Arvind Iyengar

Staff Software Engineer

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San Francisco, CA

Education & Teaching

University of California, Berkeley

B.A. Computer Science (GPA: 3.5)

Student Instructor | UC Berkeley

Developed course content & taught laboratory / discussion sections for:
- **Data Science** (3 semesters)
- **Probability Theory** (2 semesters)
- **Computer Security** (2 semesters)

Textbook Co-Author | UC Berkeley

Co-wrote, revised, and finalized the textbook used for STAT 88

Relevant Coursework

Computer Science: Algorithms, Data Structures, Machine Structures, Computer Security, Cryptography
AI / ML: Probability Theory, Stochastic Processes, Natural Language Processing, Artificial Intelligence

Technical Skills

Cloud Providers
AWS | Azure | Google Cloud

Programming Languages
Go | Python | Bash | Java | Javascript

Technologies
Kubernetes (RKE | k3s | RKE2) | Helm
Terraform | Containerization (e.g. Docker)
Prometheus | Grafana | Alertmanager

About Me

- Passionate about **scalable AI tooling**, such as vector search, agentic workflows, and AI infrastructure
- Excited by products that leverage modern technologies like **cloud computing** and **Kubernetes**
- Believe in writing **simple, readable, and maintainable code** in a world of complex applications
- Highly self-motivated with a proven track record through **open-source contributions**
- Strong communicator with an extensive background in **teaching & writing technical documentation**

Experience Summary github.com/aiyengar2

Rancher Labs | Staff Software Engineer   Feb 2020 - Jun 2024

- Worked as a **team lead** and **subject matter expert** for several components:

Monitoring / Alerting   rancher/charts | rancher/prometheus-federator

- Designed & maintained Helm charts to deploy **Prometheus**, **Alertmanager**, **Grafana**, and **Prometheus Operator** with custom exporters and dashboards
- Developed **Rancher Pushprox**, a Helm chart that allows Prometheus to securely scrape host network processes without firewall exposure. Configured for Kubernetes internal components in RKE, RKE2, k3s, kubeAdm, GKE, AKS, & EKS
- Implemented a **reverse TCP tunneling proxy** in wins, enabling Docker containers to proxy host ports on Windows hosts added to a Kubernetes cluster
- Developed **Prometheus Federator**, a Kubernetes operator that allowed administrators to group namespaces, automatically deploy scoped Prometheus & Grafana instances, and enforce hard multi-tenant security by locking resources and blocking unauthorized changes on the deployed Kubernetes resources

Helm Charts   rancher/charts-build-scripts | rancher/hull

- Managed the release of **50+ Helm charts** over **9+ release cycles**
- Developed **Charts Build Scripts**, a tool for managing and releasing Helm charts, enabling Rancher to streamline chart updates across all repositories
- Created **Hull**, a Go-based testing framework for writing comprehensive unit tests on Helm charts, improving reliability and validation

Windows   rancher/windows | rancher/Rancher-Plugin-gMSA

- Developed **18 Terraform modules (6 public, 12 private)** for **consistent Windows cluster provisioning** across cloud providers, simplifying issue reproduction
- Designed a **Container Credential Guard plugin** to enable internal Windows applications deployed on Kubernetes to authenticate users against Active Directory via group managed service accounts (gMSA)
- Authored **20+ Markdown files** documenting Windows, Kubernetes, and Active Directory, preserving tribal knowledge and streamlining onboarding

Other Responsibilities

- Ran **knowledge transfers** on developing Kubernetes operators & other topics
- Established deep expertise in **Fleet**, Rancher's GitOps solution
- Implemented continuous integration on repositories through Github Workflows

AWS Sagemaker | Software Engineer   Jul 2019 - Jan 2020

- Developed and executed **Bash scripts** and **CloudFormation templates** to provision AWS infrastructure for the AWS Sagemaker's API Service

AWS Lambda | Software Engineer Intern   Jun 2018 - Aug 2018

- Designed a serverless ETL (Extract, Transform, Load) pipeline to **reduce query time for complex analytics queries** on Redshift databases in slow, limited-access data centers using CloudWatch Events, Lambda, and CloudFormation