

## EXPERIENCE

### **CLOUDFLARE INC. (acquisition) | Software Engineer - Zero Trust CASB Team**

**Feb 2022 - Present | Remote**

- Lead design, development, & optimization of a flexible, async-focused task pipeline for IO heavy workloads. Replaced existing Celery task pipeline, increasing throughput by >50x.
- Lead DLP integration design & development, surfacing customer data leaks caused by SaaS file sharing.
- Lead Logpush integration design & development, pushing security insights to customer storage services.
- Deployed & maintained HA Redis, MongoDB, & RabbitMQ.
- Migrated Vectrix services to in-house offerings from Amazon EKS, Amazon RDS, & Confluent Kafka.

### **VECTRIX INC. | Software Engineer - Full Stack**

**Aug 2021 - Feb 2022 | Remote**

- Developed easily reversible deployments & DB migrations with CircleCI & Helm.
- Autoscaled EKS deployments with Terraform & Kubernetes Cluster Autoscaler.
- Designed the API & backend for "User inventory", a single pane of glass for all user accounts across all integrated SaaS apps.

### **DATTO INC. | Software Engineer II - Engineering Productivity & BCDR Cloud Team**

**March 2020 - Aug 2021 | Rochester, NY | Remote**

- Developed automatic creation & orchestration of Azure hypervisors as customer restore targets. Expanded Datto's rapid restoration offerings to Azure, protecting & validating customer Azure VMs.
- Extended our VM deployment service with an Azure backend, providing Azure compute deployment & cleanup. Facilitated testing & development of Azure-focused products.
- Migrated container-based test reporting software to an HA, Helm-managed Kubernetes deployment. Enabled reliable and scalable test reporting for all BCDR products.
- Extended a libvirt cluster management service with ZFS-backed VM snapshots. Enabled "replaying" hard-to-reproduce actions in test scenarios.

### *Software Engineer I - Engineering Productivity*

**May 2019 - March 2020 | Rochester, NY**

- Lead design & development for a backup agent test harness & a long-term test environment, complete with monitoring tools & reporting.
- Built and deployed a flexible provisioning system for our VM lifecycle management service. Enabled seamless integration of a legacy developer VM deployment service.

### *Software Engineering Intern - Quality Assurance Automation*

**Jan - Aug 2018 | Rochester, NY**

- Built a REST API for VM lifecycle management, automatically provisioning mock customer environments.
- Assisted in building a test framework for Datto's flagship backup product, leveraging the above service.
- Extended agent software with automatic MSSQL installation and DB load configuration options.

### **BAYER RADIOLOGY | System Software Verification & Validation Intern**

**June - Aug 2017 | Indianola, PA**

- Designed & implemented a log parser to partially automate contract injector test scenarios. Transformed ~40 hours of manual log reading into ~20 minutes of automated testing.

# SKILLS

## LANGUAGES

**Confident in Python** from 4+ years of professional experience building APIs and batch systems. Well-versed on **asyncio** & async Python tooling. 1 year of professional **Golang** experience. Frequent use of **Bash** & **Powershell**. **Familiar with C, Rust & Haskell** from hobby projects, tech talks, & college courses. Used **JavaScript & React** during hackathons/hobby projects. Some exposure to **Java** & **Assembly (MIPS, x86)**.

## OPERATING SYSTEMS

Used **Linux** (Debian & derivatives, Fedora, Alpine) for business, development, and personal use. Utilized **ZFS** on Datto's backup storage appliances & on a libvirt cluster manager for VM snapshots, as well as personal use. Familiar with automation & orchestration of **Windows** environments (sysprep).

## VIRTUALIZATION & CONTAINERS

Personal experience managing a **K3s** cluster. Professional experience with **managed & onsite Kubernetes**. Wrote, modified, & deployed numerous **Helm** charts, occasionally extended with **Jsonnet**. Built & deployed **Docker** images for both personal and professional applications. Leveraged the **Libvirt** API & configurations in a compute cluster, for on-demand VM creation & fast snapshots. Familiar with several hypervisor & cloud APIs, including **vSphere**, **Openstack**, **Azure**, & **AWS**.

## FRAMEWORKS

Experienced writing extensible **Pytest** plugins & heavily utilizing its fixture system. Experienced using **Celery** with various brokers. Redesigned an app's usage of **Django** models & **Django REST Framework** views.

## TOOLS

Heavily use **Mypy** to verify applications & extend Python's type system. Comfortable with **Cloudflare Tunnels**, easily and securely exposing Kubernetes services to the web. Managed **Gitlab CI**, **CircleCI**, & **Teamcity** configurations for automatic linting, testing, building, & deployment. Wrote custom **Prometheus** metrics for several services. Built **Alertmanager** rules and **Grafana** dashboards around them.

## SERVICES

Ran & utilized HA **Redis Cluster** & **Sharded MongoDB** clusters. Experience building applications with **Kafka** & **PostgreSQL**.

# PROJECTS

## **SPEEDWAGON** | *Web-based RSS reader & aggregation server*

Backend is a versioned, RESTful API built with Rust + Rocket, using Postgres + Diesel for state management. This multi-user platform supports source filters & organization via tagging.

## **SERVER** | *How I Self-Host*

An ongoing collection of deployments and instructions for a full-featured, easily installed Kubernetes instance for personal use. Powered by K3s, rook-ceph, and Prometheus Operator.

# EDUCATION

## **ROCHESTER INSTITUTE OF TECHNOLOGY** | *B.S. in Computer Science*

**Aug 2015 – May 2019** | Rochester, NY | **3.7/4.0 GPA** | **Dean's List (6/7 semesters)**

Brickhack (RIT hackathon) Sponsorship team member. Women in Computing Hackathon volunteer. RIT Linux Users Group Treasurer & frequent "tech talk" speaker.