

NILUSHAN SILVA

Full Stack and Cloud Engineer

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PROFILE

Highly experienced Full Stack Software Engineer & Cloud Solutions Developer with 15+ years delivering robust, high-quality software. Specialized expertise includes 7+ years in TypeScript/React development and 6+ years architecting solutions on Google Cloud Platform. Proven track record in service-oriented architecture, large-scale IoT integrations (55,000+ devices), and DevOps practices with consistent 99.999% uptime achievement. Passionate about implementing engineering best practices to create reliable, maintainable, and cost-efficient systems.

TECHNICAL SKILLS

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| Programming | TypeScript, JavaScript, Node.js, Java, C#, C++, PHP |
| Frontend | React, Redux, Bootstrap, HTML5, CSS3, Chart.js, Socket.IO |
| Backend | Express, Fastify, REST APIs, Event-Driven Architecture, Microservices |
| Databases | PostgreSQL, MySQL, Firestore, MongoDB, Redis, TimescaleDB, ClickHouse |
| Cloud | GCP (Kubernetes, Cloud Functions, Cloud Run, IoT Core, PubSub), Firebase, AWS (Lambda, Kinesis) |
| DevOps | Docker, Kubernetes, CI/CD, Google Cloud Build, GitHub Actions, Git, SVN |
| Tools | Jira, Confluence, ClickUp, Draw.io, Lucid Charts (UML), Axure RP 9 |

EXPERIENCE

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| Full Stack Developer & Cloud Engineer <i>Zimi Ltd, Queensland, Australia</i> | October 2017 – Present |
| <ul style="list-style-type: none">Platform Migration: Successfully migrated cloud IoT platform with 55,000+ devices from Xively to GCP with zero downtime, reducing infrastructure costs by 50% and latency by 40% while maintaining 99.999% uptimeArchitecture: Designed end-to-end IoT platform for smart electrical devices handling 100+ events/second with secure device communication protocolsCloud Infrastructure: Built microservices architecture on GCP using Kubernetes, Cloud Functions, Redis, Pub/Sub, and Firebase for optimal scalability and resilienceFrontend Excellence: Developed React/Redux admin dashboards with dynamic visualizations for real-time IoT device network monitoring and managementBackend Development: Created high-performance REST APIs and event-driven services using Node.js / TypeScript with comprehensive documentationVoice Integration: Engineered and certified Google Assistant and Alexa voice control systems, expanding product ecosystem compatibilityCode Efficiency: Created reusable TypeScript/Node.js libraries for API clients and IoT message parsing, reducing development time by more than 50%DevOps: Implemented automated CI/CD pipelines with Docker, Google Cloud Build, and GitHub Actions for seamless multi-environment deploymentsData Pipeline: Designed efficient telemetry collection and storage systems using Firestore and PostgreSQL with optimized patterns | |

Product Manager

January 2015 – June 2017

Simcentric, Colombo, Sri Lanka

- **Leadership:** Directed development of 5 new simulation products used by military training organizations
- **Team Management:** Led cross-functional teams (10 engineers, 5 QA specialists) in delivering complex software projects
- **Complex Delivery:** Successfully implemented challenging screen capture and real-time streaming features, overcoming significant R&D obstacles

Software Engineer

November 2010 – December 2014

Simcentric, Colombo, Sri Lanka

- **Simulation Development:** Built core components for military training simulation products using C++
- **Scenario Engine:** Implemented Insurgent Pattern of Life Simulation for VBS2 Game engine scenarios

Software Engineer

August 2008 – November 2010

Respere, Colombo, Sri Lanka

- **Open Source:** Developed web software for human rights violations recording using PHP and MySQL
- **SaaS Implementation:** Designed 'OpenEvSys' as a secure multi-tenant platform with international hosting options

PROJECTS

Enterprise IoT Cloud Platform Migration

2017-2020

Led migration of 55,000+ IoT devices to GCP microservices architecture with zero downtime. Achieved 99.999% uptime while handling 100+ events/second. Implemented secure device communication and real-time control systems, reducing operational costs by 50% while increasing system reliability.

Technologies: GCP, Kubernetes, Firebase, IoT Core, PubSub, PostgreSQL, TypeScript, MQTT, Redis

Smart Home Voice Control Ecosystem

2019-2021

Architected voice-control integrations for Google Assistant and Alexa. Developed unified business logic with platform-specific adapters ensuring consistent behavior across ecosystems. Successfully navigated certification processes for both platforms, expanding product market reach.

Technologies: TypeScript, Express, OAuth, AWS Lambda, Google Actions API, Alexa Smart Home API

IoT Network Management Dashboard

2018-2022

Developed comprehensive web-based platform for IoT device network management with real-time monitoring. Created interactive data visualizations for device telemetry, usage patterns, and system health metrics. Implemented role-based access control and team collaboration features.

Technologies: React, Redux, TypeScript, Bootstrap, Firestore, Chart.js, Socket.IO

EDUCATION

Bachelor of Science in Computer Science (Honours)

2004 – 2008

University of Colombo, Sri Lanka

LANGUAGES

English Professional working proficiency