



Emilio A. Magaña

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EDUCATION

Bachelor of Science in Electrical and Computer Engineering

Graduated June 2021

[Oregon State University \(OSU\)](#)

- ❖ USA-GPA: 3.52/4.0, **DE-GPA: 1.63 (Gut)**.
- ❖ **Computer Science Minor.**
- ❖ *Related Coursework:* Digital Logic Design, VLSI, CMOS, Computer Architecture, Data Structures.

EXPERIENCE

Product Engineer

Oct. 2021 - Jan. 2024

[Lattice Semiconductor](#) | Hillsboro, OR | [Python](#), [SystemVerilog](#), [R](#), [Electrical Lab Equipment](#)

- ❖ Main role consisted of validating and characterizing IP.
 - Wrote documentation of methodology for both validation and characterization.
 - Worked closely with all aspects of FPGA IP's, mainly on: I/O, PLL, OSC.
 - **Developed behavioral patterns** through our in-house design software.
 - **In charge of** bring-up, maintenance, and **automatization of benches**.
 - Created statistical visuals between specification and performance of IP.
- ❖ Worked with customer issues/JIRA (internal and external) in providing solutions and data.
- ❖ Small Projects involving: BSCAN/JTAG, Thermal Studies.

Teacher's Assistant/Head TA

Jan. 2019 - Mar. 2019

[OSU, Electrical and Computer Engineering Department](#) | Corvallis, OR

- ❖ Coordinated lab sessions for ECE 112: Introduction to Electrical and Computer Engineering.

PROJECTS

[Portfolio Website](#)

[Personal](#) | [TypeScript](#), [React.js](#), [Next.js](#), [TailwindCSS](#), [Git](#)

- ❖ **Designed** a personal website **using Next.js** to self-introduce and be a root to all socials and future projects.
 - **Including a RAG Chatbot using OpenAI, Astra DB, and Upstash Redis.**
- ❖ Deployed using Vercel for developing serverless functionality, when handling api calls.

[Wild Oasis](#)

[Personal](#) | [TypeScript](#), [React.js](#), [Supabase](#), [TanStack](#), [React Router](#), [styled-components](#), [Vite](#)

- ❖ Designed a property booking website to act as an Airbnb clone, for authenticated users managing lodgings, guests, and bookings of property.
- ❖ Supabase is used for managing all information.
- ❖ Deployed using Netlify.

High Voltage Peripherals

[Capstone](#) | [Eagle CAD](#), [LTspice](#)

- ❖ Capstone Project was done with the Global Formula Racing (GFR) Team at OSU, a International Formula Student team in conjunction with DHBW Ravensburg, as part of the ePowertrain sub-team.
- ❖ **Designed and Functionally tested** the Direct Current Link (DCL) and Brake System Plausibility Device (BSPD) for both Formula Student (FS) and Formula Society of Automotive Engineers (FSAE) 2021 Competitions.
 - Under **ES** rules:
 - The DCL discharged the vehicle's current **2627% faster** than the allotted maximum given time.
 - The BSPD **rebooted the car 11.6s** after no implausibility being present (reboot must be > 10s).
 - Under **FSAE** rules:
 - The DCL discharged the vehicle's current **50% faster** than the allotted maximum given time.
 - The BSPD was not to be used.

TECHNICAL SKILLS

Languages: [TypeScript](#), [Python](#), [CSS](#), [SystemVerilog](#), [R](#), [Go](#)

Frameworks/Libraries: [React.js](#), [Next.js](#), [Node.js](#), [TailwindCSS](#), [TanStack](#), [React Router](#), [styled-components](#)

Tools: [Vite](#), [Git](#), [Supabase](#), [Electrical Lab Equipment](#), [Eagle CAD](#), [LTspice](#), [Cadence](#)

Conversational Languages: [Spanish](#) (Fluent, Oregon Seal Of Bilingualism, C1), [German](#) (Conversational)