

# OWEN KRUSSOW

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## EDUCATION

**University of Kansas**  
BS Computer Engineering

Lawrence, Kansas  
August 2021 - Expected: May 2025

## EXPERIENCE

### Heatron Inc

*IT Intern*

Leavenworth, Kansas

Summer 2020, Summer 2021, Summer 2022

- Developed a tool in JavaScript which automatically calculated ideal components for a product, given key specifications, and outputted a file in a very detailed format to be imported into the ERP system.
- Designed and implemented a break buzzer system for the production floor using some GPIO-controlled relays, NTP, a custom python web server, and NGINX.

### KU Institute for Information Sciences (I2S, formerly ITTC)

*Student Linux System Administrator*

Lawrence, Kansas

April 2023 - Present

- Built out Ceph and CTDB (Clustered NFS and Samba) clusters to eventually replace aging primary fileserver for the Institute
- Worked with other Linux admins to administer the Institute's research cluster utilizing xCAT, Slurm, and CentOS
- Compiled Lmod environment modules for researchers/graduate students using the cluster
- Built out warewulf+Slurm cluster from scratch
- Migrated primary LDAP servers from RHEL 6 to Rocky Linux 8
- Worked with graduate students to help streamline their research on the Institute's hardware/infrastructure.
- Migrated production virtual machines from oVirt (KVM) to physical servers.

## SKILLS

Linux/Unix:	High proficiency with command line interface, 8-9 years of Linux experience.
Programming:	Experience with Python, C, C++, Rust, Java, Javascript, and shell scripting.
Networking:	Thorough understanding of networking fundamentals
Git:	Experience collaborating with Git version control
Electronics:	Solid understanding of basic electrical engineering principles

## PROJECTS

**Homelab** *Proxmox, Rocky Linux, OpenBSD, FreeBSD, NGINX, Jellyfin, Wireguard, LXC, Gitea, ZFS*  
Consists of four servers set up to self-host various services

### Unlocked vGPU on a consumer NVIDIA GPU *vgpu\_unlock*

Experimented with an open source project called "vgpu\_unlock" to set up multi-seat gaming computer

### Python Crypto (WIP) *Python*

github.com/o-krussow/python-crypto

A simple cryptocurrency written in Python to apply my understanding of blockchains and the Proof of Work consensus algorithm. The server listens for new transactions, and maintains a "blockchain"

### Stock Analysis *C++, Python, Yahoo Finance API*

github.com/o-krussow/stock-analysis

Wrote programs to backtest trading algorithms on immense amounts of price history data, and tested different parameters for these algorithms. Such large amounts of data necessitated the use of C++ and multithreading.

### Machine Learning *ROCm, Falcon LLM, Llama 2, Stable Diffusion*

Flashed a Radeon Instinct MI25 with Radeon Pro WX 9100 firmware to lower the power limit. Cooled with a fan powered by an old laptop charger. Used to experiment with emerging open source LLMs (with quantization) and text-to-image models.

### PRIM *Python, Flask, Tensorflow*

github.com/o-krussow/PRIM

Worked in a group of 4 for a hackathon to train an LSTM network on past stock prices to try to find trends in human psychology and predict future stock prices.

## AWARDS/HONORS

**Vice President of the KU Swim Club**

**High School Record Holder in two swimming events**