

Ziang Liu

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Education


Aug 2023 – Present	📖 Cornell University	Ph.D. in Computer Science	Advisor: Jennifer Sun	GPA: 4.00 / 4.00
Sep 2021 – Jun 2023	📖 Stanford University	M.S. in Computer Science		GPA: 4.17 / 4.30
Aug 2017 – May 2021	📖 University of Southern California	B.S. in Computer Science B.S. in Applied and Computational Mathematics		GPA: 3.92 / 4.00

Publications

- 1 A. Grassick, J. T.-H. Hsu, E. Lin, **Z. Liu**, M. Whitton, M. Hair, L. Gutierrez, H. Yu, K. Branson, V. Jayaraman, M. A. Gil, A. M. Hein, and J. J. Sun, *WildFin: An In-the-Wild Video Dataset for Fish Behavioral Recognition*, In Submission, 2026.
- 2 **Z. Liu***, K. Dimitropoulou*, C. Cheung, and T. Bhattacharjee, “CareEval: Evaluating Large Language Models for Decision-Making in Physical Robot Caregiving,” in *Companion Proceedings of the 21st ACM/IEEE International Conference on Human-Robot Interaction*, 2026, pp. 57–62. 📄 DOI: 10.1145/3776734.3794354
- 3 **Z. Liu***, Y. Yan*, C. S. Y. Cheung, T. Ying, B. Liu, S. Tong, A. Orkwis, K. Dimitropoulou, and T. Bhattacharjee, “Knowing When Not to Help: Active Estimation of Human Reachability for Just-Right Robot Assistance,” in *Robotics: Science and Systems (RSS)*, 2026.
- 4 Z. Qiu, **Z. Liu**, W. Niu, T. Bhattacharjee, and S. Kalantari, *EgoCogNav: Cognition-aware Human Egocentric Navigation*, In Submission, 2026.
- 5 T. Silver, R. K. Jenamani, **Z. Liu**, B. Dodson, and T. Bhattacharjee, *Coloring Between the Lines: Personalization in the Null Space of Planning Constraints*, In Submission, 2026.
- 6 R. K. Jenamani, T. Silver, B. Dodson, S. Tong, A. Song, Y. Yang, **Z. Liu**, B. Howe, A. Whitneck, and T. Bhattacharjee, “FEAST: A Flexible Mealtime-Assistance System Towards In-the-Wild Personalization,” in *Robotics: Science and Systems (RSS)*, 2025, **[Best Paper Award]**.
- 7 X. Liang, **Z. Liu**, K. Lin, E. Gu, R. Ye, T. Nguyen, C. Hsu, Z. Wu, X. Yang, C. S. Y. Cheung, H. Soh, K. Dimitropoulou, and T. Bhattacharjee, “OpenRoboCare: A Multimodal Multi-Task Expert Demonstration Dataset for Robot Caregiving,” in *2025 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2025, pp. 2661–2668. 📄 DOI: 10.1109/IROS60139.2025.11247516
- 8 **Z. Liu**, Y. Ju, Y. Da, T. Silver, P. N. Thakkar, J. Li, J. Guo, K. Dimitropoulou, and T. Bhattacharjee, “GRACE: Generalizing Robot-Assisted Caregiving with User Functionality Embeddings,” in *2025 20th ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, 2025, pp. 686–695. 📄 DOI: 10.1109/HRI61500.2025.10974054
- 9 E. K. Gordon, R. K. Jenamani, A. Nanavati, **Z. Liu**, D. Stabile, X. Dai, T. Bhattacharjee, T. Schrenk, J. Ko, H. Bolotski, R. Karim, A. Kashyap, B. H. Zhu, T. K. Faulkner, and S. S. Srinivasa, “An Adaptable, Safe, and Portable Robot-Assisted Feeding System,” *Companion of the 2024 ACM/IEEE International Conference on Human-Robot Interaction*, 2024, **[Best Demonstration Award]**.

- 10 M. Guo, **Z. Liu**, S. Tian, Z. Xie, J. Wu, and C. K. Liu, “Learning to Design 3D Printable Adaptations on Everyday Objects for Robot Manipulation,” in *2024 IEEE International Conference on Robotics and Automation (ICRA)*, 2024, pp. 824–830. [DOI: 10.1109/ICRA57147.2024.10610268](#)
- 11 N. Ha, R. Ye, **Z. Liu**, S. Sinha, and T. Bhattacharjee, “REPeat: A Real2Sim2Real Approach for Pre-acquisition of Soft Food Items in Robot-assisted Feeding,” in *2024 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2024, pp. 7048–7055. [DOI: 10.1109/IROS58592.2024.10801368](#)
- 12 R. K. Jenamani, D. Stabile, **Z. Liu**, A. Anwar, K. Dimitropoulou, and T. Bhattacharjee, “Feel the Bite: Robot-Assisted Inside-Mouth Bite Transfer using Robust Mouth Perception and Physical Interaction-Aware Control,” in *Proceedings of the 2024 ACM/IEEE International Conference on Human-Robot Interaction*, 2024, pp. 313–322. [DOI: 10.1145/3610977.3634975](#)
[Best Paper Award Nomination].
- 13 E. Ng, **Z. Liu**, and M. Kennedy, “Diffusion Co-Policy for Synergistic Human-Robot Collaborative Tasks,” *IEEE Robotics and Automation Letters*, vol. 9, no. 1, pp. 215–222, 2024. [DOI: 10.1109/LRA.2023.3330663](#)
- 14 **Z. Liu**, G. Zhou, J. He, T. Marcucci, L. Fei-Fei, J. Wu, and Y. Li, “Model-based control with sparse neural dynamics,” in *Proceedings of the 37th International Conference on Neural Information Processing Systems*, 2023.
- 15 **Z. Liu***, S. Tian*, M. Guo, K. Liu, and J. Wu, “Learning to Design and Use Tools for Robotic Manipulation,” in *Proceedings of The 7th Conference on Robot Learning*, 2023, pp. 887–905.
- 16 E. Ng, **Z. Liu**, and M. Kennedy, “It Takes Two: Learning to Plan for Human-Robot Cooperative Carrying,” in *2023 IEEE International Conference on Robotics and Automation (ICRA)*, 2023, pp. 7526–7532. [DOI: 10.1109/ICRA48891.2023.10161386](#)
- 17 E. Heiden, **Z. Liu**, V. Vineet, E. Coumans, and G. S. Sukhatme, “Inferring Articulated Rigid Body Dynamics from RGBD Video,” in *2022 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2022, pp. 8383–8390. [DOI: 10.1109/IROS47612.2022.9981687](#)
- 18 **Z. Liu**, R. Martín-Martín, F. Xia, J. Wu, and L. Fei-Fei, “BEHAVIOR in Habitat 2.0: Simulator-Independent Logical Task Description for Benchmarking Embodied AI Agents,” in *CVPR Embodied AI Workshop*, 2022.
- 19 H. Nemlekar*, **Z. Liu***, S. Kothawade, S. Niyaz, B. Raghavan, and S. Nikolaidis, “Robotic Lime Picking by Considering Leaves as Permeable Obstacles,” in *2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2021, pp. 3278–3284. [DOI: 10.1109/IROS51168.2021.9636396](#)
- 20 H. Zhang, M. Yao, **Z. Liu**, J. Li, L. Terr, S.-H. Chan, T. K. S. Kumar, and S. Koenig, “A Hierarchical Approach to Multi-Agent Path Finding,” *Proceedings of the International Symposium on Combinatorial Search*, vol. 12, no. 1, pp. 209–211, 2021. [DOI: 10.1609/socs.v12i1.18586](#)
- 21 E. Heiden, **Z. Liu**, R. K. Ramachandran, and G. S. Sukhatme, “Physics-based Simulation of Continuous-Wave LIDAR for Localization, Calibration and Tracking,” in *2020 IEEE International Conference on Robotics and Automation (ICRA)*, 2020, pp. 2595–2601. [DOI: 10.1109/ICRA40945.2020.9197138](#)

Teaching

- 2023  **Head Teaching Assistant**, *Stanford University*.
- ▶ **CS 231n** Deep Learning for Computer Vision (Spring 2023).
- Graduate Teaching Assistant**, *Stanford University*.
- ▶ **CS 231a** Computer Vision, From 3D Reconstruction to Recognition (Winter 2023).

- 2022 ■ **Head Teaching Assistant**, *Stanford University*.
 - ▶ **CS 161** Design and Analysis of Algorithms (Winter 2022).**Graduate Teaching Assistant**, *Stanford University*.
 - ▶ **CS 229** Machine Learning (Spring 2022).
 - ▶ **CS 161** Design and Analysis of Algorithms (Summer 2022, Fall 2022).
- 2021 ■ **Graduate Teaching Assistant**, *Stanford University*.
 - ▶ **CS 161** Design and Analysis of Algorithms (Fall 2021).
- 2020 ■ **Undergraduate Teaching Assistant**, *University of Southern California*.
 - ▶ **CSCI 360** Introduction to Artificial Intelligence (Spring 2020, Fall 2020).
 - ▶ **CSCI 270** Algorithms and Theory of Computing (Summer 2020).
 - ▶ **CSCI 170** Discrete Methods in Computer Science (Spring 2020, Fall 2020).
- 2019 ■ **Undergraduate Teaching Assistant**, *University of Southern California*.
 - ▶ **CSCI 170** Discrete Methods in Computer Science (Spring 2019, Summer 2019).
 - ▶ **CSCI 104** Data Structures and Object-Oriented Design (Fall 2019).

Honors & Competitions

Honors

- 2023 ■ **Siebel Scholar**. Recognizes top students at leading graduate schools for academic excellence and leadership potential; one of 5 students nominated by Stanford CS and one of 83 students selected worldwide as the Class of 2023.
- 2020 ■ **USC Undergraduate Research Associates Program Recipient**. Research funding for the robot lime picking project with Professor Stefanos Nikolaidis.

Competitions

- 2019 ■ **International Collegiate Programming Contest (ICPC), SoCal Regional**. Team ranked top 20 out of 90 teams.
- **USC Programming Contest**. Ranked 3rd among undergraduate students and 4th among all participants.

Activities & Certifications

- **PSIA Alpine Level 1 Instructor**. Certified alpine ski instructor through the Professional Ski Instructors of America.
- **California Naturalist Certificate**. Certified through the University of California California Naturalist Program.
- **Birding Tour Guide**. Led birding tours and guided participants in field identification and natural history interpretation.