Ryan Frederich

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Skills

Languages: Python, C/C++, Bash, SQL, JavaScript, HTML/CSS
Tools: GitHub, Linux, Docker, Ansible, AWS, CI/CD (GitHub Actions), Jira, Confluence, Figma
Other: Unit testing, Virtualization, Networking (VLANS, VPNS, etc.), Firewalls, Wireshark

Experience

Software Development Intern, Callaway Golf – San Diego, CA June 2023 – Sept 2023

- Replaced existing code in a large, customer-facing eCommerce website with reusable components to improve readability and functionality, referencing Figma for design
- Automated local server startup and file compilation through custom Bash scripts, reducing start-up time by 30%
- Used SAP Backoffice to add and test new product data, using cronjob to automate the updating of catalog contents
- Updated documentation in Confluence, giving detailed steps on how to get the local environment running
- Managed tickets through Jira and utilized Agile development practices, working in short sprints

Computer Science Instructor, iD Tech – Remote Sept 2022 – May 2023

- Taught students computer science fundamentals using Python in both group settings of 10+ students and private lessons
- Explained basic data structures, algorithms, and object-oriented programming concepts

Projects

CLI Surf Report | *Python, JavaScript, Tailwind CSS, Bash, Docker* github.com/ryansurf/cli-surf

- Developed a full-stack customizable surf reporting & forecasting tool, pulling data from an open-source weather API
- Utilized GPTs to give custom surf reports and recommendations based on the current and forecasted surf conditions
- Collaborated with other developers, reviewed and merged pull requests, and helped contributors debug any errors, among other typical open-source responsibilities
- The server responds to HTTP GET requests, delivering custom data via CLI arguments in JSON or a readable format
- Containerized the application using Docker, ensuring smooth deployments across different environments
- Configured GitHub Actions to automate code quality checks and testing on push and pull requests. Unit tests are run to catch any errors and a formatter/linter is executed for readability in a pre-commit hook, enhancing CI/CD workflows
- Hosted on a local server with firewall rules allowing any device in the network to access it from any VLAN

HomeLab | *Python, YAML, Bash, Docker, Ansible, Networking* ryansurf.github.io/network_diagram.html

- Linux and Windows-based environments are 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 a 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

Education

University of California, Santa Cruz Dec 2023

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

Relevant Coursework

CSE 120: Computer Architecture
CSE 150: Computer Networks
CSE 182: Database Management
CSE 140: Artificial Intelligence
CSE 101: Data Structures & Algorithms
TIM 175: Business Strategy & Information Systems