

Aditya Katre

Class of 2027 at Del Norte High School in San Diego, CA / adikatre.github.io / adityad39c@gmail.com

RELEVANT COURSEWORK

Del Norte High (Class of 2027): AP Calculus AB, AP Comp Sci A & Principles, AP Statistics, AP Physics C: Mechanics

Palomar College: Calculus 2, Calculus 3/Multivariable Calculus, Linear Algebra

EXPERIENCE

Research Fellow at San Diego State University

Jan 2026 - Present

- Developing a [novel deep learning framework](#) titled "Asymmetric Cross-Modal Attention for Multimodal Representation Learning" to improve multimodal attention mechanisms
- Supervised by Prof. Hajar Hodayouni and collaborating with two SDSU students
- Submitted to IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)

Independent Researcher with UCLA Master's Student

Mar 2024 - Sep 2025

- Developed CV model and wrote a research paper titled "[Classifying Marine Mammals using Convolutional Neural Networks](#)" with a UCLA mentor, Arpit Jasapara
- Published in the National High School Journal of Science (NHSJS) after a thorough peer review.

CyberAegis Linux Lead & CyberPatriot Captain

Mar 2021 - Present

- Captained team of six & placed within top 30 of 6,000+ teams for 5 consecutive years
- Presented on cybersecurity topics (e.g., password policies, web server security) to 120+ CyberPatriot competitors
- Created 3+ practice Linux virtual machines to simulate the CyberPatriot competition and test competitors' knowledge

Co-founder of Del Norte AI Club

Oct 2024 - Present

- Taught 40+ members the fundamentals of Machine Learning model development
- Covered topics in ML ranging from regression to image-classification neural networks
- Created 10 weekly challenges for members to test their skills on real-world issues

Eagle Scout Candidate and Senior Patrol Leader of Boy Scout Troop 685

Sept 2024 - Mar 2025

- Led 80+ scouts in leadership, service, and outdoor skills via weekly meetings and activities
- Led team of 3 to develop a park reservation and newsletter viewing feature for Del Sur Community HOA
- Iterated by gathering feedback from 5 HOA board and community members
- Organized 5+ multi-day camping trips and taught 20+ younger scouts real-world skills

AWARDS

CyberPatriot XV National Finalist (1st in Networking, 2nd Overall out of 6,000+ Teams)

Mar 2023

- Nominated Most Valuable Player
- Defended against live cyberattacks from a professional red team in the national finals

Congressional App Challenge Finalist (4th out of 12,682 teams nationwide)

Jan 2026

- Developed an app that uses a custom-trained YOLOv8 object detection model to classify waste and direct users to disposal centers
- Featured in a [San Diego Union-Tribune](#) news story

SoCal Cyber Cup First Place (Out of 200 total teams)

Apr 2024

- Demonstrated skills in cryptography, reverse engineering, password cracking, log analysis, and web app exploitation in a CTF-style competition

Eagle Scout

Aug 2025

- Contributed 30+ hours of community service and led 100+ scouts in troop-wide activities and outings

SKILLS

Languages: Proficient in Python, Java, JavaScript, TypeScript, HTML, CSS, SQL

Frameworks & Tools: Linux, Flask, Git, Docker, VSCode, AWS EC2 & S3, Railway, Agile Methods