

RoyHubbard

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WORK EXPERIENCE

Mathematical Research Incorporated

Software Engineer IV

Remote

08/2024 - 07/2025

- Led a large-scale refactor of a Terraform-based infrastructure-as-code codebase to align with modern best practices and enable rapid onboarding of new tenants, significantly improving scalability and maintainability
- Authored comprehensive documentation for core infrastructure systems, workflows, and conventions, reducing onboarding time for new team members and improving team autonomy
- Built and standardized a GitLab CI/CD pipeline for infrastructure provisioning, enhancing deployment reliability and enforcing consistency across environments
- Designed and implemented a tagging framework across all Terraform-managed resources to improve traceability, cost allocation, and resource lifecycle governance
- Developed an automated DNS management framework for tenant workloads, incorporating DNS conventions and certificate issuance via cert-manager and ExternalDNS
- Utilized Flux to manage tenant workload lifecycles through a GitOps model, ensuring consistent and auditable deployment workflows
- Enhanced infrastructure security posture by enforcing encryption-at-rest for all S3 buckets and applying security best practices across cloud resources
- Delivered numerous additional features, improvements, and tenant-specific accommodations in response to evolving product and platform requirements

Self-Employed

Technical Consultant

Remote

2021 – Present

- Built a pipeline for ingesting network metrics and building or updating custom Grafana dashboards using Python and the Grafana API
- Developed an application for analyzing social media posts and delivering curated dashboards to clients. Written in Python and React and deployed on AWS EKS. Other technologies included Celery, PostgreSQL and SQLAlchemy
 - Developed an application for creating time-based raffle events using Python, Flask/SQLAlchemy and Svelte.
- Created an auth platform for a suite of services using Keycloak, MySQL. Wrote a proxy layer using Python and Flask for existing applications to seamlessly cutover to the new auth provider.
- Lift and shift from bare metal to Kubernetes along with existing applications, SCM, CI/CD
- Developed a turnkey monitoring tool deployed to Kubernetes with Helm, based on Grafana, Loki, Tempo and Prometheus

Masterworks

Devops - Contract

Remote

01/2023 – 12/2023

- Independently executed a major lift and shift of the company's core business-critical product from ECS to EKS, handling the development of Infrastructure as Code, CI/CD pipelines, and necessary codebase modifications. This resulted in a \$12k monthly cost reduction per account, decreased build deployment times by an average of 6 minutes, and substantially downsized the AWS infrastructure footprint.
- Spearheaded the architecture of an observability stack utilizing EKS, CDK (Typescript), Grafana, Loki, Tempo, and Prometheus, focusing on maintaining a continuous feedback loop with developers to meet their needs effectively. This initiative led to a reduction in monthly costs for Cloudwatch and third-party monitoring platforms, alongside reported improvements in developer experience and efficiency.
- Personally designed and implemented custom tooling in Python and TypeScript to streamline developer workflows and meet the unique demands of our infrastructure, significantly boosting efficiency and project delivery timelines.

NYC/Remote

Weight Watchers

Software Engineer

10/2017 - 07/2021

- Member of the platform architecture team, responsible for developing applications and workflows to improve the efficiency of the business. This included writing tools in the preferred language of different teams, including Python, Perl, Bash, Powershell, Javascript and Go.
- Designed and implemented an API for the lifecycle management of infrastructure resources. These included resources from AWS, Kafka, GCP, Github and other providers. This workflow reduced the ops burden on the platform team, enforced a uniform, standards-based process and boosted velocity across the org for teams who needed to utilize these resources.
- Designed and implemented an asset management pipeline to monitor security metrics on company workstations. Utilized osquery, AWS Athena, Grafana, Loki and a suite of tools developed using Python to detect and respond to threats on workstations and deployed services.
- Wrote a platform for generating and alerting on reports from our business applications deployed in AWS. It was built with Perl using Paws and the Catalyst framework, and deployed with Kops on our Kubernetes appliance. Also utilized MySQL, Kafka, Loki and Travis.

Past Experience

Integral Ad Science Devops Engineer

NYC/Remote
01/2015 - 08/2017

- I designed and implemented a system to automate over 2,000 physical and cloud servers using Puppet. As a part of this process, I trained a team of engineers to use Puppet, and developed a system of local testing to allow developers to test their changes locally using a production-mirror system.
- Used Graphite and Grafana for time-series analysis

DemystData Devops Engineer

NYC
06/2014 - 02/2015

- Built a reproducible, automated infrastructure using a combination of Amazon's AWS Cloudformation and Puppet, including a reproducible local environment orchestrated with Vagrant.
- Made contributions to the company's core product. A Rails-based app that built models through the consumption of public and private API data.

IPSoft NYC Service Transition Engineer 01/2013 - 03/2014

- Performed a wide range of operational tasks spanning all aspects of Linux and Unix systems administration. This included DNS, Email, managing web services, database administration and others.
- Performed software development for a platform monitoring solution based on Nagios. I wrote pluggable extensions to the platform using Perl and helped maintain our Javascript-based automated deployment platform.
- Wrote tests for new and existing modules, and developed a framework for performing end-to-end testing

Internap NYC Systems Administrator 10/2011 - 08/2012

- Provided level 2 support for an on-premises managed hosting platform. Apache, MySQL, nginx, Varnish, DNS, CDN
- Automated repetitive tasks using Perl and Bash
- Wrote a platform for scraping our CRM tool and generating reports for the business

The New York Internet Company NYC Systems Administrator 05/2007 - 10/2011

- Operational support, database administration, email administration with Qmail and Postfix, DNS/bind, datacenter and network administration

SKILLS & INTERESTS

Skills : Linux; AWS (SDK/CLI); Config Management (Ansible, Puppet, Salt); Infrastructure as Code (Pulumi, Terraform, CDK, Cloudformation); Docker; Kubernetes; CI/CD (Jenkins, Travis, CircleCI, Github Actions); Python; Javascript; Bash; SQL