# Huaxiaoyue (Yuki) Wang

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## Summary

Cornell final-year CS PhD Student with ML, robotics, and NLP expertise working on robots and AI agents that understand human intent from different forms of information (e.g., language instruction, language feedback, video demonstration). Specializing in foundation models for robotics, large language models, and LLM agents. Experienced in training robot policies via reinforcement learning and imitation learning, building real-world robotics systems by integrating multiple foundation models, and leading research projects that are accepted to top ML conferences (NeurIPS, CoRL, ICML).

## Research Experience

05/2025 – 11/2025 **Research Scientist Intern.**
Adobe Research.
Mentor: Stefano Petrangeli, Sunav Choudhary, Franck Dernoncourt, Yu Shen, Saayan Mitra.
– **AI Assistant for Adobe Product**: Building data-efficient algorithm to align AI in low-data regime. Demonstrating algorithm's impact through integration with production code base. Filed for patent, and the paper is in submission at a top ML conference.

08/2022 – present **Graduate Research Assistant.**
Cornell University, Computer Science Department.
Advisor: Prof. Sanjiban Choudhury, OpenAI/PoRTaL group.
Published at NeurIPS 2022; CoRL 2024 (2x); ICML 2025.
– **AI agents learning from visual demonstrations**: Inverse reinforcement learning for manipulation tasks [3], [5]; active preference learning using LLMs [4]; code generation as task planning for robots [7].
– **LLM agents learning from interaction**: Proposed efficient algorithm to improve RL exploration by leveraging past interactions. Trained Llama-3.2-3B models as process reward model and agents for multi-turn conversational task [1], [2].
– **Real-world robotics systems**: long-horizon mobile manipulation [4]; collaborative home cooking with a user and two robots [6].

05/2021 – 05/2022 **Undergraduate Research Assistant.**
Harvey Mudd College, Computer Science Department.
Published at ICAPS 2022.
Advisor: Prof. Jim Boerkoel, Human Experience & Agent Teamwork Lab.
– **Human-robot collaboration**: Theoretically investigated task allocation given temporal constraints [8].

02/2020 – 05/2022 **Undergraduate Research Assistant.**
Harvey Mudd College, Engineering Department.
Advisor: Prof. Christopher Clark, Lab for Autonomous and Intelligent Robotics.

08/2018 – 12/2019 **Undergraduate Research Assistant.**
Harvey Mudd College, Engineering Department.
Advisor: Prof. David Harris, The HMC Aero Lab.

## Education

2022 – present **Cornell University, M.S., Ph.D.**
Department of Computer Science, GPA 3.9/4.0
Advisor: Sanjiban Choudhury.
Expected to Graduate: May 2026

2018 – 2022 **Harvey Mudd College, B.S.**
Department of Computer Science, GPA 3.9/4.0

## Technical Skills

**Languages:** Python, ROS, C/C++, Java, JavaScript, HTML/CSS
**Libraries:** PyTorch, Transformers, vllm, Gym

## Research Publications

### Conference Proceedings

1. **Huaxiaoyue Wang** and S. Choudhury, "The road not taken: Hindsight exploration for LLMs in multi-turn RL," in *The Exploration in AI Today Workshop at ICML 2025*, 2025. URL: https://openreview.net/forum?id=1jqYCS1LxR.
2. **Huaxiaoyue Wang** and S. Choudhury, "The road not taken: Hindsight exploration for LLMs in multi-turn RL," in *ES-FoMo III: 3rd Workshop on Efficient Systems for Foundation Models*, 2025. URL: https://openreview.net/forum?id=xIifnHONrv.
3. W. Huey*, **Huaxiaoyue Wang***, A. Wu, Y. Artzi, and S. Choudhury, "Imitation learning from a single temporally misaligned video," in *Forty-second International Conference on Machine Learning*, 2025. URL: https://openreview.net/forum?id=YV05KZt7v2.
4. **Huaxiaoyue Wang**, N. Chin, G. Gonzalez-Pumariega, *et al.*, "APRICOT: Active preference learning and constraint-aware task planning with LLMs," in *8th Annual Conference on Robot Learning*, 2024. URL: https://openreview.net/forum?id=nQslM6f7dW.
5. **Huaxiaoyue Wang***, W. Huey*, A. Wu, Y. Artzi, and S. Choudhury, "Time your rewards: Learning temporally consistent rewards from a single video demonstration," in *CoRL 2024 Workshop on Whole-body Control and Bimanual Manipulation: Applications in Humanoids and Beyond*, 2024. URL: https://openreview.net/forum?id=gsgkiuv9BS.
6. **Huaxiaoyue Wang***, K. Kedia*, J. Ren*, *et al.*, "MOSAIC: Modular foundation models for assistive and interactive cooking," in *8th Annual Conference on Robot Learning*, 2024. URL: https://openreview.net/forum?id=dUo6j3YURS.
7. **Huaxiaoyue Wang**, G. Gonzalez-Pumariega, Y. Sharma, and S. Choudhury, "Demo2code: From summarizing demonstrations to synthesizing code via extended chain-of-thought," in *Thirty-seventh Conference on Neural Information Processing Systems*, 2023. URL: https://openreview.net/forum?id=ftPoVcm821.

### Journal Articles

1. M. Morgan*, J. Schalkwyk*, **Huaxiaoyue Wang***, *et al.*, "Simple temporal networks for improvisational teamwork," *Proceedings of the International Conference on Automated Planning and Scheduling*, vol. 32, no. 1, pp. 261–269, Jun. 2022. DOI: 10.1609/icaps.v32i1.19809.

## Teaching Experience

08/2022 – 05/2023 **Graduate Teaching Assistant.**
Cornell University, Computer Science Department.
Introduction to CS, Robot Learning
Supervisors: Prof. Sanjiban Choudhury, Prof. Walker White.

08/2019 – 05/2022 **Undergraduate Teaching Assistant.**
Cornell University, Computer Science Department.
Courses: Intro. to CS; Data Structure & Programming Development; Computability & Logic; Algorithms.
Supervisors: Prof. Zachary Dodds; Prof. Julie Medero; Prof. George D. Montanez; Prof. Ran Libeskind-Hadas.

## Awards and Achievements

2024 At ICRA 2024, "MOSAIC: Modular foundation models for assistive and interactive cooking" won **the Best Paper** at the VLMNM Workshop and **the Best Poster** at the MoMa Workshop.

2022 **The Greever Award,** Harvey Mudd College.
Made an outstanding contribution to a collaborative project with eBay.

**Graduated with High Distinction,** Harvey Mudd College.

**Departmental Honors in Computer Science,** Harvey Mudd College.