NADUN DE SILVA

Lead Software Engineer

Auckland, New Zealand
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Summary

Lead Software Engineer with 7 years of experience in cloud-native application development in Kubernetes and other cloud platforms. Background in architecture, user experience (UX), development, and deployment of cloud-native applications in production environments. Experience in owning the technical direction of product areas and leading a team of engineers.

Experience

Senior Software Engineer

Orion Health November 2022 to Present Auckland, New Zealand

- Directed the successful deployment of Indexity using AWS infrastructure; conducted thorough disaster recovery planning, which reduced potential downtime risks from unforeseen incidents by at least 40%.
- Championed an end-to-end deployment strategy for Indexity within an SRE framework on GitLab and AWS, resulting in a faster rollout time that decreased development cycles by one day per development cycle.
- Orchestrated comprehensive threat modeling and privacy assessments, leading to stronger safeguards, resulting in no major vulnerabilities detected by penetration tests initiated by customers.
- Enhanced the precision of phone number searches by implementing Apache Lucene-based indexing techniques, improving the patient searches across two customers.
- Developed the Terraform code for deploying self-hosted GitLab runners on Google Cloud, reducing the development costs by more than 50%.

Associate Technical Lead

WSO2 June 2021 to November 2022 Colombo, Sri Lanka

- Secured the Sustained Outstanding Contribution Award thrice in a row, an honor given exclusively to only the top 5% of all company staff members who demonstrated exceptional technical leadership and innovative contributions throughout tenure.
- Led a senior software engineer in developing the minimum viable features for the resource scheduling of the Choreo online editor within 1.5 months, using Kubernetes and GoLang.
- Eliminated bottlenecks, reducing the startup time of the Kubernetes resources of the Choreo Editors by 80% and increasing the overall user experience.
- Reduced the MsSQL database utilization by 60% by introducing a Redis cache and randomization of cache expiry times, increasing the number of users the system can handle.
- Led the product team, completing 95% of the team targets and sprint milestones on time by prioritizing tasks and fostering a good working environment.

Senior Software Engineer

WSO2 July 2019 to June 2021 Colombo, Sri Lanka

- Spearheaded the implementation of the foundation for Choreo observability within 3 months with a team of 2 other engineers, creating the backbone of Choreo observability.
- Decreased the cost by 90% for the company by architecting the Choreo observability storages, including data archival into a Data Lake for Machine Learning (ML) use cases.
- Improved debugging experience for users by revamping the observability instrumentation at the Ballerina compiler level within 1 month to map the observability data to the source code.
- Minimized the number of bugs in the Choreo Observability area by implementing proper code reviewing, testing, and deployment practices in a team of 6 engineers.

Software Engineer

WSO2 January 2018 to July 2019 Colombo, Sri Lanka

- Delivered the Cellery observability basic features within 2 months for observing microservice composites using Kubernetes, Istio, OpenTracing, and Envoy.
- Headed the implementation of Cellery developer tools using VSCode Language Server Extensions and visualizations of Cells using D3.
- Developed Cellery Hub backed by a Docker Registry as the storage and implemented the authentication of the CLI and portal using OpenID Connect (OIDC) within 1 month.
- Implemented the observability aspects of the WSO2 Serverless Platform using Prometheus and Jaeger on top of Kubernetes and OpenWhisk.

Skills

- **Programming languages** — Java, GoLang, Scala, Python, JavaScript, TypeScript
- **Cloud Platforms** — AWS, GCP, Azure
- **Frameworks and tools** — Terraform, Kubernetes Operator Framework, React, Ansible, ExpressJS
- **Storages** — Time-series Databases (Influx DB, Azure Data Explorer), Graph Databases (Orient DB), Data Lakes (Azure Data Lake), Relational Databases (MySQL, MsSQL), Redis
- **Containerization** — Kubernetes, Azure Kubernetes Service, AWS ECS, Docker, Kustomize, Helm
- **CI/CD Tools and Practices** — GitOps, GitHub Actions, GitLab
- **Observability Tools and Platforms** — OpenTelemetry, DataDog, Prometheus, Jaeger, CloudWatch
- **API Protocols** — REST, GraphQL, gRPC
- **Software Development Methodologies** — Agile, DevOps

Education

B.Sc. (Hons.) in Engineering (Computer Science and Engineering)

University of Moratuwa January 2014 to December 2017 Colombo, Sri Lanka

- Attained a GPA of 3.85 out of 4.20, obtaining a First Class.
- Placements in Dean's List in 6 out of 8 semesters at the University of Moratuwa.
- Awarded Global Finalist (Galactic Impact) in the NASA Space Apps Challenge 2017.
- Completed Google Summer of Code 2017.

Certifications

- Certified Kubernetes Administrator
  The Linux Foundation December 2020
- Certified Kubernetes Application Developer
  The Linux Foundation January 2020
- Fundamentals of Reinforcement Learning
  Amii, University of Alberta September 2021
- Build Basic Generative Adversarial Networks (GANs)
  DeepLearning.AI June 2021
- Deep Learning Specialization
  DeepLearning.AI June 2021

Publications

- "Generative Adversarial Networks (GAN) based Anomaly Detection in Industrial Software Systems" published in 2019 at the Moratuwa Engineering Research Conference (MERCon)
- "Anomaly Detection in Industrial Software Systems — Using Variational Autoencoders" published in 2017 at the Proceedings of the 7th International Conference on Pattern Recognition Applications and Methods (ICPRAM)