

# Danh Tran

(714) 837 - 5323 | [danhtraannn@gmail.com](mailto:danhtraannn@gmail.com) | 16678 Mt. Cachuma Cir. FV

## SUMMARY

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Electromechanical engineering student aspiring to specialize in mechatronics. Experienced in hands-on projects integrating mechanical, electrical, and software systems. Strong leadership background in team-based engineering and technical problem-solving. Seeking an engineering internship to apply skills in circuit design, prototyping, and embedded systems.

## EDUCATION

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**California State Polytechnic University, Pomona**, Pomona, CA

August 2025 - Present

*Electromechanical Systems Engineer Freshman*

- GPA: 4.0/4.0
- Planned Coursework: Electrical Networks, Instrumentation & Control, Robotics Control & Applications, Applied Statics & Dynamics, Strength of Materials, Machine Elements, Thermodynamics, Fluid Mechanics, Manufacturing Systems, C/C++ Programming

## EXPERIENCE

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**Teaching** | *Tutoring, Lesson Planning, Communication, Curriculum Design*

August 2021 - May 2025

*Co-Teacher, Tutor, Teacher Assistant*

Westminster & Santa Ana, CA

- Tutored ~8 middle school students daily; supported ~80 students over 4 years
- Co-taught digital design for nuns in Vietnam, bridging English/Vietnamese communication
- Led confirmation classes and retreats for 20+ high school students

**CyberPatriot** | *Linux, Bash Scripting, Networking, Cybersecurity, Leadership*

September 2023 - Present

*Coach*

Westminster, CA

- Mentored 9 teams (~54 students) national CyberPatriot competition
- Scripted ~2k lines of Bash for Linux hardening and security automation
- Coached teams to Top 100 National Platinum Tier (twice) and grew placements by 200%

## PROJECTS

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**Go-Kart Engineering Project** | *Physics/Mechanics, Wiring, Altium PCB Design, Team Leadership*

August 2024 - July 2025

*Team Leader*

- Engineered a go-kart from a repurposed bed frame; reached 15 mph in testing
- Managed ~\$1.2k budget and 3-member team for design, fabrication, and testing
- Applied torque/friction analysis, drivetrain troubleshooting, and electrical wiring

**Pickleball Launcher Project** | *Raspberry Pi, Circuits, Python, 3D Printing, Motor Control*

February 2025 - Present

*Engineering Intern (informal)*

- Guided by a professional engineer to apply mechanical/electrical design principles
- Designing a motorized ball launcher with capstan drive mechanics
- Implementing H-bridge motor control and Python-based motion calibration
- Integrating 3D-printed parts with electronics for testing and iteration

**Jukebox** | *Raspberry Pi, Python, GPIO Wiring, Embedded Systems*

February 2025 - Present

*Solo Developer*

- Built a functioning Raspberry Pi music player with custom circuit wiring
- Programmed GPIO button controls for audio playback
- Strengthened embedded systems and hardware-software integration skills

## SKILLS

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**Engineering & Technical Tools:** *Circuit Design, PCB Design (Altium), 3D Printing, Mechanical Prototyping, SolidWorks CAD, Raspberry Pi, Arduino, Embedded Systems*

**Programming & Software:** *Python, Bash, C++, Java, HTML/CSS, JavaScript, OpenGL, Git/GitHub*

**Certifications:** *Virtual Intern Simulation @ Johnson & Johnson Medtech, State Seal of Civic Engagement, Seal of Biliteracy, Computer Science & Cyber Security CTE Pathway*