Ravindu Wanasinghe

Full-Stack & AI Developer Intern

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LinkedIn GitHub Portfolio

PROFILE SUMMARY

Information Systems undergraduate at Sabaragamuwa University of Sri Lanka specializing in building production-ready Full-Stack applications and multi-agent AI systems. Proven experience engineering end-to-end architectures using React, TypeScript, Spring Boot, and Python, paired with agentic LLM pipelines (Gemini API, Groq, DeepSeek-R1) and vector search (ChromaDB). Recognized as 1st Runner-Up at the AURORA 2026 National AI Ideathon. Passionate about solving complex real-world workflows through scalable microservices and robust AI integration.

EDUCATION

BSc (Hons) in Information Systems | *Sabaragamuwa University of Sri Lanka* 2024 – Present
Relevant Coursework: Software Architecture, Object-Oriented Design, Web Development, Database Management Systems, Digital Forensics, Data Structures & Algorithms

G.C.E. Advanced Level (Physical Science) | *Kegalu Vidyalaya, Kegalle* 2021

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, SQL

Frontend Development: React.js, Vite, Tailwind CSS, State Management, Responsive Web Design, REST API Integration

Backend & APIs: Spring Boot, Spring Security, Node.js, Express, RESTful APIs, JWT Authentication, Hibernate ORM

AI, Agents & Vector Search: Multi-Agent Systems, RAG Pipelines, ChromaDB (Vector Search), Gemini API, Groq, DeepSeek-R1, Ollama

Databases & DevOps: MySQL, Git, GitHub, Docker basics, Postman, Linux CLI, Cloud Deployment

KEY PROJECTS

ShadowSense Aurora – AI Anti-Scam Overlay | *Team Lead* 2026
Codebase | **1st Runner-Up — AURORA 2026 AI Ideathon**

- Architected a privacy-focused intelligent browser layer designed to shield freelance developers from sophisticated phishing and escrow fraud on Upwork and Fiverr.
- Orchestrated a multi-agent consensus pipeline with 4 AI agents running on Groq, Gemini 2.0 Flash, and local DeepSeek-R1 via Ollama.
- Implemented RAG-assisted contextual risk analysis backed by ChromaDB vector similarity search to cross-reference emerging fraud vectors.
- Directed technical architecture and coordinated rapid agile sprints to deliver a deployable MVP within competition constraints.

Stack: Python, Fast-Inference APIs (Groq, Gemini), ChromaDB, Ollama, DeepSeek-R1, Multi-Agent Architecture

GridWalk AI – Autonomous Microgrid Recovery Simulator | *Team IGNITE* 2026
Codebase | **1st Runner-Up — AI Hackathon 2026 (UoM & Jaseci Labs)**

- Built an AI-native full-stack microgrid recovery simulator in Jac/Jaseci modeling a 12-bus power network with fault injection, load prioritization, and real-time topology inspection.
- Engineered a multi-tier recovery pipeline combining Gemini primary planning, Groq fallback inference, and a deterministic solver under strict execution deadlines.
- Implemented deterministic graph validation to verify line/source capacities, connectivity, and grid state revisions before committing AI-proposed switching actions.
- Designed typed state contracts and an interactive dashboard displaying audit trails, validator feedback, served vs. unmet demand, and critical-load preservation.

Stack: Jac (Jaseci), Python, Gemini API, Groq, Graph-Based State Modeling, Multi-Agent Architecture

V–Mas – Enterprise Fleet Management System | *Full-Stack Developer* 2025

Codebase

- Developed an enterprise web application to track vehicle lifecycles, schedule preventive maintenance, and manage operational expenditures.
- Implemented secure role-based access control (RBAC) and stateless JWT user authentication with Spring Boot and Spring Security.
- Designed normalized relational schemas in MySQL with Hibernate ORM and built data export pipelines for automated Excel/PDF generation.

Stack: Java, Spring Boot, Spring Security, MySQL, Hibernate, React, Vite, Tailwind CSS

TrueTrace – Digital Document Forensic Analyzer | *Developer* 2026

Codebase

- Created an image verification tool to detect tampered financial records, invoices, and government identification cards.
- Applied computer vision routines including Error Level Analysis (ELA), high-frequency noise variance, and metadata integrity checks.

Stack: Python, Computer Vision / ELA, Image Processing, Digital Forensics

HONORS & CERTIFICATIONS

1st Runner-Up | AI Hackathon 2026 (EESoc UoM & Jaseci Labs) 2026
1st Runner-Up | AURORA 2026 National AI Ideathon 2026
Gemini Certified Student | Google for Education 2026
Introduction to Artificial Intelligence | Simplilearn SkillUp 2026
Introduction to Prompt Engineering | Simplilearn SkillUp 2026
Machine Learning Using Python | Simplilearn SkillUp 2026
Certificate of Appreciation | SabraXtreme 3.0 (IEEE Student Branch of SUSL) 2025

LEADERSHIP & ENGAGEMENT

Program Team Member | IEEE Student Branch, SUSL 2025
Managed technical event platforms, tracks, and competitor communications for SabraXtreme 3.0.

Treasurer – Project Green Sprout | Rotaract Club of SUSL 2024 – 2025
Oversaw project budget planning, expenditure auditing, and accountability reports for community initiatives.

REFERENCES

Mr. YMS Tharaka, *Lecturer (Probationary)*, Sabaragamuwa University of Sri Lanka
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Mr. Chathura Manohara, *Associate Tech Lead*, Omobio (Pvt) Ltd
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