# DANIEL ROMERO

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## EDUCATION
California State Polytechnic University, Pomona, Ca
**Bachelor of Science in Electrical Engineering,** Expected 2026

## PROJECTS
*Personal Project*                                                                 December 2024 - December 2024
**STM32 KiCad PCB**
- Built a small development board leveraging the STM32 microcontroller and KiCad.
- Included de-coupling capacitors for power pins and added a ferrite bead for filtering on VDDA pin.
- Labeled differential pairs appropriately on schematic for simplification when designing PCB.
- Learned importance of load capacitance when choosing an external clock crystal.

*Microcontrollers Class Project*                                                   November 2024 - December 2024
**Wet Bulb Globe Temperature Test Tool**
- Programmed a Pic18F4321 microcontroller operating through MPLABX IDE in C.
- Utilized interrupts and on-chip ADCs to gather data from sensors and output results on an LCD display.
- Created SPI protocol with I2C protocol simulated through programmed bit bashing for the light sensor.
- Built circuit being mindful of deploying pull-up resistors for sensors and using analog and digital I/O.

*Personal Project*                                                                 November 2024 - Present
**Augmented/Alternative Communication Device**
- Formulated strategy for Record/Playback with 4 memory banks for communication with a single button.
- Set goal to institute ARM architecture leveraging capabilities on the Raspberry Pi RP2040 microcontroller.
- Designing schematic and PCB on KiCad.
- Programming in C with Virtual Studio Code and Raspberry Pi extension.
- Soldered components and constructed prototype on a breadboard for testing and debugging.

*Project Lead / Electrical Team Lead*                                              May 2024 - Present
**Cal Poly Pomona Motorcycle Club (cppmc.com)**
- Project Goal: Highway speeds at a range of 100 miles.
- Collaborated with other team members and mentor for project goals and funding.
- Led motorcycle disassembly / assembly (engine, chain, seat, etc ).
- Parts used: Nissan Leaf Battery Modules, Fardriver Motor Controller (ND72680), Mid-Drive Motor (QS165), Domino Commando Throttle, KG-F Cuolometer.

## SKILLS
Microcontrollers and Embedded Systems:
Firmware development (C/C++/Assembly)
Peripheral Interfacing (GPIO, SPI, I2C, UART)
Real-Time Debugging
Real-time systems
Schematic and PCB Design.
Technical: MPLABx, KiCad, Altium, Verilog, LTSpice, MATLAB, Microsoft Suite

## EXPERIENCE
**Ferguson Enterprises, Ventura, California**                                      September 2017 - August 2020
*Counter Sales Manager*
- Led a team of four union counter associates where excellence in customer service was aim.
- Approved weekly timecards and managed associate schedules daily.
- Promoted effective product placement of "own brands" to increase counter profits between 30-35%.