Brendan Birozy

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EDUCATION

California State Polytechnic University, Pomona   **Expected May 2027**

B.S. Electrical Engineering - GPA 3.63

- Microelectronics, Signals and Systems, Control Systems, Electromagnetic Fields, C++, Digital Logic, Circuit Analysis

ENGINEERING EXPERIENCE

Formula SAE Electric, Cal Poly Pomona   **Aug 2025 - Present**

EV Powertrain, Electrical Design Engineer

- Develop High Voltage (400V) and Low Voltage (12V, 5V, 3.3V) Battery Management System (BMS) using KiCAD, ensuring designs meet safety and performance rules of FSAEE national competition.
- Implement CAN communication protocols utilizing Teensy4.1 and perform analysis to verify robust, cost-effective component selections.
- Integrate BMS with Tractive Battery and Tractive System as part of a 10-member powertrain sub-team and greater 30-member multidisciplinary engineering team.

System Lead, Business and Marketing

- Lead sponsorship strategy by researching, identifying, and securing partnerships with industry professionals and alumni to support team growth and operations.
- Direct weekly student engagement initiatives to strengthen recruitment and retention while managing and revamping social media utilizing LinkedIn, Canva, Instagram, and Adobe products, increasing brand visibility and following by 20%.
- Built a formal sponsorship proposal pipeline for enterprise partners, resulting in new sponsor commitments.

Autonomous Vehicle Laboratory, Cal Poly Pomona   **Aug 2025 - Present**

Embedded Systems Team Member

- Design and prototype control systems for autonomous drive-by-wire systems (steering, throttle, and braking) and migrate to permanent PCBs using KiCAD.
- Work with 20-person time to design a go-kart sized autonomous vehicle's drive-by-wire electrical system, integrating steering, throttle, and braking over a CAN bus network with Teensy4.1s.
- Research custom 4WD hub motor powertrain strategies for an autonomous EV project with off-road applications.

SKILLS

- Hardware: Circuit Analysis, Microcontrollers, Microelectronics, Digital Logic, Soldering, Lab Equipment
- CAN, SPI, C/C++, Orcad, KiCAD, PSpice, LTSpice, MATLAB, Simulink, Verilog, Microsoft Office, Google Suite, Rust (Student)
- Languages: English [Native/Fluent], Japanese [Novice/Student]