

PATRICK FORCE

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// *I'm in awe of what you just built.*

— Coworker at Twilio, in response to a Kubernetes operator I helped build for his observability team in the Fall of 2023

SUMMARY

- I started my career as an application developer/software engineer and have focused mainly on infrastructure and operations engineering roles in recent years.
- I'm a builder at heart. I value careful, thoughtful, and efficient ways of assembling solutions.
- My passion lies in improving our lives as engineers and developers. Most of the time I'm thinking about how to achieve living our best lives while doing our jobs and producing the highest quality products while doing so.
- I walk many miles, I shoe horses, I replace engines, I build greenhouses, and I like solving problems creatively in the digital world.

SKILLS

- Golang, Python, Javascript/Node.js, Bash/shell, Ruby
- Kubernetes (including controller/operator development), Docker/containers, microservice architecture and container orchestrated infrastructure
- Various IaC and configuration management languages and frameworks including Terraform, Chef, Salt, and Ansible
- Helm, Kustomize
- AWS, GCP
- Bare metal/on-prem infrastructure
- HPC systems architecture and development
- Relational databases/SQL and NoSQL databases
- Data indexes like Solr and Elasticsearch, caches like Redis, queues/message brokers like RabbitMQ and Kafka
- API, application, and CLI development
- Backend and frontend development experience
- Various CI/CD methodologies and tools, SDLC, testing and product delivery best practices

PROFESSIONAL EXPERIENCE

TWILIO

2022 – present

PRINCIPAL SOFTWARE ENGINEER

Helping evolve and support internal Kubernetes platform adoption, leading business and technical initiatives, and helping build and adopt solutions to this end

- Tech/team lead on the operations engineering team in SendGrid/email organization within Twilio, with a focus on Kubernetes platform delivery, infrastructure, and developer/engineering experience.
- Mentoring other engineers, namely platform and infrastructure, in topics like Terraform, SOLID principles, delivery and iteration in platform tooling.
- Kubernetes controller/operator development using Golang, implementing Python utilities, shell scripted solutions, Terraform project and module development, all with a focus on SDLC, testability, and continuous delivery. Helping instill the importance of a resilient testing and delivery path for internal infrastructure and operations tooling.
- Helping engineers reduce toil, become familiar with languages and frameworks to help them automate and codify more of their work while using SCM/git workflows, CI/CD tools like Buildkite, and best-practices for testing their work along the way.

DESCARTES LABS

2021 – 2022

SENIOR SITE RELIABILITY AND INFRASTRUCTURE ARCHITECT/ENGINEER/LEAD

Helping the org pursue proper operations, infrastructure, and reliability solutions

- Re-architected a non-standardized infrastructure, presented plans up to the CEO and had them approved for a new PaaS-based architecture.
- Lead and implemented most of this re-architected Descartes Labs' cloud infrastructure as a PaaS to support growing distributed and OEM business needs. This architecture is cloud agnostic where possible. The initial overhaul took place in Google Cloud and the identical infrastructure was then built out, leveraging much of what was already in the build out for Google Cloud, to support a migration to AWS.
- Improving tooling and automation in development, infrastructure, and continuous integration and delivery pipelines via Github actions and other CI/CD tools.
- Golang CLI development, Helm chart construction with custom surrounding utilities for building/testing, ArgoCD setup, administration and customization, various GCP and AWS tool integrations with developer and operations flows.

HEWLETT PACKARD ENTERPRISE

2021

LEAD SOFTWARE ENGINEER

Support product, operations, and SRE development, architecture and design

- New product and infrastructure development and deployment design, using AWS, Kubernetes, Helm, Spinnaker, containerized service development etc.
- System integration planning and design for concerns such as cloud orchestration management of on-prem BMCs, cloud-to-on-prem security, observability,

and availability.

- Internal and customer-facing product and tool development using Golang, Python, and Javascript.

CRAY/HEWLETT PACKARD ENTERPRISE

2018 – 2020

LEAD SOFTWARE ENGINEER, CLOUD DEVELOPMENT

Working on projects spanning internal development practice improvement to virtual HPC infrastructure design and development. Solving debt and modernization issues at scale, both technically and culturally, for one of the oldest, and most important Supercomputing companies in the world.

- Virtual HPC development in Google Cloud, including fully-customized Kubernetes cluster construction from the ground up due to Linux distro contractual requirements (SLES) not enabling a path forward with GKE, dynamic net booting of HPC compute nodes in the cloud, and heavy automation around using the Cloud for HPC development and testing.
- Internal tool development in Golang and Python primarily, focused on moving fast to improve operational and infrastructure orchestration and utilities.
- Development and adoption work around both Helm v2 and v3.
- Operational restructuring, fixing problems of internal and system tool restructuring for things like CI/CD, server and infrastructure install, provisioning, and configuration management.
- Implementing and guiding a layered image-based install approach using tools like Packer to pre-build as much as possible both for virtual and bare metal environments. Think docker layers for VM and PXE install needs, with foundational images that can be branched and used for different purposes like generic compute vs storage vs Kubernetes node types.

DEVELOP INTELLIGENCE/PLURALSIGHT

2019 – present

COURSE DEVELOPER & INSTRUCTOR

Corporate and Professional Training

- Creation of and instructing courses on various technologies like Terraform, Packer, Kubernetes, and Helm, delivered both in-person and virtually.

PYTHIAN

2018

OPERATIONS ARCHITECT & ENGINEER

Various development and DevOps-related client work, with a focus on cloud adoption, automation, CI/CD pipeline management, containerization, and incremental migration strategies.

ROCKHOLLA

2015 – 2018

CONTRACT ENGINEER & CONSULTANT VIA MY LLC

Working in development and operations-related roles for various clients and employers. Some notable ones over these years:

- [CloudBees](#)
- [CourseArc](#)
- [Modern Tribe](#)
- [Vidstore](#)
- [Bletchley Park](#)

- I'm happy to discuss more about my career prior to 2014 if you're interested.

Pre 2014

ACTIVE CERTIFICATIONS

- [CloudBees Jenkins Engineer](#) (December 2017, No expiration)

PREVIOUS CERTIFICATIONS

- [Google Cloud: Professional Cloud Architect](#) (June 2018, expired June 2020)

EDUCATION AND PROFESSIONAL DEVELOPMENT

- **COLUMBIA UNIVERSITY – NEW YORK, NY**
Coursework in Astronomy while working at the University
- **UNIVERSITY OF GEORGIA – ATHENS, GA**
BBA in Management Information Systems
Recipient – Honors Program Scholarship, Dean's List
- **COLORADO STATE UNIVERSITY – FORT COLLINS, CO**
School of Computer and Electrical Engineering
Member – Golden Key International Honor Society, Dean's List

INTERESTS AND HOBBIES

- Construction, gardening, basically hands on things where I can be creative and make and care for things
- The outdoors, horses, and long distance hiking. July - November, 2015, I hiked about 2000 miles of the Continental Divide Trail

- I enjoy the creative potential of software. I think it is one of the most promising ways of doing good.
- I'm a fan and [creator](#)* of score and soundtrack work for independent films, online videos, theatre, etc.
- Movies
- Pizza
- Tacos

References Available Upon Request

* In the event that you received a version of this resume that is printed or doesn't contain working links, you can go to <http://www.patrickforce.com/music> for the music page.