RACHANA KALLADA JAYARAJ

+1 (857)-763-7511 | kalladajayaraj.r@northeastern.edu | Portfolio | LinkedIn | GitHub

SUMMARY

Results-driven software engineer with 6 years of experience in software design, development, testing, web design, and cloud technologies. Backed by contributions to the HPE Dev Blog community, I am actively seeking full-time opportunities in full-stack and cloud development.

EDUCATION

Khoury College of Computer Sciences, Northeastern University

Master of Science, Computer Science

United States

2025

Dr. Ambedkar Institute of Technology

Bachelor of Engineering, Computer Science

India 2018

TECHNICAL SKILLS

Languages: Python, Go, Java, Bash, HTML, CSS, JavaScript, TypeScript

Databases & Storage: OracleDB, MySQL, Microsoft SQL Server, Amazon S3, MongoDB, DynamoDB, Google BigQuery, PostgreSQL Cloud & Distributed Systems: Amazon Web Services (AWS), HPE GreenLake Cloud, Google Cloud Platform (GCP), Docker, Kubernetes

DevOps & Testing: GitHub Actions, CircleCI, JFrog, Helm, ArgoCD, Spinnaker, JUnit, Cucumber, Sonar, Cypress

Monitoring, Alerting & Streaming: Grafana, Prometheus, ServiceNow, PagerDuty, Kafka, Monte Carlo, Braze, Google Pub/Sub Developer Tools, Frameworks & APIs: Agile, Git, Jira, Postman, Slack, Terraform, Linux, React.js, REST, JSON, YAML

WORK EXPERIENCE

Software Engineering Co-op - Mercari US

United States

Jun 2024 - Dec 2024

Backend & Data Engineering Department

- Led the migration of the Q4M worker to Google Pub/Sub, creating topics and subscriptions, updating Supervisord configurations, and modifying publisher code. Monitored Pub/Sub performance and job metrics using Grafana and Loki.
- Created both development and production BigQuery tables to store Mercari agent and team details by querying Dixa Agent and Team APIs, leveraging Airflow for seamless data ingestion and workflow orchestration.

Research Apprentice - Northeastern University

United States

Serverless File System

Jan 2024 - May 2024

- Automated failure recovery of Serverless File System coordinators by developing a system to detect and restore failed coordinators, ensuring
 high availability and eliminating single points of failure.
- Enhanced coordinator monitoring by using Zookeeper for continuous health tracking and automatic failover in a ring topology, ensuring seamless recovery and monitoring.

Cloud Developer II - Hewlett Packard Enterprise

India

GreenLake Cloud Services R&D Department

Jun 2021 - Aug 2023

- Improved product stability through development, unit, functional and stress testing of HPE Containers as a Service backend code for BareMetal & Virtual Machines. Streamlined communication between on-premises and SaaS components.
- Reduced feature time-to-market by 10% via streamlined CI/CD deployments and engineered user-friendly terraform providers. Spearheaded open sourcing of these repositories by overseeing all stages of OSRB review, boosting downloads by 25%.

Systems Engineer - Tata Consultancy Services

India

IOT Department (Client: Nielsen Holdings)

Oct 2018 - Jun 2021

- Migrated client applications to AWS cloud, reducing infrastructure costs by 10% while improving scalability by 12%. Resolved backend application issues using ServiceNow and developed extensive functional tests for applications written in Go, using Cucumber framework.
- Implemented efficient data monitoring and uploading via Kafka streaming and AWS S3 storage buckets, with added monitoring via Athena queries, resulting in 16% improvement in data processing times.

BLOGS & RESEARCH

- <u>Kubernetes Cluster as Code Part 1</u>
- Kubernetes Cluster as Code Part 2
- Automated Failure Recovery of Serverless File System Coordinators

PROJECTS

Reliable SMS Offer Notifications for Buyers & Sellers

Oct 2024 - Dec 2024

- Implemented an SMS toggle under 'Offers from Buyers' and 'Offers from Sellers,' allowing Mercari users to opt in for SMS notifications.
- Implemented a robust SMS delivery system using PHP and Go, ensuring seamless offer notifications are sent via Braze when enabled, with an automatic fallback to Twilio during outages for uninterrupted delivery.

Load Balancer Manager

Jan 2023 - Mar 2023

- Designed and developed a dynamic Nginx load balancer deployment with automated security updates on HPE GreenLake Cloud, enabling seamless Kubernetes cluster management for customers.
- Eliminated the need for SSH credentials and created REST APIs for provisioning, configuration updates, IP retrieval, and deletion.

Containers as a Service on BareMetal

Oct 2021 - Dec 2022

- Developed code to enable users to seamlessly create, delete, and scale BareMetal clusters, integrating with a resource orchestrator for APIdriven deployment of bare metal worker and KVM master nodes.
- Implemented a controller for continuous cluster status monitoring with GUI updates.