

Brahmiraj Tharmapalan

Full Stack Software Engineer

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PROFESSIONAL SUMMARY

Full Stack Software Engineer with **3+ years of experience** designing and shipping scalable, cloud-native web applications using **React, Next.js, Node.js, and Python**. Strong expertise across frontend and micro-frontend architecture, backend API design, authentication and authorization, microservices, and **AI/LLM integration**. Proven track record of delivering reliable, high-quality systems in fast-paced, collaborative environments.

PROFESSIONAL EXPERIENCE

Consultant Next.js Developer

Apr 2025 – Present

BCS Technology International — Colombo, Sri Lanka

- Architected a large-scale airline booking platform using **Next.js** with a **Turborepo**-based micro-frontend architecture, integrated with **Navitaire** airline reservation services.
- Organized shared packages for design tokens, UI components, and utilities within the **Turborepo** workspace, maintaining consistent design and behavior across all booking zones.
- Designed and built backend microservices in **Node.js** and **Express.js**, delivering secure **REST** and **gRPC** APIs with **Redis** caching for high-performance, scalable service communication.
- Engineered tab-based session management combined with **Server-Side Rendering (SSR)** and **Static Site Generation (SSG)** to support independent multi-tab user flows with secure authentication.
- Implemented complex client-side state with **Redux Toolkit** and **RTK Query** for all services within the micro-frontend platform, with centralized cache management.
- Built multi-step booking forms with **React Hook Form** and **Zod** schema validation, ensuring type-safe validation across all booking services.
- Optimized **Core Web Vitals** using Next.js Image optimization, dynamic imports, route-level code splitting, and **Fastly CDN** edge caching, improving Lighthouse scores and Time-to-First-Byte.
- Implemented **SEO** optimization with dynamic metadata, **Open Graph** tags, **JSON-LD** structured data, XML sitemaps, and canonical URLs, improving search engine discoverability and Lighthouse SEO scores.
- Integrated CMS-driven content management and implemented **AWS Cognito** authentication for a feature-complete admin panel, enabling non-technical staff to manage content without engineering involvement.

Software Engineer

May 2024 – Apr 2025

Neuronic Systems — Trincomalee, Sri Lanka

- Developed backend services using **Python (Django)** and **PostgreSQL** for a pawning mobile application, implementing role-based authentication, authorization, and core business workflows.
- Designed **RESTful APIs** consumed by mobile and web clients, ensuring data integrity, secure access, and consistent response contracts.
- Built responsive web interfaces using **Next.js** and **Tailwind CSS** with a focus on performance, accessibility, and **Core Web Vitals** optimization.

Associate Software Engineer

Sep 2023 – May 2024

BotCalm — Sri Lanka

- Developed web applications using **React**, **Redux**, and **Express.js**, improving user experience and frontend performance.
- Built a secure **Ethereum** wallet browser extension supporting blockchain transactions and key management.

Software Engineer Intern

Mar 2023 – Sep 2023

Dockyard Total Solutions — Colombo, Sri Lanka

- Developed a role-based HR Management System using **React**, **ASP.NET**, and **MSSQL**, including multi-stage approval workflows for leave and performance management.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python

Frontend: React, Next.js (App Router, Server Components, SSR, SSG, ISR), Redux Toolkit, RTK Query, React Hook Form, Zod, Tailwind CSS, Material UI, Shadcn UI

Backend: Node.js, Express.js, Nest.js, Django, REST, gRPC, Authentication (JWT, OAuth 2.0, AWS Cognito), Authorization (RBAC)

AI / LLM: LLM API Integration, Prompt Engineering

Databases & Caching: PostgreSQL, MongoDB, MSSQL, Redis

Architecture: Microservices, Micro-frontends, Clean Architecture, Monorepo (Turborepo)

Cloud & DevOps: AWS (Cognito, S3, EC2), Docker, CI/CD (AWS CodePipeline), Vercel, Fastly CDN

Testing & Quality: Jest, React Testing Library, SonarQube, SonarLint, Husky

Tools & Practices: Git, Bitbucket, Jira, Agile, Scrum

EDUCATION

BSc (Hons) in Electronics & Telecommunication Engineering

2019 – 2023

SLTC Research University — Sri Lanka

CERTIFICATIONS

- **Introduction to Large Language Models** — LinkedIn Learning (2026)
- **AWS Academy Cloud Foundations** — Amazon Web Services (2023)
- **Docker Foundations** — Docker, Inc. (2023)
- **SLASSCOM Cloud Engineering Bootcamp** — Sri Lanka Association for Software & Services Companies (2022)