

# Xinran Liang

+1-609-937-3470 | [xinranliang@princeton.edu](mailto:xinranliang@princeton.edu) | <https://xinranliang.github.io/xinranliang>

## EDUCATION

### • Princeton University

*Ph.D. in Computer Science*

Sep 2022 - Present

Princeton, NJ

- Selected Coursework: Advanced Computer Vision, Probabilistic Inference in Reinforcement Learning, Theoretical Machine Learning, Systems and Machine Learning

### • University of California, Berkeley

*B.A. in Applied Mathematics and Data Science*

Aug 2018 - May 2022

Berkeley, CA

- GPA: 4.0/4.0. Highest Distinction in General Scholarship (Top 3%).
- Selected Coursework: Data Structures, Efficient Algorithms, Artificial Intelligence, Machine Learning, Probability and Stochastic Processes, Optimization Models in Engineering, Deep Reinforcement Learning, Deep Unsupervised Learning, Deep Learning for Computer Vision

## EXPERIENCE

### • Intuit AI Research

*Research Intern*

Jun 2025 - Aug 2025

Mountain View, CA

- Topic: Real-Time Reward Modeling for Task-Oriented Dialogue Systems
- A two-stage LLM-driven approach to monitor turn-level risks in conversational AI systems, including a multi-instance learning model for risk scoring function and RL-based trigger function in inference-time.

### • Princeton VisualAI Lab

*Graduate Student Researcher*

Jan 2023 - May 2025

Princeton, NJ

- Advisor: Olga Russakovsky.
- Investigated fairness considerations in class-conditional and text-to-image generative models, primarily focusing on GAN and diffusion model architectures.
- Proposed a method controlling pre-trained diffusion models for data augmentation through personalized fine-tuning, addressing limitations in vision datasets and improving recognition model generalization.

### • Berkeley Artificial Intelligence Research

*Undergraduate Student Researcher*

Jan 2021 - Sep 2022

Berkeley, CA

- Advisors: Kimin Lee, Aditi Raghunathan, Pieter Abbeel.
- A simple and efficient exploration method based on epistemic uncertainty from human feedback, and improved preference-based reinforcement learning algorithms in complex decision making tasks.
- Developed an embodied learning framework that leverages active exploration for visual representation learning and perception tasks in complex 3D environments; proposed incorporating action supervision from agent movements to enhance visual representation learning.

## PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PREPRINT

- [P.2] **Xinran Liang**, Esin Tureci, Prachi Sinha, Vikram Ramaswamy, Ye Zhu, Olga Russakovsky. **Personalized Generative Models for Contextual Debiasing**. Preprint, under review.
- [P.1] **Xinran Liang**, Anthony Han, Wilson Yan, Aditi Raghunathan, Pieter Abbeel. **ALP: Action-Aware Embodied Learning for Perception**. In *arXiv* 2023.
- [C.1] **Xinran Liang**, Katherine Shu, Kimin Lee, Pieter Abbeel. **Reward Uncertainty for Exploration in Preference-based Reinforcement Learning**. In *ICLR* 2022.

## SKILLS

- **Language/Tool:** Python, Java, Git, C/C++, PyTorch, Tensorflow, Linux, Mujoco, Weights&Biases
- **Machine Learning:** Computer Vision, Reinforcement Learning, Natural Language Processing, Generative Models

**HONORS AND AWARDS**

---

- **Department Citation in Data Science** (UC Berkeley) May 2022
- **Outstanding Graduate Student Instructor Award** (UC Berkeley) May 2022

**TEACHING EXPERIENCE**

---

- **Princeton University** Sep 2023 - May 2024  
*Graduate Student Instructor*
  - Introduction to Machine Learning (Fall 2023). Algorithms and Data Structures (Spring 2024).
- **University of California, Berkeley** Jan 2020 - May 2022  
*Undergraduate Student Instructor*
  - Probability for Data Science (Spring 2020 - Spring 2022). Principles and Techniques of Data Science (Summer 2020).

**ACADEMIC SERVICE**

---

- **Reviewer:** ECCV 2024, ICLR 2025, CVPR 2025