DILSHAN AMARASINGHE



Senior Full-Stack Engineer | GenAI & Cloud

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PROFESSIONAL SUMMARY

Full-stack software engineer with nearly 4 years delivering production web and mobile applications across FinTech, Healthcare AI, and HR Tech. Strong in React, Next.js, React Native, Node.js and Python across AWS, Azure and Google Cloud (GCP), with recent hands-on ownership of end-to-end GenAI systems (self-hosted LLMs, RAG, agentic pipelines) and a technical lead role delivering a secure, serverless WhatsApp Business messaging platform. First-Class BSc (Hons) in Computer Science. Comfortable owning features end to end in autonomous, remote-first teams.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, SQL, HTML/CSS

Frontend & Mobile: React.js, React Native (iOS/Android), Next.js, Redux Toolkit, RTK Query, Tailwind CSS, Material UI, Ant Design

Backend: Node.js (Express.js, Fastify), Python (FastAPI), .NET (Azure Functions), AWS Lambda, REST APIs, WebSockets, microservices

Cloud & DevOps: AWS (Lambda, ECS, EKS, S3, API Gateway), Azure, Google Cloud (GCP): Cloud Run, Cloud SQL, Pub/Sub, Cloud Tasks, Cloud KMS, Secret Manager, Load Balancing, Cloud Build; Docker, Terraform, GitLab CI/CD, GitHub Actions, Trivy, SonarQube

AI / GenAI: LangChain, LangGraph, self-hosted LLMs, RAG pipelines, vector search (Weaviate), Azure OpenAI, GPT-4, Claude API, prompt engineering

Data: PostgreSQL, MySQL, Azure SQL, schema & data modelling

Practices: Agile/Scrum, code review, automated testing, CI/CD, software architecture, technical leadership, Jira

PROFESSIONAL EXPERIENCE

Technical Lead (Consulting, Part-time)

Independent Consultant | Confidential client, UAE (under NDA) | Oct 2026 – Present

- Led a team of 2 engineers to move a B2B SaaS WhatsApp Business messaging gateway (Node.js/TypeScript on Google Cloud) to a production-ready serverless architecture against a fixed launch date.
- Split a monolithic service into role-based serverless services (webhook intake, partner API, management, worker, migration job), each with a least-privilege service account and scoped secrets, failing closed on startup.
- Designed and ran a zero-downtime cutover behind a global HTTPS load balancer with path-based routing and a rehearsed one-switch rollback.
- Built blocking CI/CD quality gates (tests, architecture rules, Trivy image scanning, SonarQube) with deploys that run migrations first, release on no traffic, then health- and smoke-check.
- Hardened security and reliability: split Cloud KMS keys with staged re-encryption, pinned secret versions, graceful shutdown draining in-flight sends, and cold-start tuning with startup CPU boost and lazy initialisation.
- Diagnosed a multi-number Meta Embedded Signup bug and designed a phased fix with a safe fallback; mentored two developers through a layered refactor.

Stack: TypeScript, Node.js, Fastify, PostgreSQL, Next.js, Google Cloud (GCP), Terraform, Docker, Meta WhatsApp Cloud API, Jira

Software Engineer

1 Billion Technology (Pvt) Ltd, Colombo | Jun 2026 – Present

- Owned an end-to-end, self-hosted GenAI domain-name suggestion platform from architecture through on-premise client deployment, built on a LangGraph multi-stage pipeline with a FastAPI backend.
- Cut average response latency from 19 seconds to 3 seconds through deterministic query paths and validator tuning.
- Deployed self-hosted LLMs on GPU infrastructure with Weaviate hybrid vector search, eliminating third-party API costs and keeping client data on-premise.
- Built the full GitLab CI/CD pipeline with Trivy security scanning, SonarQube quality gates and Harbor registry publishing.
- Mentor junior engineers and conduct technical interviews to uphold engineering standards.

Associate Software Engineer

1 Billion Technology (Pvt) Ltd, Colombo | Jan 2024 – May 2026

- Delivered a React Native cross-platform HR application (iOS and Android) covering onboarding, attendance, leave management and workflow automation for UK and European clients.
- Migrated backend services to serverless (AWS Lambda / Node.js, Azure Functions / .NET) and authored Terraform IaC, reducing infrastructure costs by 40%.
- Built a React Native healthcare risk-screening app integrating ML risk-prediction APIs, with AI-powered voice navigation using Claude and OpenAI APIs for hands-free use.
- Built backend services for a content and webcast platform on Azure Functions, Node.js and Azure SQL, including resilient large-video chunked upload via OneDrive and Vimeo APIs.
- Introduced automated testing and environment provisioning, cutting production defects by 35% and shortening developer onboarding.

Intern Software Engineer

1 Billion Technology (Pvt) Ltd, Colombo | Jan 2023 – Jan 2024

- Built an enterprise GenAI chat application with React, Redux Toolkit, RTK Query and GPT-4, using WebSockets for real-time streaming responses.
- Developed an event-management and reservation platform in React with Redux and Google OAuth authentication.
- Contributed web and React Native features to a FinTech reservation platform serving business owners and suppliers.

SELECTED PROJECTS

NextDrive.lk (nextdrive.lk): Car sales marketplace for Sri Lanka with vehicle listings, inspection reports, finance options, and affordability/EMI calculators. Next.js, React, Tailwind CSS.

Query Master (github.com/Senithdilshan): React Native AI chat app with a LangChain LLM pipeline and Firebase authentication, delivering context-aware responses. React Native, LangChain, Serverless Framework.

Birdlife Encyclopedia (github.com/Senithdilshan): Cross-platform React Native bird encyclopedia with search by name, photo and sound, plus Firebase authentication and favourites.

EDUCATION

BSc (Hons) Computer Science & Software Engineering, First Class

University of Bedfordshire, UK (delivered at SLIIT, Sri Lanka) | 2020 – 2024

Higher National Diploma in Information Technology

Sri Lanka Institute of Information Technology (SLIIT)

LANGUAGES

Sinhala (native) | English (professional working proficiency)