Daniel Herrera

Fields of Interest

Site Reliability Engineering | Developer Tooling | Process Automation | Distributed Systems
Game Engine Design | Cyber Security | Data Science

Engineer with over 5 years of experience using software and process to do what I love:
solve problems and remove toil
I'm eager to become better at doing this by growing my skillset and experiences

Work History

Software Engineer II @ Digital Ocean (*June '20 - Present*)

Reducing internal operational toil through automation and tech debt reduction

Related Tech: Concourse, *Bare-metal K8s, Chef, Ansible*

Automating previously-manual process of reviewing new releases of our dependencies and updating deployment code files by implementing automatic vendoring and version-bumping jobs in Concourse. Migrating high-inertia, spaghetti K8s deployment and configuration code from Chef to Ansible, enabling easier iteration for devs, integration with infrastructure team's paving process, and potential automatic control-plane upgrades going forward.

Maintaining and developing internal K8s-backed app platform

Related Tech: *Golang, client-go, mutating and admission webhooks, controllers*

Implementing feature requests for internal app platform on K8s. Major initiatives include: controller reconciliation of custom job resources, enabling log scraping for pods via mutating webhooks, tracking revision history and enabling rollback of custom app and job manifests. Collaborating daily with other engineers through help channels, brief RFCs, and PR discussions.

Cloud Engineer @ Ultimate Software (*Jan '16 - June '20*)

Developed an internal, cloud-agnostic Kubernetes offering from scratch

Related Tech: *OpenStack, K8s, Rancher, Terraform, Packer, Ansible*

Collaborate with architects, security specialists, and external consultants on initial system requirements and company-wide migration strategies. Deliver initial implementation using custom pre-baked cluster node images and a GitOps workflow for auditable requests. Transition towards Rancher-managed clusters to further enable self-service for consumers.

Developed new deployment tooling for a legacy, in-house deployment service

Related Tech: *OpenStack, Python, GitLab CI, Terraform, Chef*

Uncovered and recreated the deployment process for a legacy OpenStack deployment API written in Python. This new automation enabled reproducible builds and safe rollouts of changes. Along with new monitoring utilities and operational documentation, future

Education

B.S. Computer Science from Florida International University (Fall 2018)

The above covers major projects from my recent work history
I cover my experience and skills far more in-depth on my website (link below)