Everett Richards

ehrichards9@gmail.com · (858) 899-5834

linkedin.com/in/everett-richards · github.com/EverettRichards · everettrichards.com

Objective

Right Now: PhD in Computer Science.
After PhD: A full-time academic research position in applied intelligent transportation and/or robotics.

Education

San Diego State University — San Diego, CA
BS Computer Science & BS Applied Mathematics, 4.0 GPA — Aug 2023–May 2026 (expected)

Research Experience

Research Assistant – San Diego State University — Aug 2025–Present
Advisor: Xiaobai Liu (Machine Vision and Perception Lab) — San Diego, CA

- Reproduced the π_0 Vision Language Action (VLA) model to transform language commands into executable trajectories, especially for out-of-distribution tasks
- Developing a simulation environment in RoboSuite–a robot learning platform built upon the MuJoCo physics engine–to train and evaluate RoboChef, an AI-powered cooking robot.

NSF Research Fellow – Worcester Polytechnic Institute — May–Aug 2025
Advisor: Ziming Zhang (Vision, Intelligence, and System Lab) — Worcester, MA

- Conducted robustness evaluations through targeted injection of Gaussian noise into 3D LiDAR point clouds, simulating sensor degradation due to low-resolution sensors and adverse weather conditions.
- Proposed and empirically validated a novel noise-aware training curriculum, achieving up to a 40% improvement in model robustness under challenging real-world scenarios.
- Resulting paper accepted at MIT URTC 2025.

NSF Research Fellow – UC San Diego — Sept 2024–June 2025
Advisor: Hao Su (SU Computer Vision Lab) — San Diego, CA

- Conducted experiments on the impact of Gaussian noise injection in robotic imitation learning models.
- Achieved statistically significant R^2 values between 0.91 and 0.99, supporting my argument that Gaussian noise induces a sigmoidal performance decay curve.
- Resulting paper accepted at MIT URTC 2025.

NSF Research Fellow – University of Delaware — June–Aug 2024
Advisor: Lena Mashayekhy (Intelligent Edge Systems Lab) — Newark, DE

- Developed and validated two algorithms to improve object detection accuracy in autonomous vehicles.
- Achieved up to 70% accuracy improvement over legacy methods, validated on a four-robot testbed.
- Presented paper at the IEEE World Congress on Services 2025 in Helsinki, Finland.

Publications

- **E. Richards**, L. Dai, "Modeling Imitation Learning Robustness to Noisy Demonstrations via Sigmoid Degradation," 2025 IEEE MIT Undergraduate Research Technology Conference (URTC), Cambridge, MA, 2025.
- **E. Richards**, A. Lopez, J. Morales, Z. Zhang, "From Chaos to Clarify: Strengthening 3D Collaborative Autonomous Vehicle Perception with Noise-Aware Training," 2025 IEEE MIT Undergraduate Research Technology Conference (URTC), Cambridge, MA, 2025.
- **E. Richards**, B. Thapa and L. Mashayekhy, "Edge-Enabled Collaborative Object Detection for Real-Time Multi-Vehicle Perception," 2025 IEEE International Conference on Edge Computing and Communications (EDGE), Helsinki, Finland, 2025, pp. 13-22, doi: 10.1109/EDGE67623.2025.00011.

Instructional Experience

Tutor, Mathematics & Computer Science   Aug 2024–May 2025
SDSU Math and Science Learning Center (MSLC)   San Diego, CA
- Tutored students in computer science (Java, Python, data structures, algorithms), mathematics (calculus, discrete math, real analysis), and physics.
- Participated in professional development workshops to enhance tutoring skills.
- Certified Level 1 Tutor by the College Reading and Learning Association (CRLA).

Instructional Assistant, Discrete Mathematics   Jan 2024–May 2025
SDSU Dept. of Mathematics and Statistics – Instructor: Vadim Ponomarenko   San Diego, CA
- Led weekly office hours for ten groups of 6 to 8 students, covering proof techniques, recursion, and boolean algebra.
- Developed and discussed weekly focus exercises to reinforce key topics.

Leadership Experience

Vice Chair, CTRL @ SDSU   May 2025–Present
Coalition of Tech Representatives and Leadership (CTRL) at SDSU
- Served on a board of leaders from various Computer Science student organizations at SDSU.
- Represented CTRL at CS faculty and Industrial Advisory Board (IAB) meetings.
- Director of the 2026 CTRL Student Project Showcase, Co-Director of the biannual ACM+CTRL Hackathon, and Committee Member for the 2026 CTRL E-Waste Drive.

AS Representative   May 2025–Present
Associated Students of San Diego State University (AS SDSU)
- Represent the College of Sciences on the University Council.
- Oversee financial appropriations for a non-profit with over $45,000,000$ in annual revenue.

President, ACM @ SDSU   Apr 2024–Present
Association for Computing Machinery (ACM) Student Chapter at SDSU
- Secured $2,500 sponsorship from Google to fund events and initiatives.
- Presented 10+ workshops on topics like machine learning, web development, and version control.
- Hosted the "Innovate 4 SDSU" Hackathon in April 2025, in which 80+ students competed to develop apps that improve student life at SDSU.

CSSC Representative   Aug–Dec 2024
SDSU College of Sciences Student Council (CSSC)
- Oversaw financial appropriations, community service, and academic events within the College of Sciences.
- Planned, implemented, and secured more than $1,500$ to fund, the STEM Karaoke Night series.

Awards and Honors

Academic Awards:
- Cert. of Excellence in Advanced Programming Languages, World Computing Organization (2025)
- AP Scholar with Distinction, College Board (2023)
- National Merit Commended Scholar (2022)

Scholarships:
- George A. Hansen Scholarship (2025)
- Deloitte Foundation Scholarship (2024)
- Mensa Foundation Scholarship (2024)
- Intuit STEM Scholarship (2023)

Skills and Strengths

Technical Skills:
- Deep learning with TensorFlow, Keras, PyTorch, OpenCV
- Data analysis with NumPy, Pandas, MatPlotLib, and Scikit-learn
- Computer vision, including CNNs & deep learning
- Computer networking and edge computing
- Theoretical and applied mathematics

Professional Skills:
- Research, literature review, and technical writing
- Public speaking and presentations
- Leadership and organizational management
- Tutoring and mentoring
- Drafting LaTeX documents
- Publishing papers in reputable journals