

Kentaro Wada

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Date of birth: 31st January 1994 • Nationality: Japan

EDUCATION	University of Tokyo MS in Information Science and Technology BE in Mechano-Informatics Advisors: Prof. Masayuki Inaba, Associate Prof. Kei Okada	<i>April 2012 – Present</i>
PORTFOLIO	wkentaro.com <i>Extensive listing of cocurricular and research projects.</i>	
DISTINCTION	University of Tokyo, Toyota Dwango Advanced AI Fellowship Google Summer of Code Student <i>Completed an open source project from Open Source Robotics Foundation.</i> 5th Place Winners (Pick Task) at the Amazon Picking Challenge <i>An internationally recognized premier robotics competition.</i>	2017 2016 2016
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 <i>Under review at IEEE International Conference on Robotics and Automation (ICRA)</i> , 2018. [Paper] [Movie] Kentaro Wada , Kei Okada, and Masayuki Inaba, “Probabilistic 3D Multilabel Real-time Mapping for Multi-object Manipulation”, in <i>Proceedings of the 2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)</i> , 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 <i>Proceedings of the 2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)</i> , 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”, <i>Journal of Advanced Robotics</i> , 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 <i>Proceedings of the 2016 IEEE-RAS International Conference on Humanoid Robotics (Humanoids)</i> , 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 <i>Proceedings of the 2016 IEEE-RAS International Conference on Humanoid Robotics (Humanoids)</i> , 2016. [Paper] [Movie]	

RESEARCH EXPERIENCE	Leader of the UTokyo Team at the Amazon Robotics Challenge <i>JSK Robotics Laboratory at University of Tokyo</i> 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.	2015 – 2017
	Research Assistant at the UTokyo JSK Robotics Lab <i>JSK Robotics Laboratory at University of Tokyo</i> 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.	2015 – 2017
	Research Assistant at the UTokyo Tanaka Kenji Lab <i>Tanaka Kenji Laboratory at University of Tokyo</i> 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.	2014 – 2015
WORK EXPERIENCE	Donuts Co. Ltd., Tokyo <i>Internship as a system integrator</i>	2013 – 2014
	Honda Research Institute, Tokyo <i>Summer internship, Road scene understanding with deep learning</i>	2014
KEY SKILLS	<ul style="list-style-type: none"> ▪ High-level programming skills, especially with Python and C++, trained in the research use and contributions to open source projects at GitHub. ▪ Experience and knowledge 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	<p>Prof. Masayuki Inaba Professor of Graduate School of Information Technology and Science University of Tokyo 73A1, Engineering Building NO. 2, 7-3-1, Hongo, Bunkyo-ku, Tokyo, 1138656, Japan inaba@jsk.imi.i.u-tokyo.ac.jp • +81 (3) 5841-7416</p> <p>Associate Prof. Kei Okada Associate Professor of Graduate School of Information Technology and Science University of Tokyo 73A2, Engineering Building NO. 2, 7-3-1, Hongo, Bunkyo-ku, Tokyo, 1138656, Japan k-okada@jsk.imi.i.u-tokyo.ac.jp • +81 (3) 5841-7416</p>	

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