Yoshiki Obinata

- Tokyo, Japan
- (Please ask me by e-mail.)
- obinata (at) jsk.imi.i.u-tokyo.ac.jp
- yoshikiobinata
- https://github.com/mqcmd196

Born 3 April 1998

WORK EXPERIENCE

April 2025 – present

Research Fellowship
JSPS Research Fellowships for young students (DC2)
・ Research Grant 200000 JPY / month
・ Research Fund 800000 JPY / year

July 2023 – March 2025

Software Engineer / Parttime
New Innovations Inc.
・ Robotics software engineer
・ Embedded software engineer

April 2023 – March 2025

The project member of Support for Pioneering Research Initiated by the Next Generation (SPRING)
Japan Science and Technology Agency (JST)
・ Research Grant 180000 JPY / month
・ Research Fund 340000 JPY / year

July 2024 – August 2024

Software Engineer
Google Summer of Code
・ Support GTK3,4+OpenGL in OpenCV

May 2021 – March 2024

Technical Assistant Staff / Parttime
JSK Robotics Lab, The University of Tokyo
・ Developing and maintaining the robot software.

April 2022 – June 2023

Robotics Software Engineer, Integrator / Parttime
Preferred Robotics
・ Developing the B2B mobile robot service.

August 2017 – June 2022

Software Engineer / Parttime
Aidemy
・ Developing the education service of machine-learning-programming.

August 2021 – October 2021

Robotics Software Engineer / Internship
Mujin, Inc.
・ Developing the robot software.

December 2018 – June 2019

Software Engineer / Internship
OTOKORO.com
・ Developing of an automated data analysys platform.

EDUCATION

2023 – present

Ph.D's degree in Information Science and Technology
Graduate School of Information Science and Technology, The University of Tokyo
・ Major in Mechano-Informatics
・ Belong to JSK Robotics Lab and supervised by Prof.Kei Okada

2021 – 2023	**Master's degree in Information Science and Technology**
	Graduate School of Information Science and Technology, The University of Tokyo
	• Major in Mechano-Informatics
	• Belong to JSK Robotics Lab and supervised by Prof.Kei Okada

2017 – 2021	**Bachelor's degree in Engineering**
	Faculty of Engineering, The University of Tokyo
	• Department of Mechano-Informatics
	• Belong to JSK Robotics Lab and supervised by Prof.Kei Okada

SCHOLARSHIPS

2025 – present	**Scholarship**
	Iwadare Scholarship Foundation
	• 550000 yen/year for 1 year.

2017 – present	**Exemption of tuition fees**
	The University of Tokyo
	• Tuition exemption from undergraduate to graduate school

2021 – 2023	**Scholarship**
	COSINA Scholarship
	• 30000 yen/month for 2 years.

2021 – 2023	**Scholarship**
	TAKEUCHI Scholarship
	• 60000 yen/month for 2 years.

2017 – 2021	**Scholarship**
	The foundation Matsuo Scholarship Society
	• Scholarship for school expenses, tuition, dormitory, food, and medical expenses for 4 years.

SKILLS

Languages	Japanese, English, Chinese

Software Skills	Programming Languages
	• Python, Lisp, C++, Shell, JavaScript
	Frameworks, Middlewares
	• ROS1 / ROS2, OpenCV, Qt, Universal Windows Platform, Active Directory, LDAP
	Operating System
	• Linux(Ubuntu, Debian, Red Hat Enterprise Linux), Windows 11, Windows Server, macOS

Hardware Skills	CAD
	• SOLIDWORKS

SELECTED ACHIEVEMENTS

Awards

1. Kento Kawaharazuka, <u>Yoshiki Obinata</u>, Naoaki Kanazawa, Naoto Tsukamoto, Kei Okada. "Reflexive Open-Vocabulary Navigation without Prior Knowledge Using Omnidirectional Camera and Multiple Vision-Language Models", Excellent Practice Award (Workshop on Environment Dynamics Matters: Embodied Navigation to Movable Objects) in IROS2024.

2. <u>Yoshiki Obinata</u>, Iori Yanokura, Naoto Tsukamoto, Naoya Yamaguchi, Shingo Kitagawa, Koki Shinjo, Kei Okada, Masayuki Inaba. "System for Teaching Robot Action Instructions and Responding to Situations Using a Chat Application", IAS-18 Finalist for the Best Paper Award.

3. <u>Yoshiki Obinata</u>, Kento Kawaharazuka, Naoaki Kanazawa, Naoya Yamaguchi, Naoto Tsukamoto, Iori Yanokura, Shingo Kitagawa, Koki Shinjo, Kei Okada, Masayuki Inaba. Semantic Scene Difference Detection in Daily Life Patroling by Mobile Robots using Pre-Trained Large-Scale Vision-Language Model, IEEE RAS Japan Joint Chapter Young Award (IROS 2023).

4. <u>Yoshiki Obinata</u>, Kento Kawaharazuka, Naoaki Kanazawa, Naoya Yamaguchi, Naoto Tsukamoto, Iori Yanokura, Shingo Kitagawa, Koki Shinjo, Kei Okada, Masayuki Inaba. "Semantic Scene Difference Detection in Daily Life Patroling by Mobile Robots using Pre-Trained Large-Scale Vision-Language Model", SICE International Young Authors Award (SIYA-IROS 2023).

5. <u>Yoshiki Obinata</u>, Naoaki Kanazawa, Kento Kawaharazuka, Iori Yanokura, Soonhyo Kim. RoboCup@home Japan 2022 General Purpose Service Robot First Prize.

Journals

1. <u>Yoshiki Obinata</u>, Kento Kawaharazuka, Naoaki Kanazawa, Naoya Yamaguchi, Iori Yanokura, Shingo Kitagawa, Kei Okada, Masayuki Inaba. "Situation classification of living environment by daily life support robot using pre-trained large-scale vision-language model", Advanced Robotics, Vol.39, No.7, pp.323–337, 2025.

2. Koki Shinjo, <u>Yoshiki Obinata</u>, Kento Kawaharazuka, Kei Okada, Masayuki Inaba. "Simply Mountable Elevator Status Recognition and Operation System with Multi-sensor and IoT Switches for Movement of Robots between Floors", Journal of the Robotics Society of Japan, Vol.43, No.2, pp.189-197, 2025.

3. Naoaki Kanazawa, Kento Kawaharazuka, <u>Yoshiki Obinata</u>, Kei Okada, Masayuki Inaba. "Real-World Cooking Robot System from Recipes Based on Food State Recognition Using Foundation Models and PDDL", Advanced Robotics, Vol.38, No.18, pp.1318-1334, 2024.

4. Naoaki Kanazawa, Kento Kawaharazuka, <u>Yoshiki Obinata</u>, Kei Okada, Masayuki Inaba. "Cooking Task Execution of Robot based on Food Condition Change Recognition by Recipe Description Analysis and Time-Series Use of Vision-Language Model", Journal of the Robotics Society of Japan, Vol.42, No.3, pp.266-273, 2024.

5. Kento Kawaharazuka, <u>Yoshiki Obinata</u>, Naoaki Kanazawa, Kei Okada, Masayuki Inaba. "Robotic State Recognition based on Large-Scale Vision-Language Models and Genetic Algorithm", Journal of the Robotics Society of Japan, Vol.42, No.3, pp.259-265, 2024.

6. Kento Kawaharazuka, Naoaki Kanazawa, <u>Yoshiki Obinata</u>, Kei Okada, Masayuki Inaba. "Continuous Object State Recognition for Cooking Robots Using Pre-Trained Vision-Language Models and Black-Box Optimization", IEEE Robotics and Automation Letters, Vol.9, No.5, pp.4059-4066, 2024.

International Conferences

1. <u>Yoshiki Obinata</u>, Haoyu Jia, Kento Kawaharazuka, Naoaki Kanazawa, Kei Okada. "Remote Life Support Robot Interface System for Global Task Planning and Local Action Expansion Using Foundation Models", IEEE-RAS International Conference on Humanoid Robots, 2024.

2. <u>Yoshiki Obinata</u>, Kento Kawaharazuka, Naoaki Kanazawa, Naoya Yamaguchi, Naoto Tsukamoto, Iori Yanokura, Shingo Kitagawa, Koki Shinjo, Kei Okada, Masayuki Inaba. "Semantic Scene Difference Detection in Daily Life Patroling by Mobile Robots using Pre-Trained Large-Scale Vision-Language Model", IEEE/RSJ International Conference on Intelligent Robots and Systems, 2023.

3. <u>Yoshiki Obinata</u>, Iori Yanokura, Naoto Tsukamoto, Naoya Yamaguchi, Shingo Kitagawa, Koki Shinjo, Kei Okada, Masayuki Inaba. "System for Teaching Robot Action Instructions and Responding to Situations Using a Chat Application", Intelligent Autonomous Systems 18, 2023.

4. Ayaha Nagata, Tomoka Sawada, Aiko Ichikura, <u>Yoshiki Obinata</u>, Naoaki Kanazawa, Tasuku Makabe, Iori Yanokura, Kei Okada. "Design and Evaluation of Engaging Storytelling Experience through Interactive Scripted Performance with a Character Robot", IEEE International Conference on Robot & Human Interactive Communication, 2025.

5. Kento Kawaharazuka, <u>Yoshiki Obinata</u>, Naoaki Kanazawa, Kei Okada, Masayuki Inaba. "Robotic State Recognition with Image-to-Text Retrieval Task of Pre-Trained Vision-Language Model and Black-Box Optimization", IEEE-RAS International Conference on Humanoid Robots, 2024.

6. Aiko Ichikura, Kento Kawaharazuka, <u>Yoshiki Obinata</u>, Kei Okada, Masayuki Inaba. "A Method for Selecting Scenes and Emotion-Based Descriptions for a Robot's Diary", IEEE International Conference on Robot & Human Interactive Communication, 2023.

7. Aiko Ichikura, Kento Kawaharazuka, <u>Yoshiki Obinata</u>, Koki Shinjo, Kei Okada, Koji Kawasaki, Masayuki Inaba, "Automatic Diary Generation System Including Information on Joint Experiences between Humans and Robots", Intelligent Autonomous Systems 18, 2023.

8. Naoaki Kanazawa, Kento Kawaharazuka, <u>Yoshiki Obinata</u>, Kei Okada, Masayuki Inaba. "Recognition of Heat-Induced Food State Changes by Time-Series Use of Vision-Language Model for Cooking Robot", Intelligent Autonomous Systems 18, 2023.

9. Kento Kawaharazuka, <u>Yoshiki Obinata</u>, Naoaki Kanazawa, Kei Okada, Masayuki Inaba. "VQA-based Robotic State Recognition Optimized with Genetic Algorithm", IEEE International Conference on Robotics and Automation, 2023.

10. Kento Kawaharazuka, <u>Yoshiki Obinata</u>, Naoaki Kanazawa, Kei Okada, Masayuki Inaba. "Robotic Applications of Pre-Trained Vision-Language Models to Various Recognition Behaviors", IEEE-RAS International Conference on Humanoid Robots, 2023.

11. Kento Kawaharazuka, <u>Yoshiki Obinata</u>, Naoaki Kanazawa, Kei Okada, Masayuki Inaba. "Daily Assistive View Control Learning of Low-Cost Low-Rigidity Robot via Large-Scale Vision-Language Model", IEEE-RAS International Conference on Humanoid Robots, 2023.

ADDITIONAL INFORMATION

Interests — Robotics Software System (Considering whole system, OSS contributions), Software Infrastructure, Server/HPC Operations