

Garrett Hart

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Education

B.S. in Electrical Engineering

Rose-Hulman Institute of Technology

February 2024

Terre Haute, IN

Related Courses: Computer Networking, Digital Signal Processing, Data structures and Algorithms, Deep/Machine Learning

Languages: Python, Java, C, MATLAB, LabVIEW

Development Tools: Linux, Git, Azure, Jira

Skills: Docker, Kubernetes, Computer Networking, RESTful services, Server Virtualization, Kafka, Devops / Gitops

Work Experience

DEKA R&D

Electrical Engineer

May 2024 – Present

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

Software Engineering Intern

June 2023 – August 2023

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

Software Engineering Intern

May 2022 – September 2022

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

NASK Inc

Software Engineering Intern

May 2021 – Aug 2021

Dayton, OH

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

Altec Inc

Core Controls Developer CO-OP

July 2020 – Nov 2020

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 and built a boost converter 12-14V \rightarrow 25V, 50W
- Designed and built a buck-boost converter 12-14V \rightarrow -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: \sim 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