Eric Yu

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Looking for internships in Robotics and AI/ML for summer 2027.
U.S. Citizen (no visa sponsorship required)

Research Interests

Reinforcement Learning, Robot Safety, World Models, Generative Models, Learning-based Control, Embodied AI.

Education

- **Massachusetts Institute of Technology** — Advisor: Prof. Chuchu Fan
  Ph.D., Robotics, REALM — *Aug. 2024 - Present*
- **University of California, San Diego** — Advisor: Prof. Sicun Gao
  M.S., Computer Science and Engineering — *Sep. 2022 - Jun. 2024*
- **University of California, San Diego**
  B.S., Computer Science and Engineering — *Sep. 2018 - Jun. 2022*

Research Experience

- **Massachusetts Institute of Technology** – *Doctoral Researcher, REALM* — Cambridge, MA | Aug. 2024 - Present
  - Introduced a novel robustness measure quantifying least-effort-to-failure for multi-agent safety under uncertainty.
  - Learned latent safety certificates in world model imagination for high-dimensional robot manipulation and control.
  - Leveraged curriculum-based RL for safe control under rare and difficult environment conditions.
- **University of California, San Diego** – *M.S. Researcher* — La Jolla, CA | Sep. 2022 - Jun. 2024
  - Applied Lyapunov-inspired safe RL for long-term societal fairness in sequential decision-making problems.
  - Studied SMT solvers with RL-guided search for efficient and fair blue-collar worker scheduling.
- **MIT Lincoln Laboratory** – *Research Intern, Mentor: T. Tsiligkaridis* — Lexington, MA | Jun. 2023 - Sep. 2023
  - Developed a test-time method improving zero-shot image classification of vision-language models.
- **Amazon** – *Software Development Engineer Intern* — Seattle, WA | Summers 2021, 2022
  - Automated ML pipelines saving $12M+/year; built a mapping service handling billions of requests/month.

Publications

** Equal contribution.*

- **ICLR (2027, in submission)**: E. Yu*, O. So*, A. D. Saravanos, M. Cleaveland, C. Fan, "WISH: Margin-Free Latent Control Barrier Functions via World-Model Imagination"
- **ICRA (2027, in submission)**: O. So*, E. Yu*, C. Fan, "LEAP-CBF: A Safety Filter for Uncertain Systems with Least-Effort Adversarial Potentials" [PDF]
- **NeurIPS (2026)**: S. Zhang, O. So, E. Yu, M. Cleaveland, P. Crowley-Dolen, C. Fan, "LASER: Latent Space Adjoint Matching for Support-Constrained Entropy-Regularized Offline RL" [PDF]
- **ICLR (2026)**: O. So*, E. Yu*, S. Zhang, M. Cleaveland, M. Black, C. Fan, "Solving Parameter-Robust Avoid Problems with Unknown Feasibility using Reinforcement Learning" [PDF]
- **ICLR (2026)**: S. Zhang, O. So, H. M. S. Ahmad, E. Yu, M. Cleaveland, M. Black, C. Fan, "ReFORM: Reflected Flows for On-support Offline RL via Noise Manipulation" [PDF]
- **ICLR (2026)**: A. Parashar*, Y. Li*, E. Yu, F. Chen, J. Neidhoefer, D. Upadhyay, C. Fan, "SEED-SET: Scalable Evolving Experimental Design for System-level Ethical Testing" [PDF]
- **RSS (2025)**: J. Yin*, O. So*, E. Yu, C. Fan, P. Tsiotras, "Safe Beyond the Horizon: Efficient Sampling-based MPC with Neural Control Barrier Functions" [PDF]
- **WACV (2025)**: E. Yu*, C. Liao*, S. Ravi, T. Tsiligkaridis, B. Kulis, "Image-Caption Encoding for Improving Zero-Shot Generalization" [PDF]
- **NeurIPS (2022)**: E. Yu, Z. Qin, M. K. Lee, S. Gao, "Policy Optimization with Advantage Regularization for Long-Term Fairness in Decision Systems" [PDF]

Honors and Awards

- **CoRL SPAIS Workshop Spotlight** *(Top 10 of 121 submissions; 8.3%)* — 2026
- **NSF Graduate Research Fellowship** *(Top 2,037 of 14,106 applicants; 14.4%)* — 2024
- **Stanford Knight-Hennessy Scholars Finalist** *(Top 180 of 8,272 applicants; 2.2%)* — 2024
- **UCSD CSE Alumni Advisory Board Leadership Excellence Scholarship** — 2021