

Tai Inui

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Research Interests

Human-Computer Interaction (HCI), Human-Robot Interaction, Haptics, Entertainment Technology

Education

Waseda University, Mechanical Engineering Major, Computer Science and Communication Engineering Minor Sep 2022 – Sep 2026

- Sugano Laboratory (Robotics, Robot Learning, and HRI)
- Simo-Serra Laboratory (Computer Graphics and Generative Models)

Experience

Research Assistant, Sony CSL, Cybernetic Humanity Group – OIST, Okinawa, Japan Feb 2025 – Present

- Project: Research on human augmentation; RL agent embodiment
- Skills: Reinforcement Learning, Imitation Learning, Simulations, Sim-to-real, Python, C++

Visiting Student Researcher, KAIST, IRiS Lab – Daejeon, South Korea Sep 2025 – Nov 2025

- Project: Research on game-theoretic approaches for agency-preserving teleoperation assistance
- Skills: Game Theory, Haptic Devices, User Studies, C++, Python

Visiting Collaborator, Carnegie Mellon University, BIG – Pittsburgh, PA Jul 2024 – Oct 2024

- Project: Research on VR soft robot teleoperation with proprioceptive visual augmentation
- Skills: Robot Operating System (ROS), Simulations, Machine Learning, Unity, VR, C#, Python

Robotics Software Engineer Intern, Tokyo Robotics – Tokyo, Japan Dec 2023 – Oct 2024

- Project: Vision-language-action model implementation and fine-tuning for a humanoid robot [Video]
- Skills: Machine Learning, Robot Operating System (ROS), AWS SageMaker, Python, C++

Extracurriculars

Co-founder of Kuma Lab Apr 2024

- Student-based community with 60+ members exploring machine intelligence
- Hosted multiple lectures and hands-on workshops introducing students to various research fields (e.g. Robotic Art, Reinforcement Learning, Diffusion Models...)

Member of Google Developer Group, Education Team Oct 2024

- Hosting hands-on introductory STEM workshops (e.g. Introduction to AI, Unity, etc.) to spread the fun of engineering

Publications

SoftBit: Soft Bimanual Teleoperation with Proprioceptive Visual Augmentation [Paper]

- Accepted to VAM-HRI workshop at HRI 2025

TriForce Band: Leveraging Triaxial Tactile Sensing for Wrist Force-Myography Gesture Recognition [Paper]

- Accepted to UIST 2025 Poster

TerrainDiffuser: Leveraging Text Prompts and Elevation Data for Dynamic Texture Generation [Paper]

- Presented at CVM2026 as Technical Brief. Project at Simo-Serra Lab, sponsored by game studio Rikka Inc.

SoftNash: Entropy-Regularized Nash Games for Non-Fighting Virtual Fixtures [Paper]

- Visiting Student Researcher Project at IRiS Lab, KAIST under supervision of Prof. Jee-hwan Ryu

MicCheck: Repurposing Off-the-Shelf Pin Microphones for Easy and Low-Cost Contact Sensing [Paper]

- Received Best Session Presentation Award at CACS 2025