

Luca Younes

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WORK EXPERIENCE

Banco Coup – **Embedded Hardware Developer**

Jan 2025 – Present

- Designed highly miniaturized bluetooth low energy input device
- Developed interrupt-based firmware to detect user input and transmit BLE packets
- Reduced power consumption by 80% to $< 10\mu A$ by optimizing circuitry and firmware
- Designed and fabricated low fixed-cost prototype enclosure and carrying case

Neusleep – **Embedded Software Engineer**

Jan 2023 – Dec 2023

- Architected software for BLE integrated EEG, HR, blood oxygen, and skin temperature sensor
- Helped reduce board size of pre-existing prototype hardware

PERSONAL PROJECTS

CAN Bus DAQ hardware, parametric [parsing](#), and [data visualization](#) system

CAN-Enabled IR Proximity [Sensor](#) for automation and robotics environments

Vacuum Thin-Film Deposition System applicable to optics and semiconductor fabrication

Custom Pickup Bed designed and welded with watertight compartments, secure storage, and flatbed area

IC Engine Modifications to [improve efficiency](#), both of combustion and by [reducing load](#)

Personal Notes & [Website](#)

SKILLS AND INTERESTS

PC Board Design – Digital & analog circuit design & board layout

Embedded Programming – Zephyr, Mbed, NCS, Bare metal

Documentation – Markdown, Process Documentation, Schematics, Wiring Diagrams

Data Analysis – Grafana, DB, SQL, Visualizations, Prediction Models

Wireless Communications – BLE, RF, Antenna Selection, WiFi, 802.11ah Halow, Ham Radio

Automotive & Robotics Electronics – CAN Bus, DBC, Wire Harnessing

Unix & Networking – Linux, Systemd, Kernel Modules, Wireguard, nginx, http

EDUCATION & STUDENT INVOLVEMENT

University Of California, Santa Cruz – Pursuing Electrical Engineering B.S.

Fall 2025 - Fall 2027 (Projected)

- Electrical Team of [Formula Slug](#) – Formula SAE electric
 - Lead ongoing development of new data acquisition and analysis hardware and software stack
 - * Write documentation and standards
 - * Help others use KiCad and Git
 - * Maintain clean and readable schematics
 - Help peers use Git and EDA software more effectively
 - Work with mechanical & suspension team to manufacture replacement parts in the field
 - Commission new COTS CAN-enabled sensors to report data correctly
 - Increase effective budget by securing high-value hardware sponsorships

Design Tech High School, Redwood City CA

Fall 2021 - Spring 2025

- Electrical Lead of [5940 BREAD](#) FRC robotics team
 - Ranked in the top 15 of 3000 teams at the world championship each year I participated
 - Rebuilt Documentation, Onboarding, and Training
 - Developed several highly constrained mechanisms each year
 - Piloted new "Partner Prep" program to help catch reliability issues in alliance member robots using the same processes I developed for our own
 - Invested in longevity of the team and programs I developed by continuously passing on responsibilities
- Participated in Model United Nations
- Designed and co-instructed brand new two week electronics course during which participants completed a project for the annual Hackaday challenge and learned basic Arduino and electronics skills