

CHRISTIANO GRAVINA

Computer Engineer

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SUMMARY

Versatile and reliable computer engineer with a strong foundation in embedded systems, C++, and hardware integration. Eager to grow in the tech industry and apply a broad technical skill set to real-world challenges. My 5-year goal is to get a postgraduate degree that helps me build more advanced robots and circuitry. More on my website!

TECHNICAL SKILLS AND TOOLS

- Languages: C++, C, Assembly, Verilog, Python, Java
- Embedded Systems: FPGA, Arduino, Raspberry Pi, NVIDIA Jetson, FreeRTOS, ROS
- Software: Fusion 360, Cadence Virtuoso, Xilinx Vivado, MATLAB, Simulink, Linux CLI, Git, Virtual Machines, OpenCV
- Lab Tools: Soldering, Oscilloscope, Bench Power Supply, Bench Voltmeter, Circuit Design, Perf-board Prototyping
- Human Languages: Fluent in Portuguese and English, Advanced Spanish
- Additional: Advanced Microsoft Word, PowerPoint and Excel, LLM Prompt Engineering

RELEVANT PROJECTS

VENDING MACHINE

VERILOG, BASYS 3 FPGA, XILINX VIVADO, I2C

- Designed and implemented a vending machine chip in my Basys 3 FPGA. It takes input from a 4x4 keypad scanner and sends characters to a 1602 LCD via I2C.

MIPS PROCESSOR WITH PIPELINING

VERILOG

- Designed and implemented a RISC-V pipelined processor executing custom bytecode as a solo project in EECS 112L.

CMOS DIGITAL DESIGN PROJECTS

CADENCE VIRTUOSO, CUSTOM SILICON DESIGN

- Designed a **4-bit adder** and **up/down counter** in Cadence Virtuoso using custom CMOS logic; created and verified transistor-level schematics, then developed full custom layouts with DRC/LVS compliance for silicon implementation.

SELF-DRIVING TRUCK WITH NFC

I2C, SPI, C++, RASPBERRY PI, LINUX CLI

- Developed embedded software for high-frequency, time-critical data transfers between Raspberry Pi and peripherals; part of a forthcoming research paper under Dr. Fadi Kurdahi.

CYCLOPS SELF DRIVING PLATOON PLATFORM

C++, OPENCV, ROS, SOLDERING, PERF-BOARD PROTOTYPING

- Capstone Project under Dr. Fadi Kurdahi. Extended a South Korean platooning platform.
- Developed high-level controllers in C++ and ROS. Integrated low-level firmware on Arduino and ensured real-time communication across modules. Built custom perf-board circuit and debugged hardware/software integration issues.

PROFESSIONAL EXPERIENCE

STITCHCRAFT INTERIORS

CORONA, CA

Electrical Installation

Concurrent

- Planned and installed audio and light harnesses for customized cars.

MICRO CENTER

TUSTIN, CA

System Sales

Concurrent

- Top salesman in General Sales (keyboards, mice, general electronics) then quickly promoted to Systems sales, where I found computer system solutions for people and businesses.

CENTER FOR EMBEDDED AND CYBER-PHYSICAL SYSTEMS

IRVINE, CA

Undergraduate Research

2023 - 2024

- Sole developer of the Cyclops self-driving truck, handling embedded C++/ROS development and hardware integration. Built and maintained real-time microcontroller communication using I2C/SPI.
- Supported an NFC-guided robotic car project for doctoral research, focusing on embedded control and sensor interfacing.

EDUCATION

UNIVERSITY OF CALIFORNIA IRVINE, HENRY SAMUELI SCHOOL OF ENGINEERING

IRVINE, CA

Bachelor of Science in Computer Engineering

2025