# Ian Chuang

ianc@berkeley.edu · ian-chuang.github.io · Google Scholar · GitHub · LinkedIn

## Education

**University of California, Berkeley** 2024 – Present
*Ph.D. in Electrical Engineering and Computer Sciences* Advisor: Claire Tomlin

**University of California, Davis** 2020 – 2024
*B.S. in Computer Science and Engineering* GPA: 4.0/4.0

## Research Experience

**Hybrid Systems Lab, UC Berkeley** 2024 – Present
*Graduate Student Researcher* Advisor: Claire Tomlin

- Sim-to-real in-hand object pose reaching with a LEAP hand: zero-shot transfer from a wrist-mounted depth camera, plus a learned residual safety filter that cuts object drops by 75% over 4,800 real-robot goals.
- Mechanistic interpretability and activation steering of vision-language-action (VLA) models.

**Lab for AI, Robotics and Automation, UC Davis** 2022 – 2024
*Undergraduate Researcher* Advisor: Iman Soltani

- Active vision and human-gaze-guided, foveated vision transformers for efficient, robust imitation learning.
- Bimanual manipulation with hierarchical attention for action chunking; flow-matching visuomotor policies.
- Built robot hardware, ROS drivers, and MuJoCo simulation for bimanual and dexterous platforms.

**Human/Robotics/Vehicle Integration and Performance Lab, UC Davis** 2022 – 2024
*Undergraduate Researcher* Advisor: Stephen K. Robinson

- Explainable behavior-tree robot control for human-robot interaction studies for NASA HOME.

## Industry Experience

**Ford Motor Company, Greenfield Labs** Summer 2022
*AI/ML Robotics Intern, Research & Advanced Engineering* Palo Alto, CA

- Developed 6-DoF pose estimation from fisheye cameras for autonomous vehicle alignment and parking; demoed the full perception pipeline on a Mustang Mach-E to Ford executives.
- Won 1st place at the intern hackathon with a driver-attentiveness monitoring system.

## Selected Publications

Full list on Google Scholar

- Dexterous In-Hand Object Pose Reaching with Learned Safety Filters
  **Ian Chuang**, H. Shah, V. Chilamkur, I. Soltani, C. Tomlin. *arXiv*.
- Look, Focus, Act: Efficient and Robust Robot Learning via Human Gaze and Foveated Vision Transformers
  **Ian Chuang**, J. Zou, A. Lee, D. Gao, I. Soltani. *ICRA 2026*.
- Active Vision Might Be All You Need: Exploring Active Vision in Bimanual Robotic Manipulation
  **Ian Chuang**, A. Lee, D. Gao, M. Naddaf, I. Soltani. *ICRA 2025*.
- VITA: Vision-to-Action Flow Matching Policy
  D. Gao, B. Zhao, A. Lee, **Ian Chuang**, H. Zhou, H. Wang, Z. Zhao, J. Zhang, I. Soltani. *ICLR 2026*.
- Mechanistic Interpretability for Steering Vision-Language-Action Models
  B. Häon, K. Stocking, **Ian Chuang**, C. Tomlin. *CoRL 2025*.
- Gaze on the Prize: Shaping Visual Attention with Return-Guided Contrastive Learning
  A. Lee, **Ian Chuang**, D. Gao, K. Fukazawa, I. Soltani. *arXiv 2025*.
- InterACT: Inter-dependency Aware Action Chunking with Hierarchical Attention Transformers for Bimanual Manipulation
  A. Lee, **Ian Chuang**, L.-Y. Chen, I. Soltani. *CoRL 2024*.