmentation for Shelf Bin Picking by Humanoid with Deep Learning and Occupancy Voxel Grid Map", in *Proceedings of the 2016 IEEE-RAS International Conference on Humanoid Robotics (Humanoids*), 2016. [Paper] [Movie]

Yuki Furuta, **Kentaro Wada**, Masaki Murooka, Shunichi Nozawa, Yohei Kakichi, Kei Okada and Masayuki Inaba, "Transformable Semantic Map Based Navigation using Autonomous Deep Learning Object Segmentation", in *Proceedings of the 2016 IEEE-RAS International Conference on Humanoid Robotics (Humanoids)*, 2016. [Paper] [Movie]

RESEARCH **EXPERIENCE** Leader of the UTokyo Team at the Amazon Robotics Challenge

JSK Robotics Laboratory at University of Tokyo

Advisor: Associate Prof. Kei Okada

Objectives: develop a robust state-of-the-art robot picking system for warehouse automation. 2015 edition: Verification based robust picking system by in-hand recognition. 2016 edition: Deep learning based 3D semantic segmentation. 2017 edition: Few-shot deep learning of novel object segmentation using only instance images.

Research Assistant at the UTokyo JSK Robotics Lab

2015 - 2017

2015 - 2017

JSK Robotics Laboratory at University of Tokyo

Advisor: Associate Prof. Kei Okada

Objectives: develop a system of continuous integration of robotic system as a whole: (1) same software of robotic system on simulation and real world. (2) enable motion testing by simulator with dynamics.

Research Assistant at the Utokyo Tanaka Kenji Lab Tanaka Kenji Laboratory at University of Tokyo

2014 - 2015

Advisor: Associate Prof. Kenji Tanaka

Objectives: analyze customer data of a e-commerce shop to segment users' tastes by clustering user data of page access and shopping.

WORK

Donuts Co. Ltd., Tokyo

2013 - 2014

EXPERIENCE Internship as a system integrator

Honda Research Institute, Tokyo

2014

Summer internship, Road scene understanding with deep learning

KEY SKILLS

- High-level programming skills, especially with Python and C++, trained in the research use and contributions to open source projects at GitHub.
- Experience and knowlege of constructing a large robot vision system integrating various kinds of hardware and software with Robot Operating System (ROS).
- Knowledge of deep learning implementation with the frameworks, Chainer, PyTorch and Caffe, and GPU computing using CUDA.

INTERESTS

Deep learning, Scene understanding, 3D reconstruction, Real-time vision system.

REFERENCES

Prof. Masayuki Inaba

Professor of Graduate School of Information Technology and Science

University of Tokyo

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Associate Prof. Kei Okada

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