Sithum Vihanga

Software Engineer

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SUMMARY

Software Engineer with experience building scalable, event-driven systems using Next.js, MongoDB, PostgreSQL, and AWS. Strong background in backend architecture, data migrations, and high-throughput messaging systems. Proven ability to own features end-to-end and collaborate effectively in fast-paced product teams.

CORE COMPETENCIES

Programming Languages: JavaScript, TypeScript, Python
Frameworks & Libraries: React.js, Next.js, Node.js, Express.js, Nest.js, Bun.js, Hono.js
Databases: MySQL, MongoDB, PostgreSQL
Tools & Technologies: AWS, Git, Prisma ORM, GraphQL, Jira, Socket.io

WORK EXPERIENCE

Software Engineer | *Metarune Labs (PVT) Ltd.*   March 2025 – Present

- Contributed to the **Staryo Creator Platform** using **Next.js**, focusing on scalable backend systems and performance improvements.
- Architected a **scalable, event-driven announcement system** using **MongoDB Triggers**, **Amazon SQS**, and **AWS Lambda** for reliable asynchronous delivery.
- Led the **migration of the Creator Mass Messaging system** to the event-driven architecture, significantly improving throughput and reliability.
- Designed and implemented the **Gift System**, enabling new monetization flows for creators.
- Built a **Star Pack A/B testing feature** to segment new users and analyze conversion behavior, contributing to revenue optimization.
- Designed and delivered a **proof-of-concept data analytics pipeline** during a client discovery sprint, integrating BigCommerce with **Snowflake** via **RudderStack**, and implementing an **AI-powered product recommendation engine** using **Snowflake ML** and **Cortex AI** with hybrid collaborative filtering and content-based algorithms.

Backend Engineer(Part Time) | *People Solutions Development (PSD)*   Oct 2024 – March 2025

- Designed database structures and developed scalable backend APIs using **Nest.js** for ERP modules (Project & Case Handling, Finance, Attendance & Time Reporting).
- Created and executed migration scripts for seamless customer data integration into the ERP system.
- Converted the web application into a cross-platform desktop app using **Electron.js**, expanding platform accessibility.
- Led code reviews and pull request management, ensuring adherence to coding standards and best practices.

Associate Software Engineer | *Fcode Labs (PVT) Ltd.*   May 2024 – Dec 2024

- Developed and maintained a data migration system for Terezi, an internal company project, enabling a seamless transition to a MongoDB database.
- Migrated the Terezi backend from MongoDB to PostgreSQL, achieving improved system performance, scalability, and reliability.
- Optimized database performance by implementing raw PostgreSQL queries with Prisma ORM, reducing query execution times significantly.

Intern Software Engineer | *Fcode Labs (PVT) Ltd.*   Nov 2023 – May 2024

- Delivered key features for the Terezi HR management system, including Project Members and Resource Allocation modules, through cross-functional collaboration.
- Optimized Notifications and Pending Actions performance by integrating the MongoDB Aggregation Pipeline with Prisma ORM, significantly reducing loading times.

PROJECTS

Tech Finder AI | *Next.js, MongoDB, Prisma, BetterAuth, n8n*   Nov 2025 – Present

- AI-driven product finder using natural language search to recommend tech products with intelligent matching and conversational refinement.

Ayurvedic Pharmacy Web App | *Next.js, MongoDB, Prisma, BetterAuth*   Sep 2025 – Nov 2025

- Developing a responsive web application for an Ayurvedic pharmacy to showcase products and services, enabling users to request orders directly via WhatsApp. Includes an admin dashboard for managing products and services efficiently.

Vectify | *YOLO, OpenCV, TensorFlow Lite, PyTorch, Flutter, FastAPI*   May 2024 – May 2025

- This mobile app captures images to detect and refine logos. It converts refined logos into high-quality vector formats and matches them with a database to identify and provide brand details. This solution combines logo detection, vector conversion, and brand recognition.

Expense Tracker API | *Bun.js, Hono.js, Prisma ORM, PostgreSQL*   Oct 2024 – Dec 2024

- Created a high-performance backend for expense tracking built with Bun.js and Hono.js to master modern backend development. Features expense categorization, JWT security, and RESTful endpoints, delivering lightning-fast responses. Combines Prisma ORM, Zod validation, and clean architecture. Ideal for learning optimized API design, security, and cutting-edge JS runtimes.

RAG Chat Bot | *Next.js, Vercel AI SDK, Upstash Rag-Chat and Redis*   Sep 2024 – Dec 2024

- Created a chatbot application that can answer questions based on a provided website or web page. Includes caching, chat streaming, and chat history options.

EDUCATION

BSc Eng (Hons), Computer Science & Engineering   2021 – 2025
University of Moratuwa
Debarawewa Central College   2010 – 2019
G.C.E. A/L 2019: 3 A Passes (Physical Science Stream) — Island Rank: 3

CERTIFICATIONS

- AWS Knowledge: Compute – AWS Academy
- AWS Knowledge: Cloud Essentials – AWS Academy (Certificate)
- React Basics – Meta (Certificate)
- Programming with JavaScript – Meta (Certificate)

REFERENCES

- **Tharindu Malawara Arachchi**
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