

Ryan Frederich

(858) 334-8841 | ryanfrederich@gmail.com | [linkedin.com/in/ryanfrederich/](https://www.linkedin.com/in/ryanfrederich/) | github.com/ryansurf | ryansurf.github.io

Education

University of California, Santa Cruz

Sep 2019 - Dec 2023

- B.S. Technology and Information Management | Minor: Computer Science

Relevant Coursework

Sep 2019 - Dec 2023

CSE 120: Computer Architecture

CSE 140: Artificial Intelligence

CSE 150: Computer Networks

CSE 101: Data structures & Algorithms

CSE 182: Database Management

TIM 175: Business strategy & Information Systems

Employment

Software Development Intern

Callaway Golf

Jun 2023 - Sep 2023

- Developed and maintained **HTML**, **CSS** and **Java** for a customer-facing eCommerce website.
- Developed reusable components, referencing **Figma** designs for creation and modification.
- Automated server startup and file compilation through custom **Bash** scripts, reducing start-up time by 30%.
- Managed tickets through **Jira** within an **Agile** development framework, working in short sprints.

Computer Science Instructor

iD Tech

Sep 2022 - May 2023

- Taught students computer science fundamentals using **Python** in a group setting of 10+ students and one-on-one.
- Explained basic data structures, algorithms and **object-oriented** programming concepts.

Skills

- **Languages:** Python, C/C++, Javascript, HTML/CSS, Java, SQL, Bash
- **Tools:** Git, Linux, Docker, Ansible, AWS, REST APIs, Jira, Confluence, Figma
- **Other:** Virtualization, Computer networking, Firewalls, Wireshark

Projects

CLI Surf Report

https://github.com/ryansurf/cli_surf_report

- Developed a **full-stack** customizable surf forecasting tool, pulling data from an open-source weather **API**. Users can access real-time surf conditions and forecasts from the command line or through a web browser.
- Runs on a server, which responds to **HTTP curl requests**. Delivers custom data via command line arguments.
- Hosted on a small server ran locally in my network. **Firewall rules** allow any device on any **VLAN** in the network to use the service.
- Containerized the application using **Docker**, ensuring smooth deployments across different environments.
- Configured **GitHub Actions** to automate code quality checks, testing, and deployment processes on push and pull requests, enhancing **CI/CD** workflows.
- Wrote simple unit tests to verify all functions are working as expected.

Homelab

https://ryansurf.github.io/network_diagram.html

A sandbox environment that is used to learn new skills/software

- **Linux** and **Windows** based environments used to test new technologies across different operating systems.
- Implemented network-wide ad-blocking with a self-hosted **DNS** server in a **Docker** container, enhancing security.
- Set up infrastructure as code to manage and configure Virtual Machines.
- Self-hosted a secure **VPN** and integrated dynamic DNS to point to the local network's IP address.
- Configured **VLANs** on router to separate guest traffic from the rest of the network using several switches.
- Replaced home router with custom-built PC running **routing/firewall** software for enhanced network security.
- Examined network traffic, including **TCP/IP** and **HTTP** protocols, using a network protocol analyzer.