

Jerry Yan

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EDUCATION

Purdue University

2025 - present PhD (Computer Science)

Advisor: Prof. Sotiris Nousias

UC San Diego

2023 - 2025 MS (Machine Learning & Data Science) (GPA: 3.677)

Co-advisors: Prof. Nicholas Antipa and Prof. Sophia Merrifield

2019 - 2023 BS (Probability & Statistics) (GPA: 3.914)

PUBLICATIONS

JOURNAL PUBLICATIONS

Yan, Jerry, Chinmay Talegaonkar, Nicholas Antipa, Eric Terrill, and Sophia Merrifield (2025). “Leveraging 6DoF Pose Foundation Models For Mapping Marine Sediment Burial”. In: *Preprint, arXiv:2506.10386*.

Yan, Jerry, Thomas Cook, Allison Ho, Mark Otero, Peter A. Rogowski, Mika Siegelman, Eric Terrill, and Sophia Merrifield (2023). “PyPlume: A toolkit for rapid ocean surface transport assessments”. In: *Environmental Modelling & Software* 168, p. 105783. ISSN: 1364-8152. DOI: [10.1016/j.envsoft.2023.105783](https://doi.org/10.1016/j.envsoft.2023.105783).

CONFERENCE PROCEEDINGS

Yan, Jerry, Chinmay Talegaonkar, Nicholas Antipa, Eric Terrill, and Sophia Merrifield (2024). “Pose Estimation of Buried Deep-Sea Objects using 3D Vision Deep Learning Models”. In: *OCEANS 2024 - Halifax*. IEEE, pp. 1–6. DOI: [10.1109/OCEANS55160.2024.10754044](https://doi.org/10.1109/OCEANS55160.2024.10754044).

RESEARCH EXPERIENCE

Graduate Research · Computational Imaging Systems Lab

June 2023 – June 2025 · La Jolla, CA · (Principal Investigator: Nicholas Antipa, PhD)

- Developed methods to map burial states of dumped seabed waste from underwater vehicle imagery.
- Performed pose estimation of buried, degraded objects by creating new deep learning models and combining them with pre-trained models.
- Implemented buried barrel pose estimation via multiview 3D reconstruction and point cloud analysis.

Undergraduate Research · Coastal Observing Research & Development Center

April 2020 – June 2023 · La Jolla, CA · (Principal Investigator: Sophia Merrifield, PhD)

- Analyzed video and sidescan sonar images from underwater robotic vehicles to map ocean dumpsites.
- Created Python framework to run real-time Lagrangian particle simulations on ocean models. This framework was used with HF radar data to help scientists respond to the Huntington oil spill.
- Processed and analyzed X-band radar data for western pacific maritime domain awareness.

EXPERIENCE

Computer Vision Programmer · Triton Unmanned Aerial Systems

October 2019 – June 2023 · La Jolla, CA · (5th Place Internationally in the 2022 AUVSI SUAS Competition)

- Created and programmed drones to compete in the Student Unmanned Aerial Systems Competition.
- Built and tested traditional computer vision and neural network models (such as U-Net) to perform image classification and segmentation on aerial images.
- Designed standardized testing frameworks for computer vision pipeline.
- Onboarded and mentored new software members through team projects.

Software Development Engineer Intern · Amazon Web Services

June 2022 – September 2022 · Seattle, WA

- Deployed new debugging features to improve troubleshooting capabilities for Amazon Just Walk Out services, which impact Amazon Go and Amazon Fresh stores.
- Communicated actively between different teams to determine implementation details and manage project pipelines.

SKILLS

Programming languages Python, MATLAB, R, Java, Kotlin, C#, JavaScript
Tools & Libraries PyTorch, OpenCV, Unity, Blender, Pandas