

Anthony Tong

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Education

Computer Science B.S., Applied Mathematics B.S.

Fall 2023 – Fall 2026

University of California, San Diego | Cumulative GPA: 3.984

Awards & Honors

Regents Scholarship @ UC San Diego (\$5000 / year)

Fall 2023 – Fall 2026

Awarded to top ~2% of applicants

UC San Diego CSE Undergraduate Excellence in Research Award

2025 – 2026 Academic Year

1 of 3 recipients out of all UC San Diego CSE undergraduates

UC San Diego NSF REU: Interdisciplinary AI (\$5000)

Fall 2025 – Spring 2026

University of Nevada, Las Vegas NSF REU: AI SUSTEIN (\$5540)

Summer 2024

UC San Diego Provost Honors

Fall 2023 – Fall 2026

Publications

Deep Learning Classification of Reproductive Tissue from Ultrasound: Sex Determination in Red Abalone (*Haliotis rufescens*)

April 2026

In *Frontiers in Artificial Intelligence*.

Edwin A. Solares*, **Anthony Tong**, Sohyun Yoo, Welokiheiakeaeloa Gosline-Niheu, Kevin Jacob, Gordon Feliz, Sachin Loecher, Yuan Zhai, Maggie Mah, Sara Elizabeth Boles, Ayodeji Fagbohun, Jackson A Gross

SPECTRE: A Multimodal Spectral Transformer for Small Molecule Annotation

February 2026

In *Journal of Chemical Information and Modeling*.

Wangdong Xu*, Byeol Ryu*, **Anthony Tong**, Huanru Mao, Hyunwoo Kim, James Zhao, Chen Zhang, Yiran Xu, Mingxun Wang, William Gerwick, Garrison W. Cottrell

Research Experience

GURU Lab | Prof. Garrison W. Cottrell

April 2025 – Present

UC San Diego | Developing transformer models for structure annotation, building interpretable molecular representations, agentic systems for molecular structure solving. Mentored 6 NSF REU students on the project.

ESB.AI Lab | Prof. Edwin A. Solares

October 2023 – April 2025

UC San Diego | AI for food security, species and language conservation. Building computer vision models for red abalone and sturgeon sex determination, automated avocado tree phenotyping, and Hawaiian OCR text extraction. Led a team of 15 undergraduates across the 4 projects.

AI SUSTEIN REU | Prof. Shengjie (Patrick) Zhai, Dr. Ming Zhu

June 2024 – April 2025

University of Nevada, Las Vegas | Applying vocabulary transfer in LLM tokenizers for domain shifts to biomedical applications.

Regents Scholars Research Initiative | Prof. Arya Mazumdar

September 2023 – June 2024

UC San Diego | Exploratory study on nonlinear estimation, generative diffusion models, and quantization methods.

Teaching

University of California San Diego | Department of Computer Science and Engineering

Holding office hours to explain class concepts, grading assignments and creating autograders, designing exam questions and study materials, managing course logistics and communication. Served as the sole lead undergrad teaching assistant in all quarters; Fall 2025/2026 had no designated lead role.

Undergraduate TA CSE 151B: Deep Learning	Fall 2026
Lead Undergraduate TA CSE 151B: Deep Learning	Spring 2026
Lead Undergraduate TA CSE 150A: Intro to AI: Prob. Reasoning and Decision Making	Winter 2026
Undergraduate TA CSE 151A: Machine Learning: Learning Algorithms	Fall 2025
Lead Undergraduate TA CSE 150A: Intro to AI: Prob. Reasoning and Decision Making	Summer I 2025
Lead Undergraduate TA CSE 151B: Deep Learning	Spring 2025
Lead Undergraduate TA CSE 150A: Intro to AI: Prob. Reasoning and Decision Making	Winter 2025

Internships and Work Experience

Ridge Security Technology Inc. | Offensive Security Intern October 2023 – January 2024

Developed 6 plugins which automatically exploit security vulnerabilities for the RidgeBot software, an automated penetration testing system. Language: Python

Software Skills

Python, PyTorch Advanced proficiency

Extensive experience in Python across various frameworks, primarily in PyTorch and other machine learning libraries.

Linux, Bash, Server Deployment Strong proficiency

Hands on experience with server deployment including physical installation, setup, and working with command line tools and deploying/installing software.

Wolfram Mathematica, MATLAB, Java, C, C++, JavaScript Basic familiarity