

Lishan Dissanayake

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Profile

Full-stack and blockchain developer experienced in building scalable web, mobile, backend and decentralized applications. Strong foundation in modern software engineering principles with hands-on experience in Web2 and Web3 development.

Education

University of Moratuwa May 2022 - July 2026
B.Sc. Engineering Honours, Computer Science & Engineering

D.S. Senanayake College, Colombo 07 Jan 2012 - Nov 2020
Advanced Level (Physical Science) | Ordinary Level

- **G.C.E. A/L Exam (2020):** 3A's | Island Rank 188 | Z Score 2.4716
- **G.C.E. O/L Exam (2017):** 9A's

Experience

Software Engineer Intern Dec 2024 - May 2025
IXD Labs (Pvt) Ltd 🔗

- Contributed to full-stack development of two major company projects, Fitsmiles and Fitconnect, delivering production-ready features.
- Architected and implemented RESTful APIs using **Spring Boot** microservices, designed optimized **PostgreSQL** and **MongoDB** database schemas, and integrated Keycloak for authentication in Fitsmiles.
- Contributed to end-to-end feature development for Fitconnect, handling both backend logic with **Django REST Framework** and dynamic client-side implementations with **React**.

Technologies: Spring Boot | Django | React | TypeScript | Java | PostgreSQL | MongoDB | Keycloak | Swagger

Freelance Software Engineer Feb 2026 - Present

- Working as a freelance software engineer on full-stack, backend, and microservices-based client projects.
- Built and delivered Agrinova, a production-grade inventory management system, and currently developing TipLanka, a low-fee real-time livestream donation platform.

Technologies: React | Next.js | TypeScript | PostgreSQL | Clerk | Supabase | Prisma ORM

Selected Projects

Improving Blockchain Scalability with ZK-Rollups 🔗 June 2025 - July 2026
Rust | Solidity | Ethereum | Node.js | TypeScript | Python | Docker | SQLite | Hardhat

- Designed and implemented a modular, configurable ZK-Rollup prototype using Rust microservices and Solidity smart contracts to benchmark Ethereum rollup scalability across different sequencing, execution, and settlement configurations.

Agrinova 🔗 Mar 2026 - April 2026
React | Next.js | TypeScript | PostgreSQL | Clerk | Supabase | Prisma ORM

- Developed a production-grade inventory management system for a client, supporting multi-location stock tracking, automated inventory workflows, employee and customer management, commission calculation, and analytics dashboards.
- Architected a Role-Based Access Control (RBAC) system using Clerk and Next.js for fine-grained authorization.

GoTogether 🔗 Mar 2025 - June 2025
React Native | React | Next.js | Spring Boot | TypeScript | Java | Keycloak | PostgreSQL | Supabase | Prisma ORM | Docker | Google Maps | Gemini

- Built an AI-powered travel management platform with responsive web and React Native mobile applications, featuring itinerary planning, location-based services, transport information, and an in-app social media platform.
- Integrated Google Gemini for intelligent travel recommendations and dynamic itinerary generation.

Cache-Optimized Top-K Aggregation Engine 🔗 April 2026 - May 2026
C++ | Python

- Developed a cache-efficient C++ engine for top-k aggregation in databases extending a PVLDB 2023 research paper.
- Implemented cache-resident data structures, including open-addressing hash tables and Flajolet-Martin sketches.

GemTrace (Ongoing) Dec 2025 - Present
React | React Native | Next.js | TypeScript | Solidity | Ethereum | Hardhat | PostgreSQL | Docker | Prisma ORM

- Developing a full-stack Web3 gemstone provenance platform using Ethereum smart contracts, ERC-721 NFTs, IPFS,

and wallet-based authentication for immutable asset registration, ownership transfers and supply chain tracking.

Post Office Management Information System 🗑

June 2024 - Nov 2024

React Native | React | TypeScript | Express.js | PostgreSQL | Prisma ORM | JMeter

- Developed a postal management system with customer and employee web portals and a postman assistant mobile app.
- Implemented barcode scanning, live GPS tracking, digital proof-of-delivery, and secure JWT-authenticated workflows.

TrackMyVan 🗑

Oct 2025 - Dec 2025

React Native | TypeScript | Firebase | Firestore | Google Maps

- Developed a real-time school van tracking platform with driver and parent mobile apps. Implemented background GPS tracking, route optimization, in-app messaging, student management, push notifications, and role-based access control.

Airline Reservation System 🗑

Aug 2023 - Nov 2023

React | Next.js | JavaScript | MySQL

- Developed an airline reservation platform supporting ticket booking, customer management and more. Used MySQL stored procedures, triggers, transaction management, and analytical SQL reporting for reliable workflows.

Compiler for the WinZigC Programming Language 🗑

May 2026 - June 2026

C++

- Developed a complete compiler for the WinZigC programming language featuring lexical analysis, recursive descent parsing, semantic analysis, Abstract Syntax Tree (AST) generation, and stack-machine code generation.

Technologies

Programming Languages:	Java C++ C Python TypeScript JavaScript Rust
Frontend Development:	React Next.js Tailwind CSS HTML
Backend Development:	Spring Boot Express.js Node.js Django
Mobile App Development:	React Native Nativewind
Database:	PostgreSQL MySQL MongoDB Firestore Supabase SQLite Prisma ORM
Cloud & DevOps:	Docker Firebase GitHub Actions Vercel
Blockchain & Web3:	Solidity Ethereum Hardhat
Other Tools:	Keycloak Clerk Swagger Postman Git

Articles

Common Security Vulnerabilities in Software: Risks and Countermeasures 🔗

Honours and Awards

Dean's List

Semester 6 (SGPA 4.0/4.0)

Olympiads

Mathematics Olympiad 2017 | Junior Science Olympiad 2013

Extra Curricular and Leadership

Mathematics Society, University of Moratuwa

Vice President of HR Management and Logistics

Committee Member

Oct 2023 - Dec 2024

Nov 2022 - Oct 2023

Department of Computer Science & Engineering, University of Moratuwa

Dev Committee Member | CSE 40

Selection Committee Member | SLIoT Challenge 2023

Logistics Committee Member | CSE Careers Day 2024

Feb 2025 - April 2025

Oct 2023 - Mar 2024

Dec 2023 - Jan 2024

IEEE Student Branch, University of Moratuwa

Committee Member

Mar 2023 - Dec 2024

Rotaract Club, University of Moratuwa

Company Coordinator | RUR Company Coordination 2023

Jan 2023 - Feb 2023

Science Society, D.S. Senanayake College

Committee Member

Mar 2018 - Aug 2020

References

Mr. Sunera Avinash

Chief Technical Officer and Director, IXD Labs (Pvt) Ltd, Piliyandala

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Prof. Dulani Meedeniya

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