RACHANA KALLADA JAYARAJ

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SUMMARY

Results-driven software engineer with 5+ years of experience in software development, testing and cloud technologies. Contributor to Northeastern university's research and Hewlett Packard Enterprise's Developer Blog community. Actively seeking full-time roles with immediate availability.

EDUCATION

Khoury College of Computer Sciences, Northeastern University   **United States**
Master of Science, Computer Science   2025

Dr. Ambedkar Institute of Technology   **India**
Bachelor of Engineering, Computer Science   2018

TECHNICAL SKILLS

Languages: Python, Go, Java, Bash, HTML, CSS, JavaScript
Databases & Storage: MySQL, PostgreSQL, Microsoft SQL Server, MongoDB, DynamoDB, Amazon S3, Google BigQuery
Cloud & Distributed Systems: Amazon Web Services (AWS), Google Cloud Platform (GCP), HPE GreenLake Cloud, Docker, Kubernetes
DevOps & Testing: GitHub Actions, CircleCI, Spinnaker, JFrog, Helm, ArgoCD, JUnit, Cucumber, Sonar, Cypress
Monitoring, Alerting & Streaming: Grafana, Prometheus, ServiceNow, PagerDuty, Monte Carlo, Braze, Google Pub/Sub, Kafka
Developer Tools, Frameworks & APIs: Agile, Git, Jira, Postman, Slack, Terraform, Linux, React.js, REST, JSON, YAML, Swagger

WORK EXPERIENCE

Software Engineer - Mercari US   **United States**
Backend & Data Engineering Department   Jun 2024 - Dec 2024
- Migrated Q4M workers to Google Pub/Sub, creating original and dead-letter topics, configuring Supervisord, and updating Python publisher code. Monitored Pub/Sub performance and job metrics using Grafana and Loki.
- Developed ETL pipelines using Dataform and Airflow to create development and production BigQuery tables for storing Mercari agent and team details via Dixa Agent and Team APIs.

Research Apprentice - Northeastern University   **United States**
Serverless File System   Jan 2024 - May 2024
- Automated Serverless File System recovery using etcd, Zookeeper, and hashing for coordinator placement in a ring topology, improving uptime by 5%.
- Enhanced coordinator monitoring by improving C++ logic, integrating Zookeeper for health tracking and failover, and conducting extensive testing with 5 coordinators to ensure stability and resilience.

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 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 Golang, 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

- Kubernetes Cluster as Code - Part 1
- 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' settings allowing Mercari users to opt in for SMS notifications on product offers.
- 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, developed and tested a dynamic Nginx load balancer deployment on HPE GreenLake Cloud, enabling seamless Kubernetes cluster management for customers by eliminating the need for SSH credentials.
- Created REST APIs for Load Balancer provisioning, configuration updates, IP retrieval, and deletion.

Containers as a Service on BareMetal   Oct 2021 - Dec 2022
- Developed Go code to enable users to seamlessly create, delete, and scale BareMetal clusters, integrating with a resource orchestrator for API-driven deployment of bare metal worker and KVM master nodes.
- Implemented a controller microservice for continuous cluster status monitoring with GUI updates.