

# NICK PAPPAS

## Electrical & Electronics Engineering | Embedded Systems | EV Electronics

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📍 San Francisco Bay Area

🇺🇸 U.S. Citizen

🔗 papadakis.tech

## PROFILE

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Available for full-time engineering roles.

Electrical and Electronics Engineering student with hands-on experience in **Formula Student EV development**, PCB design, embedded systems, battery management systems, and vehicle electrical architecture.

Proven experience **leading electrical and embedded teams**, developing custom electronics, debugging complex hardware, and **delivering engineering projects ahead of demanding deadlines**.

**Highly driven and competitive**, with a strong bias toward ownership, continuous improvement, and exceeding expectations. Motivated by challenging engineering environments where **speed, reliability, and technical execution** matter. Interested in embedded systems, electric vehicles, hardware development, startups, and high-performance engineering.

## EXPERIENCE

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### Electrical & Electronics

#### Poseidon Racing Team

📅 Jun 2024 – Aug 2026

##### Head of Electrical & Electronics

Aug 2025 – Aug 2026

- **Led a 10-person electrical and embedded team**, working in a continuous feedback loop with mechanical engineers using **Altium Designer and SolidWorks/MCAD** to coordinate vehicle-level electrical and mechanical integration.
- **Reduced BMS weight by 35% and wiring by 980 feet** through the design and implementation of a custom Battery Management System architecture, improving reliability and passing technical scrutineering at the Red Bull Ring.
- **Designed and delivered 30+ custom PCBs using Altium Designer**, including vehicle MCU/ECU boards with **CAN, SPI, isoSPI, and Wi-Fi**, plus **CAN-based telemetry** for vehicle data monitoring, supported by MATLAB and LTspice simulations.
- **Assumed full embedded firmware responsibility mid-season**, transitioning from architecture, flowcharts, and technical direction to hands-on **C development on STM32 microcontrollers**; used AI-assisted development to compress an estimated **10 months of implementation work into 4 days** and deliver the vehicle ECU software on schedule without a dedicated firmware engineer.
- **Managed electrical and embedded development using Microsoft Project and Gantt-based planning**, adapting timelines and execution plans around supplier delays and third-party constraints while keeping critical milestones on track.
- **Built relationships with 90+ sponsors, suppliers, and industry partners**, securing **10 long-term sponsorships** through direct outreach, negotiation, and follow-up while independently managing external relationships needed to support vehicle development.
- **Optimized component selection under budget and availability constraints**, balancing cost, lead times, performance, and reliability.
- **Defined and documented the vehicle's complete electrical architecture**, producing detailed wiring diagrams for system interconnections, **CAN bus topology, shutdown circuit, and rules-critical PCBs** to guide integration, troubleshooting, and technical inspection.

##### Electronics Engineer

Jun 2024 – Aug 2025

- **Earned an invitation to Formula Student Czech within one month of joining as a freshman** after rapidly delivering my first vehicle electronics task.
- **Designed 8 custom PCBs** for electrical systems on a Formula Student electric race car.
- **Selected components through extensive datasheet research**, balancing electrical specifications, reliability, cost, availability, and design constraints to identify the best fit for each vehicle electronics application.
- **Debugged and validated custom PCBs at the bench using oscilloscopes, logic analyzers, multimeters, and thermal cameras**, identifying electrical faults and verifying boards before vehicle integration.
- **Consistently delivered engineering tasks ahead of schedule** throughout vehicle development, testing, and competition preparation.
- **Presented the team's vehicle and technical systems to judges** at Formula Student Czech 2024 (Most) and Formula Student Austria 2025 (Red Bull Ring).

## EDUCATION

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### Integrated Master's Degree in Electrical and Electronics Engineering

#### University of West Attica

📅 Oct 2023 – Expected Mar 2028