

# IRA W. SNYDER

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<https://github.com/irasnyd/>

(714) 865-9491 [ira.snyder@gmail.com](mailto:ira.snyder@gmail.com)

## Summary of Qualifications

I am a Senior Site Reliability Engineer with professional experience spanning more than 15 years. My experience and interests are primarily within the Linux ecosystem, and are especially focused on the implementation and operation of highly available distributed systems. I have a passion for automating repetitive tasks so that I can get on with “the fun stuff.” I am a self-motivated individual, experienced at working within a small dedicated team to build and operate production quality systems for commercial applications, as well as scientific and academic research.

Throughout my career, I have been a leader and contributor on many successful projects. I led the technical team designing and implementing the cloud infrastructure for the migration of the Descartes Labs SaaS Platform from GCP to AWS. I have worked with cross-functional teams throughout the software development lifecycle; taking applications from a design on paper through to a production customer-facing product. I enjoy both creating new systems, as well as working with existing systems to improve upon them to adapt to changing business needs.

## Experience and Education

- **Descartes Labs**—Fully Remote (HQ: Santa Fe, NM)  
*Sr. Site Reliability Engineer: December 2020 – present*
  - Led the team migrating the company’s cloud infrastructure from GCP to AWS.
  - Implemented company-wide CI/CD infrastructure based on Github Actions, ArgoCD, and Terraform.
  - Improved and updated Observability tooling built with Prometheus, Grafana, Loki, Tempo, and VictoriaMetrics.
  - Created many AWS Lambda functions for internal automations (Python).
  - Implemented internal tooling to increase developer velocity (Python, Golang).
  - Designed and implemented secure access for internal applications (OIDC, Okta).
  - Implemented custom Kubernetes autoscalers for internal applications.
  - Worked with Finance Team to implement Apptio Cloudability for cloud cost control.
  - Participated in 20+ SWE and SRE interviews.
- **Las Cumbres Observatory Global Telescope Network**—Goleta, CA  
*Sr. DevOps Engineer, Systems Administrator: December 2014 – December 2020*
  - Migrated on-premises data center to Amazon Web Services cloud to adapt to changing computing needs, and to decrease spending on equipment, power, and cooling.
  - Implemented Highly Available AWS Kubernetes (EKS) cluster supporting more than 100 production services. Used Spot Instances and Autoscaling to minimize cost.
  - Built several Python / Django / PostgreSQL web applications to support IT Team needs.
  - Migrated Science Data Archive to AWS S3 to significantly reduce data storage costs.
  - Implemented Github and Jenkins-based continuous build system.
  - Implemented >200TB Ceph storage cluster to support large scale scientific experiments.
  - Implemented Puppet configuration management for computers at globally distributed telescope sites. Reduced hardware failure recovery time from approx. 1 month to 1 hour.

- **California Institute of Technology Owens Valley Radio Observatory**—Big Pine, CA  
*Software Engineer, IT Staff: April 2008 – December 2014*
  - **Software Development:**
    - Ported U-Boot and Linux to several custom hardware embedded systems.
    - Implemented several Linux device drivers for various hardware components.
    - Design and implementation of Array Control System software.
    - Design and implementation of Correlator System software.
    - Implemented a Buildbot-based continuous integration system.
  - **IT Operations:**
    - Implemented a Puppet-based system management infrastructure.
    - Implemented comprehensive monitoring infrastructure based on Nagios and Munin.
    - Built a log aggregation and search system with Elasticsearch, Logstash, and Kibana.
    - Maintenance and improvement of computing and network infrastructure. This included the email system, website, DNS, DHCP, Cisco networking hardware, etc.
    - Worked with users to fix any problems with their workstations.
  
- **California State Polytechnic University Pomona**—Pomona, CA
  - Bachelor's Degree, Computer Science, December 2007.

## Skills

- **Operating Systems:** Ubuntu and CentOS (Red Hat) Linux.
- **Amazon Web Services:**
  - 5+ years of production experience working with AWS.
  - Elastic Kubernetes Service, EC2, EBS, Autoscaling, Spot Instances.
  - VPC Networking, ALB/NLB, NAT, IPSEC VPN, DHCP, DNS, ACLs, etc.
  - Experienced with EBS, S3, EFS storage.
- **Containers and Kubernetes:**
  - 5+ years production experience operating Kubernetes container orchestration platform.
  - Extensive production container operations and debugging experience.
- **Libraries, Frameworks, Tools:**
  - Python libraries: numpy, pandas, Django, Flask, etc.
  - Docker, Kubernetes, Helm, Github Actions, ArgoCD.
  - Prometheus, Grafana, Loki, Tempo.
  - PostgreSQL, MySQL, SQLite.
  - Redis, RabbitMQ, Elasticsearch.
  - NGINX, Apache, cURL.
  - Github, Google Docs, Slack, Jira, Bugzilla.
- **Programming Languages:**
  - Proficient with Terraform, Python, Puppet, bash shell, YAML, C.
  - Comfortable with Golang, Rust, HTML/CSS, Javascript (VueJS).