Garrett Hart

577 Pine St. Apt 1, Manchester, NH 03101 | ghart.space| Hart.Garrett.10@gmail.com

Education

B.S. in Electrical Engineering **February 2024**
Rose-Hulman Institute of Technology Terre Haute, IN

Related Courses: Power Systems and Machines, Renewable Energy Systems, Networking, Data structures and Algorithms
Languages: Python, Java, C, MATLAB, LabVIEW **Development Tools:** Linux, Git, Azure, Jira
Skills: PTI/PSSE, Docker, Kubernetes, Computer Networking, Server Virtualization, Kafka, Devops / Gitops

Work Experience

DEKA R&D **May 2024 – Present**
Electrical Engineer Manchester, NH

- Verify PCB assemblies for technical accuracy upon arrival and debug problematic PCBAs
- Conduct and analyze Electromagnetic interference test to drive product design decisions

Ursa Major **June 2023 – August 2023**
Software Engineering Intern Denver, CO

- Utilized Kubernetes, Docker, CI/CD, and Apache Kafka to create an event driven software architecture from scratch
- Developed a mission critical monitoring solution for hydrogen peroxide storage with Grafana, saving the company an estimated $200,000 in wasted hydrogen peroxide per year
- Outperformed expectations while learning Kubernetes on-the-job for the first time

Kratos Space and Defense **May 2022 – September 2022**
Software Engineering Intern Colorado Springs, CO

- Increased signal acquisition bandwidth from 30 to 500 MHz for the Kratos Global Sensor Network (KGSN)
- Built a Python library to utilize new RF signal digitizers with RESTful API. Library was deployed worldwide on KGSN
- Worked on a newly formed team of 10 to test bringing new software technologies to market

NASK Inc **May 2021 – Aug 2021**
Software Engineering Intern Dayton, OH

- Increased signal acquisition start time accuracy from within 50 µs to within 13 µs by applying C++ bug fixes
- Reduced setup time of RF signal acquisition machines by automating the install of CentOS Linux

Altec Inc **July 2020 – Nov 2020**
Core Controls Developer CO-OP St. Joseph, MO

- Logged hundreds of parameters from CAN devices automatically to aid development of hybrid vehicle fleet
- Utilized C++, Buildroot, GDB, CentOS, and SocketCAN to build and debug embedded Linux applications

Project Experience

Switching Power Supplies – Class project **2024**

- Designed a built a boost converter 12-14V → 25V, 50W
- Designed and built a buck-boost converter 12-14V → -25V, 50W

Applied Computer Networking – Personal project **2022 - 2024**

- Architected, deployed, and maintained a server solution to 300+ student peers to accelerate engineering design cycles
- Specifications: ~400 CPU cores, 2TB RAM, and 40TB NAS

Personal Virtualization Lab – Personal project **2019 - Present**

- Built and maintained home virtualization lab to apply computer networking and server hosting concepts
- Utilized technologies: Proxmox, Docker, Ansible, Grafana, Gitops, NGINX, TrueNAS, PfSense, and CentO

Leadership and Honors

Most Valuable Competition Team Member – Rose-Hulman Innovation Center **2023**
Outstanding Student Leader Award – Rose-Hulman Student Affairs **2022**
FIRST Robotics Woodie Flowers Mentor Award – FIRST Robotics student peers **2022**
NASA Student Launch President and Co-Founder **2020 - 2024**

- Established Rose-Hulman's first rocketry competition team, growing to 40 active students within two years
- Logged 1000+ hours of design and fabrication work in less than 2 years while enrolled full time and working 15-20 hr/wk
- Presented complex technical information to a panel of NASA engineers through a series of 3 design reviews per year

FIRST Robotics Competition Vice President and Mentor **2019 - Present**

- Responsible for teaching training material to high school students such as Java programming, robot control theory, computer vision, and more