

Yuki Tanaka

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🌐 <https://kymch.github.io/>



Employment History

- Jul. 2024 – Mar. 2025 📌 **Research Assistant** Knowledge and Information Research Team, National Institute of Advanced Industrial Science and Technology (AIST), Japan
- Jun. 2025 – Sep. 2025 📌 **Summer Intern** Data Science Summer Institute (DSSI) at the Advanced Manufacturing Laboratory (AML) in the Lawrence Livermore National Laboratory (LLNL), Livermore, California, U.S.

Education

- Apr. 2025 – Present 📌 **Ph. D. Student in Engineering, Keio University, Graduate School of Science and Technology, Japan.**
Research topic: *Imitation Learning and Reinforcement Learning for Industry Application.*
- Apr. 2023 – Mar. 2025 📌 **M. S. in Engineering, Keio University, Graduate School of Science and Technology, Japan.**
Thesis title: *Transition Model and Control Framework for Environment-Adaptive Robotic Systems.*
- Apr. 2018 – Mar. 2023 📌 **B. S. in Engineering, Keio University, Faculty of Science and Technology, Japan.**
Thesis title: *Motion-Copying System for Motion Generation Using Machine Learning.*
- Apr. 2015 – Mar. 2018 📌 **Horikawa High School, Japan.**

Research Publications

Journal Articles

- 1 **Y. Tanaka** and S. Katsura, "Sensorless reaction torque regulation of multi-dof industrial manipulator using gated recurrent unit-based virtual environment quarryer," *IEEJ Journal of Industry Applications*, vol. advpub, p. 24 004 534, 2024. 🔗 DOI: 10.1541/ieejia.24004534.
- 2 S. Yamaguchi, **Y. Tanaka**, and S. Katsura, "Contactless environmental impedance estimation: Image-based approach using confidence scores of object detection model," *IEEJ Journal of Industry Applications*, vol. advpub, p. 24 003 156, 2024. 🔗 DOI: 10.1541/ieejia.24003156.

Conference Proceedings

- 1 **Y. Tanaka**, S. Yamaguchi, and S. Katsura, "Visualization of environmental information based on mdk channels in a two-dimensional plane," in *2024 IEEE 18th International Conference on Advanced Motion Control (AMC)*, 2024, pp. 1–6. 🔗 DOI: 10.1109/AMC58169.2024.10505647.

- 2 **Y. Tanaka** and S. Katsura, “A voice-controlled motion reproduction using large language models for polishing robots,” in *2023 IEEE International Conference on Mechatronics (ICM)*, 2023, pp. 1–6.  DOI: 10.1109/ICM54990.2023.10101966.
- 3 **Y. Tanaka** and S. Katsura, “Task switching model for acceleration control of multi-dof manipulator using behavior trees,” in *IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society*, 2023, pp. 1–6.  DOI: 10.1109/IECON51785.2023.10311686.

Skills

Languages	 Reading, writing, and speaking Japanese and English.
Coding	 C, C++, Python, MATLAB, $\text{\LaTeX}$, IsaacSim, IsaacLab, Genesis
Misc.	 Robotics, AI, ML, Data science.

Miscellaneous Experience

Awards and Achievements

- 2022  **Excellent Presentation Award**, The Institute of Electrical Engineers of Japan (IEEJ).
- 2024  **Excellent Paper Presentation Award (International Workshop)**, IEEJ, Industry Applications Society.