

NADUN DE SILVA

Lead Software Engineer

📍 Auckland, New Zealand
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Summary

Lead Software Engineer with 8.5+ years of experience owning the technical direction and architecture of key domains across large-scale SaaS products, distributed systems, and cloud-native backends on Kubernetes and other cloud technologies across major cloud platforms. Proven track record of directing and mentoring engineering teams of up to 7, driving end-to-end design decisions, and delivering high-performance software at scale.

Experience

Lead Software Engineer

McCrae Tech

📅 April 2025 to Present

📍 Auckland, New Zealand

- Owned the cloud-native architecture and technical direction for Indexity's automated customer environment provisioning across 8 AWS accounts and 2 GCP projects, coaching 2 engineers through design and code reviews.
 - Architected a test environment provisioning and result-aggregation framework on Amazon EKS using Python and Terraform, reducing setup time by 90% and establishing it as the engineering standard across the Orchestral platform.
 - Formulated Indexity's database and service upgrade strategy on AWS, constraining the self-managed OrientDB upgrade to under 10 minutes of downtime with a rollback plan that de-risked the cutover.
 - Engineered an automated failure-detection and alerting system for the Indexity data-planes with Datadog and Terraform, surfacing customer-impacting issues within 15 minutes and eliminating customer-reported incidents.
 - Directed the zero-downtime migration of Indexity's AWS accounts from Orion Health to McCrae Tech by devising the account-sequencing plan that kept all customer environments continuously available.
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Senior Software Engineer

Orion Health

📅 November 2022 to April 2025

📍 Auckland, New Zealand

- Designed and deployed Indexity's AWS cloud architecture end-to-end with disaster-recovery planning that reduced downtime risk by at least 40%, delivering a resilient, highly available SaaS platform for end users.
 - Mentored 2 junior engineers within the Indexity SaaS platform area, setting its technical direction and driving design and code reviews that upheld platform quality.
 - Enhanced phone number search by designing and implementing Apache Lucene-based indexing techniques, improving patient search result precision by 30% across all customers.
 - Hardened the Indexity platform against security risks through comprehensive threat modeling and privacy assessments, achieving zero major vulnerabilities across all customer-initiated penetration tests.
 - Automated Indexity's delivery on AWS by building an end-to-end deployment framework and a Terraform-provisioned self-hosted GitLab runner on Google Cloud, cutting costs by over 50% and reducing each delivery cycle by a day.
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Associate Technical Lead

WSO2

📅 June 2021 to November 2022

📍 Colombo, Sri Lanka

- Steered a product team of 7 engineers on the Choreo platform, delivering 95% of team targets and sprint milestones on time through clear technical prioritization and a collaborative engineering culture.
- Led a Senior Software Engineer through the design and delivery of the Choreo online editor's resource-scheduling feature within 1.5 months using Kubernetes and Go.
- Secured the Sustained Outstanding Contribution Award for three consecutive years, an honor reserved for the top 5% of staff for exceptional technical leadership and innovation.
- Reduced MSSQL database utilization by 60% by introducing a Redis cache with randomized expiry times, increasing concurrent user capacity on the Choreo platform.
- Eliminated bottlenecks in the Choreo online editor, reducing startup times by 80% and enhancing user experience through Kubernetes resource optimization.

Senior Software Engineer

WSO2

📅 July 2019 to June 2021

📍 Colombo, Sri Lanka

- Spearheaded the design and implementation of Choreo observability features within 3 months, leading a team of 2 engineers to deliver the platform's core monitoring and tracing capabilities.
 - Established Choreo observability storage and data archival strategies using a Data Lake, reducing company infrastructure costs by 90% and enabling long-term data retention for Artificial Intelligence (AI) use cases.
 - Revamped the Ballerina compiler, generating instrumentation to map observability data directly to source code, improving the debugging experience for users and delivering within 1 month.
 - Minimized production bugs across the Choreo Observability area by establishing code-review, testing, and deployment standards for a team of 6 engineers, influencing engineering practices across peer teams.
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Software Engineer

WSO2

📅 January 2018 to July 2019

📍 Colombo, Sri Lanka

- Headed the design and implementation of Cellery developer tools using VS Code Language Server Extensions and interactive Cell visualizations with D3.js.
- Delivered the foundational Cellery observability features in 2 months, enabling visibility into microservice composites using Kubernetes, Istio, OpenTracing, and Envoy.
- Built Cellery Hub using a Docker Registry for storage and implemented a browser-based OpenID Connect (OIDC) authentication flow for the Cellery CLI and portal within 1 month.
- Implemented the observability capabilities of the WSO2 Serverless Platform, enabling developers to monitor their serverless functions using Prometheus and Jaeger on Kubernetes and OpenWhisk.

Skills

- **Programming languages:** Java, Go, Scala, Python, JavaScript, TypeScript
- **Data Storage:** Time-series Databases (InfluxDB, Azure Data Explorer), Graph Databases (OrientDB), Data Lakes (Azure Data Lake), Relational Databases (MySQL, Microsoft SQL Server), Redis
- **API Protocols:** REST, GraphQL, gRPC
- **Cloud Platforms:** Amazon Web Services (AWS), Google Cloud Platform (GCP), Microsoft Azure
- **Containerization:** Kubernetes (K8s), Azure Kubernetes Service (AKS), Amazon Elastic Container Service (ECS), Amazon Elastic Kubernetes Service (EKS), Docker, Kustomize, Helm
- **Frameworks and tools:** React, ExpressJS, Kubernetes Operator Framework, Terraform, Ansible
- **Software Development Methodologies:** Agile, DevOps
- **AI Coding Tools:** Claude Code, Cursor, Antigravity
- **Observability Tools and Platforms:** OpenTelemetry, Datadog, Prometheus, Jaeger, CloudWatch
- **CI/CD Tools and Practices:** GitOps, GitHub Actions, GitLab

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.
- Placed on the Dean's List in 6 out of 8 semesters at the University of Moratuwa.
- Named 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