

Skills

- Systems Administration
 - Diagnosing computer hardware and software
 - Experienced in building and deploying virtual machines
 - Experienced in learning undocumented complex systems and create meaningful documentation and ideas for overall system improvement.
 - Experience planning and implementing LAN/WAN configurations.
 - Able to understand and follow complex processes with a high degree of accuracy.
 - Able to automate infrastructure functions via Ansible
 - Experience managing and running multiple distributions of Linux including RHEL, Debian, and Canonical Ubuntu among others.
 - Experience creating API based integrations between divergent applications to add value to existing systems that don't interface natively.
- Computer Architecture
 - Using hardware design languages (SystemVerilog) to model logic gates and hardware to program FPGAs and design digital systems
 - Understanding of the innerworkings of a compiler (how to scan, parse, abstract and construct other languages)
 - Understanding of a processor across multiple architectures, the boot process, memory management, user environments and preemptive multitasking of a UNIX kernel
 - Programming in assembly using an instruction set architecture (ISA)
 - Building shells, operating system aware programs that take advantage of mutexes and parralism
 - Building various programs using C++, FreeGlut and OpenGL that demonstrate advanced knowledge of the computer graphics pipeline
- Computer Programming
 - Software Development Lifecycle, Agile and Waterfall methodologies and software design patterns
 - Software testing frameworks including black box testing, unit testing, integration testing, system testing and acceptance testing
 - Designing RESTful APIs backed up by noSQL and SQL databased, caching services, messaging services and testing tools including cURL and Postman
 - Using docker and docker-compose efficiently to build web applications
 - Analyzing time complexity of code and prove correctness of an algorithm
 - Designing a relational schema to fulfill data storage needs

Projects

Taurpalin API

2022

- Led a successful project using tools on Github, such as branching strategy and issue tracker
- Demonstrated an in depth understanding of containerization by designing a docker-compose REST API that every team member could use without installing any local dependencies
- Communicated efficiently with teammates of multiple skill levels to get project done ahead of schedule and according to design specification

- Virtual Automotive Cluster** 2021
- Worked individually using OpenGL to build a working dashboard cluster that contained a working speedometer, tachometer, fuel guage and temperature guage.
 - Used shaders, textures, animation and a basic Makefile to compile multiple files and parts
- MIT's Operating Systems Engineering, JOS kernel** 2021
- Implemented booting, memory management, user environments and preemptive multitasking
 - Used ctags, tmux, vim, GDB and qemu to develop project using CLI
- FPGA Design Project** 2019
- Worked on a small team to build multiple device drivers for an Intel FPGA
 - Built a driver for the seven segment display, a NES controller, audio output and VGA output using SystemVerilog
 - Demonstrated advanced knowlege of digital design methodology, and documentation using LaTeX

Experience

- Global Formula Racing** | Corvallis, OR 2021 — 2022
- Worked independently and collaboratively on deploying a containerized data collection and visualization application on a driverless racecar
 - Attended meetings multiple times a week, presenting project progress twice a week
 - Worked on-site and remotely with an international team
 - Communicated complex computer engineering ideas to a multidisciplinary team
 - Deployed a containerized data collection application on a driverless racecar collecting
 - Worked with Robot Operating System (ROS) for the driverless systems and Controller Area Networks (CAN) for the electric car
 - Used an agile methodology to develop the backend end and test compatibility with multiple established front-end applications
 - Assisted teammates in building and documenting GFR's software stack
 - Contributed to the computer vision portion of the driverless stack, using OpenCV
- Amazon.com LLC** | Troutdale, OR 2019 — 2021
- Attended daily stand up, worked independently to meet hourly and daily goals
 - Worked alongside robotic assemblies and assisted in troubleshooting errors
 - Worked with a complex inventory management system with a Linux POS
- Dutch Bros. Coffee** | Springfield, OR 2017 — 2019
- Worked graveyard shifts independently with a focused approach to consistently deliver good service and coffee
 - Leaned a documented process in order to pass a flow test and produce coffee rapidly and to a standard

Education

- Bachelor of Computer Science** 2018 — 2022
Oregon State University | Corvallis, OR
- Cum Laude, GPA 3.67, Computer Systems Engineering, ABET Accredited
 - Ford Scholar
- Rotary Youth Ambassador** 2015 — 2016
Instituto Menendez i Pelayo | Barcelona, Spain
- Fluent in Spanish, Certified B1 Level