

# Ryan Frederick

[ryanfrederich@gmail.com](mailto:ryanfrederich@gmail.com) | (858) 334-8841

LinkedIn: <https://www.linkedin.com/in/ryanfreder> | GitHub: <https://github.com/ryansurf>

## Education

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### University of California, Santa Cruz

Sep 2019 - Dec 2023

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

## Employment

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### Web Development Intern

### Callaway Golf

Jun 2023 - Sep 2023

- Developed and maintained **CSS** and **JSP** code for an eCommerce website
- Managed and created reusable components via **SAP Backoffice**
- Automated server startup and file compilation through custom **bash** scripts, streamlining processes

### Computer Science Instructor

### iD Tech

Sep 2022 - May 2023

- Teaching students computer science fundamentals using **Python**
- Explained basic data structures and **object-oriented** programming

## Skills

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- **Languages:** Python, C/C++, Java, Javascript/HTML/CSS, SQL, Bash
- **Libraries and Frameworks:** React, JQuery, Flask, Node.js
- **Tools:** Git, Linux, Docker, Vim, Eclipse
- **Other:** Computer networking experience (Mininet, Wireshark, Socket programming)

## Projects

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**Personal Website:** <https://ryansurf.github.io/>

### Automated Irrigation System

- Built an enclosure with a microcontroller, solenoid valve and sensor to measure a garden's soil moisture levels.
- Wrote a program in **C** to detect if the soil moisture content fell below a given threshold, and triggered the solenoid valve to turn so the garden could be watered.

### Homelab

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

- **Linux** based environment used to test new technologies.
- Implemented and maintained a network-wide ad-blocking solution utilizing Pi-Hole as the **DNS** server within a **Docker** container, increasing network security and efficiency.
- Conducted analysis of network traffic, including **TCP/IP** and **HTTP** protocols, using **Wireshark**.
- In progress: Configuring network-attached storage (**NAS**) infrastructure for centralized data storage and management, along with setting up a secure Virtual Private Network (**VPN**) using OpenVPN to enable remote access to the network from any location.

### Ocean Data Reporter

[https://github.com/ryansurf/Surf\\_ScrapeV2](https://github.com/ryansurf/Surf_ScrapeV2)

- Retrieves ocean data (wave height, tides, ocean and air temps) from buoys stationed along the coast, written in **Python** and utilizes NOAA's buoy **API**.
- Sends a surf report via email to subscribing email addresses at a specified time using **cron** on a Raspberry Pi.
- Stores data in a database using SQL (**MySQL**) for analysis of trends overtime.