

Asela Maduwantha

Backend & Full-Stack Software Engineer

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Professional Summary

Results-oriented Software Engineering student with proven expertise in building production-grade microservices and scalable backend systems. Hands-on experience developing enterprise solutions at Thomson Reuters, specialising in functional programming with Scala, distributed systems architecture, and cloud-native development. Strong track record of improving system reliability through comprehensive testing strategies and CI/CD optimisation. Passionate about clean code, system design, and delivering high-quality software solutions.

Technical Skills

Languages: Java, TypeScript/JavaScript, Python, Scala, C, SQL

Backend Frameworks: Spring Boot, Django, Node.js, NestJS, Express.js

Frontend: React, Next.js, Redux, HTML5, CSS3, Tailwind CSS, Material-UI, Ant Design

Databases: PostgreSQL, Apache Cassandra, MongoDB, MySQL, Redis

Message Brokers: RabbitMQ, Apache Kafka

DevOps & Cloud: Docker, Kubernetes, GitHub Actions, CI/CD Pipelines, Git

Architecture: Microservices, REST APIs, Event-Driven Architecture, API Gateway, Service Discovery, Clean Architecture

Testing: ScalaTest, JUnit, PyTest, Integration Testing, Test-Driven Development (TDD)

Professional Experience

Software Engineering Intern

Feb 2025 – Aug 2025

Pagero Lanka (Part of Thomson Reuters)

Colombo, Sri Lanka

- Refactored existing Scala microservices to align with functional programming paradigms, clean architecture principles, and domain-driven design patterns, improving code consistency and maintainability.
- Spearheaded authentication system modernisation for Document API by implementing a centralised authentication client, eliminating code duplication and strengthening security posture across services.
- Engineered REST APIs and asynchronous messaging systems with RabbitMQ integration, enabling reliable inter-service communication and event-driven workflows.
- Achieved 95%+ test coverage through comprehensive unit and integration testing with ScalaTest, significantly reducing production defects and improving code maintainability.
- Optimised CI/CD pipeline performance by 40% through GitHub Actions workflow refinement, parallel test execution, and elimination of flaky tests.
- Designed and executed zero-downtime database migrations across PostgreSQL and Cassandra clusters, implementing rollback strategies and data integrity validation.
- Enhanced system observability by implementing distributed tracing with correlation IDs and structured logging, reducing mean time to resolution for production incidents.
- Collaborated on production deployments and incident response, utilising Docker containerisation and monitoring tools for system health analysis.

Technical Projects

Distributed Feature Flag & Progressive Rollout Platform | Backend Developer | 📄 Repositories


- Designed and developed a distributed backend platform for runtime feature management and progressive rollout, enabling teams to safely release features without redeploying applications.
- Built Feature Flag Management APIs and a runtime evaluation engine using targeting rules and rollout percentage hashing with **Spring Boot** and **Java 21**.
- Integrated **Redis** caching for low-latency flag evaluation and **Apache Kafka** for asynchronous flag-change propagation and cache synchronisation across services.
- Developed audit logging for configuration tracking and rollback visibility; containerised all services with **Docker Compose**; structured as a **Maven multi-module monorepo** with shared DTO and event libraries.

Tech Stack: Java 21, Spring Boot 3, PostgreSQL, Redis, Apache Kafka, Docker & Docker Compose, Maven Multi-Module, JUnit 5, Swagger/OpenAPI

ArtztAll – Microservices E-Commerce Platform | *Full-Stack Developer* |  github.com/ArtEcommercePlatform


- Architected a scalable microservices ecosystem connecting artisans with buyers, featuring service mesh architecture and distributed transaction handling.
- Developed 8+ independent services — user management, product catalogue, order processing, Stripe payment integration, real-time auction engine, and notification delivery.
- Implemented API Gateway with service discovery for intelligent routing, load balancing, and fault tolerance; designed event-driven messaging for asynchronous operations and eventual consistency.

Tech Stack: React (TypeScript), Spring Boot, MongoDB, Stripe API, Docker, Microservices Architecture

SynthInvoAnalyzer – B2B Invoice Intelligence Platform | *Full-Stack Developer* |  Repositories


- Built an enterprise-grade invoice management system automating standardisation, processing, and analytics for B2B transactions.
- Architected polyglot persistence combining MySQL (transactional data), Cassandra (time-series records), and Elasticsearch (full-text search and analytics).
- Implemented a data processing pipeline handling 10,000+ invoices with OCR integration and intelligent field extraction.

Tech Stack: React, Django REST Framework, MySQL, Apache Cassandra, Elasticsearch, Redis

Marisha Coco – Company Website | *Full-Stack Developer* |  marishacoco.com

- Developed and deployed the full-stack company website covering responsive frontend pages for products, shop, cart, blogs, contact, quotes, CSR content, and order tracking.
- Built backend REST APIs for products, orders, blogs, admin authentication, dashboards, email notifications, file/blob storage, and Telegram order alerts using **NestJS** and **TypeORM**.
- Implemented e-commerce features including product listing, cart flow, order submission, order status tracking, and admin-side order management with JWT-based authentication and role/region guards.

Tech Stack: Next.js, React, TypeScript, Tailwind CSS, NestJS, TypeORM, PostgreSQL

Gulf-Stock Transportation Management System | *Frontend Developer* |  github.com/asela-maduwantha

- Developed a comprehensive fleet management solution with real-time GPS tracking, route optimisation, and a delivery analytics dashboard.
- Integrated Google Maps Platform APIs for geolocation, geocoding, and interactive route visualisation.
- Designed responsive, accessible UI components following Material Design principles using the Ant Design framework.

Tech Stack: React, TypeScript, Ant Design, Google Maps API, WebSocket

Education

University of Moratuwa, Faculty of Information Technology

2022 – 2026

Bachelor of Science (Honours) in Information Technology and Management

CGPA: 3.46 / 4.0

References

Mrs. M. B. Mufitha

Senior Lecturer

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Mr. Janaka Priyadarshana

Software Architect

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