Aidan Hopper

253-985-5876 | aidanhop1@gmail.com | linkedin.com/in/aidanhopper | github.com/aidanhopper

Summary of Qualifications

- Proficient in programming languages such as Python and C/C++ with a strong foundation in data structures, algorithms, and software development principles.
- Experienced with tools such as Docker, Git, Linux, and Proxmox VE, including containerization, virtualization, version control, and system administration.
- Skilled in automated platform deployment for testing environments, with hands-on experience creating and deploying custom images to bare metal, managed by a unified deployment system.

Education

Bachelor of Science in Computer Science: GPA 3.68

Washington State University, Pullman, WA   **Expected May 2025**

- <u>Relevant coursework:</u> Object Oriented Principles, Advanced Data Structures, Systems Programming, Linear Algebra, Calculus 3, Programming Language Design, Design and Analysis of Algorithms, and Cybersecurity.

Skills & Abilities

Languages	Tools	Technologies
- C/C++	- Git	- KVM
- Python	- SSH	- Network Booting
- Bash	- Docker	- Containerization
- Haskell	- Linux	- Virtualization

Professional Experience

Application Engineering Intern

Schweitzer Engineering Laboratories, Pullman, WA   **Aug 2023 - Current**

- Developed an automated platform deployment system with Python, iPXE, Tiny Core Linux, and QEMU/KVM, for deploying custom images to bare metal for remote automated testing, providing flexible image creation and deployment capabilities.
- Enhanced the efficiency of the test suite by automating tests that were previously performed manually, reducing testing time and increasing test coverage.
- Analyzed, refactored, and developed an existing internal SSD testing solution, decreasing time to test all blocks by 600%.

Personal Projects

Chess Engine   **github.com/aidanhopper/ChessEngine**

Developed a chess engine in Haskell that serves as a backend API for a Python frontend. Implemented chess move generation, position evaluation, and fast position search for a chess AI. Designed RESTful API for communication with the frontend, enabling flexible usage and allowing for real time gameplay and user interactions.

Proxmox Homelab

Set up and manage a two node Proxmox cluster at home to run multiple virtual machines and containers for various applications and services. Gained hands-on experience with virtualization and resource management, enhancing my understanding of cloud infrastructure.

Other Experience

President of Palouse Robosub at WSU   **Sept 2024 - May 2025**

Oversaw the design, development, and administrative tasks associated with creating "minisubs" for new members of the club as onboarding before working on the larger submarine.