

DULSARA MANAKAL PARANAGAMA

Full-Stack Software Engineer

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SUMMARY

Full-stack software engineer who owns features end to end, from requirements to production. Spent six months in Rootcode's product engineering team building Skapp's CRM module with React, Next.js, TypeScript, and Spring Boot. Final-year Software Engineering undergraduate at SLIIT, graduating September 2027.

EXPERIENCE

Software Engineer Intern | Rootcode (Pvt) Ltd, Sri Lanka, Apr 2026 - Oct 2026

Skapp is Rootcode's open-source ERP platform, with HR, project management, and CRM modules, and an AICTA 2025 Gold Award winner.

- Worked in Rootcode's product engineering team in an Agile environment, following a full SDLC, helping build Skapp's CRM module from scratch to production.
- Worked with the team to define the scope of requirements for CRM features, then owned them and built them as working, end-to-end features.
- Followed the coding and contribution standards of an open-source product, with a structured peer review process.
- **Frontend:** built with React, Next.js, and TypeScript. Helped architect the CRM's frontend data layer with Zustand as a single source of truth and built the module's features on top of it.
- Contributed to Skapp's dedicated UI component library, building new components and publishing new versions.
- **Backend:** worked in Spring Boot on a production ERP system, building new APIs and business logic to the platform's standards, plus database migrations.
- Worked in an AI-driven engineering team, using AI agents efficiently while keeping quality through a strict review process.
- Volunteer, Rootcode Foundation.
- Contributed to internal clubs and societies (Speaking Club, Frontend and Cloud societies), internal initiatives, and company events.
- Rootcode Intern Acceleration Programme: goal setting, career planning, and soft-skills building.

EDUCATION

Sri Lanka Institute of Information Technology (SLIIT) 2023 - 2027

BSc (Hons) in Information Technology, specialising in Software Engineering. Graduating September 2027.

- Dean's List, Year 2, Semester 2

TECHNICAL SKILLS

Languages: Java, TypeScript, JavaScript, C#, Python, Kotlin, SQL

Frontend: React, Next.js, Zustand, React Query (TanStack Query), Formik, Tailwind CSS

Backend: Spring Boot, Spring Security, Node.js, Express.js, ASP.NET Core, REST APIs, JWT, Microservices, API Gateway

Databases: PostgreSQL, MongoDB, Supabase, Firebase, SQL, JPA/Hibernate, Flyway

Testing & DevOps: Testcontainers, Playwright, Jest, Docker, GitHub Actions, IIS, Vercel

Mobile: Android (Kotlin, Retrofit, Room)

ML & Data: scikit-learn, PyRadiomics, pandas, NumPy

Practices: Agile/Scrum, Git and code review, i18n and accessibility, AI-assisted development

PROJECTS

Seatly: Event RSVP & Waitlist Platform (Solo) Sep 2026 - Present

Java 21, Spring Boot 4, Spring Security, PostgreSQL, Next.js, TypeScript, Docker, Testcontainers, GitHub Actions
| github.com/dulsara30/Seatly

- Built a Spring Boot REST API with a layered, SOLID architecture, Flyway migrations, MapStruct DTOs, and OpenAPI (Swagger) documentation.
- Prevented overbooking under concurrent requests with pessimistic row locking (SELECT ... FOR UPDATE), proven with multi-threaded integration tests.
- Automated waitlist promotion and pushed live seat counts with Server-Sent Events (SSE), published only after the database transaction commits.
- Secured it with Spring Security and stateless JWT, with the token in an HttpOnly cookie behind a Next.js backend-for-frontend (BFF) proxy.
- Wrote ~125 integration tests with Testcontainers on real PostgreSQL and set up GitHub Actions CI.

Care Connect: Microservices Telemedicine Platform (Team of 4) Mar 2026 - Apr 2026

Next.js, TypeScript, Node.js, Express, Microservices, Supabase (PostgreSQL), JWT, PayHere | github.com/buddhika-development/Care-Connect

- Largest contributor in a team of 4. Built the API Gateway: JWT authentication with hashed, revocable refresh tokens, role-based access control (RBAC), rate limiting, and secure proxy routing to 6 microservices.
- Secured service-to-service communication with separate gateway and internal secrets, so services accept only trusted traffic.
- Built the Patient and Payment services, including Supabase Storage uploads and PayHere payments verified by signed webhooks.
- Built 22 Next.js pages across patient, doctor, and admin portals and integrated the full booking, payment, video consultation, and prescription flow.

DonorLens: Donation Transparency Platform (Team of 4) Feb 2026 - Apr 2026

React, Node.js, Express, MongoDB, JWT, Redux Toolkit, React Query, Cloudinary, Playwright | github.com/dulsara30/DonorLens | donor-lens.vercel.app

- Largest contributor in a team of 4. Set up the project architecture and deployed it live (Railway and Vercel).
- Built JWT authentication with short-lived access tokens, HttpOnly refresh cookies, silent token refresh, and RBAC for 3 user roles.
- Designed an end-to-end NGO onboarding workflow: document uploads to Cloudinary, admin review states, and secure account activation with one-time, expiring tokens.
- Built the admin dashboard and 20 REST endpoints, with centralized error handling and Playwright API tests.

Solarix: Smart Solar Microgrid Booking System (Team of 4) Sep 2026 - Oct 2026

C#, .NET 8, ASP.NET Core Web API, MongoDB, React, Kotlin, Android, IIS, PowerShell | github.com/pavanuthsara/EADproject-Y4S1

- My first project with .NET, and the first time connecting a web app, an Android app, and MongoDB to one API.
- Built the booking and slot-management part of the ASP.NET Core API, with server-side rules for booking windows, notice periods, and capacity.
- Prevented overbooking with atomic conditional MongoDB updates and optimistic concurrency (version checks).
- Integrated the Android app (Kotlin, Retrofit, Room cache) with the API for station maps, booking, and QR display.
- Deployed the API to Windows IIS using a PowerShell deployment script.

RESEARCH

Final-Year Research: AI for Glioblastoma Treatment Response (Team of 4) Jun 2026 - Present

SLIIT Centre of Excellence for AI | Python, PyRadiomics, SimpleITK, scikit-learn, pandas, NumPy

- A team of 4 building a multi-modal AI framework that helps clinicians track whether brain tumor (glioblastoma) treatment is working across MRI visits.
- My component is the foundation layer: a reproducible delta radiomics pipeline that finds which change-over-time MRI features stay reliable across 19 hospitals and scanners, using perturbation testing (ICC) and a site-prediction check.
- Designed leakage-safe, patient-grouped cross-validation against a single-scan baseline and caught critical dataset issues early (per-slice normalization, voxel anisotropy, label mismatch).

ACHIEVEMENTS

- **Merit Award, ReviveNation (Tertiary Category), CODEFEST 2025**, Faculty of Computing, SLIIT (Sep 2025).
- **Participant, Tech Triathlon** (Rootcode competition), built a business registration platform with Next.js, Node.js, and Supabase.