Ayano Hiranaka

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EDUCATION

Stanford University — *Stanford, CA*
M.S. in Mechanical Engineering (Concentration in Robotics) — *Sep 2021 –*
GPA: 4.00/4.00

University of Illinois at Urbana-Champaign — *Champaign, IL*
B.S. in Mechanical Engineering — *Graduated with Highest Honors: Dec 2019*
Minor in Electrical Engineering — *GPA: 3.98/4.00*

EXPERIENCES – ROBOTICS, SOFTWARE, ML

Stanford Vision and Learning Lab – Research Assistant — *Stanford, CA* — *Mar 2022 – present*

- Robotics research in human-in-the-loop active reinforcement learning, brain-controlled robot systems, imitation learning of task and motion planners
- Experience working with simulated and physical robots (arm and mobile manipulators), reinforcement learning, human-in-the-loop learning, imitation learning

Computer Vision: From 3D Reconstruction to Recognition (course) — *Stanford, CA* — *Jan 2022 – Mar 2022*

- Learned traditional and deep-learning-based 3D reconstruction methods
- Project: developed AR app to play a virtual piano

Senior Design Project – Mechatronics — *Champaign, IL* — *Aug 2019 – Dec 2019*

- Developed system to track and collect data from light-emitting objects in the sky
- Experience mechatronic system design (servos, encoders, Arduino, camera, OpenCV, and PID controller)

Research in Music Transcription — *Champaign, IL* — *Sep 2018 – Aug 2019*

- Developed adaptive particle filter to identify input piano note pitch in real time

EXPERIENCES - OTHER

Research in Use of Atomization-Based Cutting Fluid on Micro-Drilling — *Champaign, IL* — *Aug 2019 – Dec 2019*

- Investigated effects of cutting fluid (ACF) spray distance and angle on micro-drilling

Internship at Taiho Corporation of America (Manufacturing) — *Tiffin, OH* — *Jun 2017 – Jul 2017*

- Modified inspection line program (ladder logic) to ensure uniform operator procedure (20% increase in inspected parts)

SKILLS

- **Programming languages**: Python, C++, C#, Java, MATLAB, HTML/CSS
- **Robotics**: arm and mobile manipulators in simulated and physical world, ROS, RL, IL, Unity
- **Miscellaneous**: 3D modeling (Creo, SolidWorks, Blender), Japanese (speak, read, write fluently)

ACTIVITIES

Game Development in Unity – Personal Project — *Stanford, CA* — *Jan 2020 –*

- Developing a retro-style simulation role-playing game from scratch in Unity (C#)

PUBLICATIONS

1. Zhang, R.*, Lee, S.*, Hwang, M.*, **Hiranaka, A.*,** et al. NOIR: Neural Signal Operated Intelligent Robot for Everyday Activities. *CoRL*, 2023
2. **Hiranaka, A.***, Hwang, M.*, Lee, S., Wang, C., Fei-Fei, L., Wu, J., Zhang, R. Primitive Skill-based Robot Learning from Human Evaluative Feedback. *IROS*, 2023
3. Zhang, R.*, Bansal, D.*, Hao, Y.*, **Hiranaka, A.**, Gao, J., Wang, C., Martin-Martin, R., Fei-Fei, L., Wu, J. A Dual Representation Framework for Robot Learning with Human Guidance. *CoRL*, 2022 (*Best paper award at Aligning Robot Representations with Humans workshop*)