Arjun Caputo

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Education

University of California San Diego — La Jolla, CA
B.S. in Electrical Engineering, Spec. in Machine Learning and Controls — *May 2029 (Expected)*

Relevant Coursework: Calculus 1-3, Linear Algebra, Differential Equations, Statistics, Mechanics, Electricity & Magnetism, Intro to Programming in C

BASIS Tucson North — Tucson, AZ
High School Diploma — *May 2025*

Experience

QODED Summer Research Experience — June 2025 — July 2025
University of Arizona, Systems & Security Lab — *Tucson, AZ*

- Researched digital twin technology using SIF-400 testbeds for Industry 4.0 technology
- Developed custom dashboard with MCP integration for detection and prediction of faults in industrial systems to reduce system downtime

Shop Worker — Feb 2025 — Aug 2025
Traxda — *Tucson, AZ*

- Responsible for cutting, welding, and powder coating parts for custom aftermarket automotive kits
- Managed and revised production schedule for greater efficiency and reduced metal waste

STAR Lab Student Researcher — Sept 2023 — Mar 2024
University of Arizona, PRISM Lab — *Tucson, AZ*

- Researched cybersecurity vulnerability prevention and large language model use for diagnosing and mitigating cybersecurity weaknesses
- Successfully produced a predictive framework to generate a summary of the likely weaknesses of a user's system and possible mitigation strategies

Computer Vision Developer — Jan 2023 — Nov 2023
FIRST Robotics Competition — *Tucson, AZ*

- Made hardware and software decisions for a custom computer vision pipeline
- Developed on-the-fly driving routine, using AprilTag detection algorithms for localization
- Successfully implemented computation on Beelink Mini PC, decreasing latency by 128%

Leadership

DevOps Lead, Team Captain, Drive Team Lead — Aug 2023 — June 2025
Bit Buckets Robotics

- Managed and maintained public code base including handling pull requests, merge conflicts, and GitHub issues
- Worked on public documentation and resources for STEM outreach and funding opportunities
- Created multi-year training plans for on-boarding and teaching students software, mechanical, and electrical skills

Class President — Dec 2024 — June 2025
Student Council — *BASIS Tucson North*

- Communicated and worked with school admin for school wide projects
- Led groups of volunteers for extracurricular activities

Skills

- **Programming Languages**: C, Java, Python, Typescript, Javascript
- **Technologies**: React, Tailwind CSS, InfluxDB, Grafana, Git, OnShape, Arduino