

MARIANO FRANCISCO RODRIGUEZ

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OBJECTIVE

Looking for opportunities to learn how to build high performing, scalable, maintainable, and idiomatic solutions to software industry problems. Passionate about learning the methodologies that comprise the foundations of successful engineering teams.

EDUCATION

- **University of Illinois at Urbana-Champaign** Expected December 2027
Bachelor of Science, Grainger College of Engineering
◦ GPA: 3.93/4.00
◦ **Relevant Coursework:** Discrete Math, Data Structures, Computer Architecture, Numerical Methods

SKILLS

- **Programming Languages:** Rust, C++, Python, JavaScript, C, OCaml, Java, Kotlin, SQL
- **Web Technologies:** NextJS, React, Django, Flask, REST, WebSockets, HTML, CSS
- **DevOps:** Git, GitHub Actions, Cargo, Bash, Make, Docker
- **Other Technologies:** Linux, UART, PWM, I2C, SPI, Onshape, PostgreSQL, SQLite

EXPERIENCE

- **Operation Autopilot** June 2025 - August 2025
Intern Chicago, Illinois
 - Wrote Python-based leads generation software for prospecting potential customers, generating over 100 new leads and leading to more potential revenue
 - Developed Flask interface for leads generator, using webcrawling, and Google Places API to enrich data
- **Mundelein High School** June 2023 - July 2023
Camp Counselor Mundelein, Illinois
 - Developed weekly lessons teaching middle schoolers the Python programming language
 - Enhanced learning by adding interactivity via weekly projects and discussions on why some code fails
- **Discovery Partners Institute** June 2022 - August 2022
Intern Chicago, Illinois
 - Developed mobile app as part of capstone project, increasing knowledge of Swift ecosystem
 - Implemented SQLite database to allow for simple persistence of data

PROJECTS

- **Outdoorzy: Social App for Finding Workout/Sports Partners/Groups** June 2025 - Present
Python, Django, REST [\[in LinkedIn\]](#)
 - Helped design system architecture for Geolocation-based CRUD app
 - Co-Developing backend CRUD REST API along with token-based authentication layer
- **Illinois Space Society: Solid Fuel Rocket Propulsion Testing Rig Software** August 2024 - May 2025
Rust, SPI, Linux, Device Tree, Git [\[Blog Post\]](#)
 - Improved GitOps for CAD and code contributions to monorepo
 - Creating Rust data collection binary for Raspberry Pi Zero 2 W, collecting uncompromising time-series data collection of key metrics from SPI sensors at 100 Hertz
 - Wrote custom device tree for Raspberry Pi Linux kernel to reconfigure hardware pins to nonstandard functions
 - Oversaw live rocket motor hotfire, with 100% uptime for telemetry
- **parse_rc_ibus: Parser for IBUS radio protocol** August 2024 - November 2024
Rust, UART [\[GitHub\]](#)
 - Implemented packet parsing logic using bit-wise operations
 - Designed robust data model, ensuring checksum validity and developer ergonomics
- **VexDoc: HTML Documentation Generating Command-line Interface** June 2024 - July 2024
Rust [\[GitHub\]](#)
 - Designed Unix style command-line interface to generate HTML code documentation
 - Using a finite-state machine to parse annotations in the target source code
- **Chatter: AOL Instant Messenger Inspired WebSocket Chat App** September 2023 - December 2023
Rust, WebSockets, HTML, CSS [\[GitHub\]](#)
 - Developed WebSocket chat app using Rust as server
 - Coordinated multiple development efforts between classmates who were interested in contributing

INVOLVEMENTS

- Illinois Space Society, Peruvian Student Association, Association for Computing Machinery