

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, specializing 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 optimization. Passionate about clean code, system design, and delivering high-quality software solutions.

Professional Experience

Software Engineering Intern

Feb 2025 – Aug 2025

Pagero Lanka (Part of Thomson Reuters)

Colombo, Sri Lanka

- Architected and delivered **production-grade Scala microservices** utilizing functional programming paradigms, clean architecture principles, and domain-driven design patterns
- Spearheaded **authentication system modernization** for Document API by implementing centralized 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
- Optimized **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**, utilizing Docker containerization and monitoring tools for system health analysis

Technical Projects

ArtztAll – Microservices E-Commerce Platform

Full-Stack Developer

- Architected and implemented a **scalable microservices ecosystem** connecting artisans with buyers, featuring service mesh architecture and distributed transaction handling
- Developed **8+ independent services** including user management, product catalog, order processing, payment integration (Stripe), real-time auction engine, and notification delivery system
- Implemented **API Gateway pattern** with service discovery for intelligent routing, load balancing, and fault tolerance across microservices
- Designed event-driven communication using message queues for asynchronous operations and eventual consistency

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

🐙 github.com/ArtEcommercePlatform

SynthInvoAnalyzer – B2B Invoice Intelligence Platform

Full-Stack Developer

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


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

🐙 Frontend Repository — Backend Repository

Gulf-Stock Transportation Management System

Frontend Developer

- Developed comprehensive **fleet management solution** with real-time GPS tracking, route optimization, and delivery analytics dashboard
- Integrated **Google Maps Platform APIs** for geolocation services, geocoding, and interactive route visualization

- Designed responsive, accessible UI components following Material Design principles with Ant Design framework
- Tech Stack: React, TypeScript, Ant Design, Google Maps API, WebSocket*
-  github.com/asela-maduwantha/stock-transportation-fe

Technical Skills

Languages	Scala, Java, Python, TypeScript/JavaScript, C, SQL
Backend Frameworks	Spring Boot, Django, Node.js, NestJS, Express.js
Frontend Technologies	React, Redux, HTML5, CSS3, 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 & Design	Microservices, REST APIs, Event-Driven Architecture, API Gateway, Service Discovery, Clean Architecture
Testing	ScalaTest, JUnit, PyTest, Integration Testing, Test-Driven Development (TDD)

Education

Bachelor of Science (Honours) in Information Technology and Management	<i>2022 – 2026</i>
<i>University of Moratuwa, Faculty of Information Technology</i>	CGPA: 3.5/4.0

Core Competencies

Advanced Problem Solving	System Design	Agile/Scrum Methodologies	Code Review
Technical Documentation	Cross-Functional Collaboration	Critical Thinking	Time Management

References

Mrs. M. B. Mufitha Senior Lecturer University of Moratuwa mufithab@uom.lk — +94 76 545 7738	Mr. Janaka Priyadarshana Software Architect Pagero Lanka (Thomson Reuters) janaka.priyadarshana@pagero.com — +94 71 305 7629
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