



MINULA VIHANGA

Software Engineering Intern | Full Stack Development

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ABOUT ME

Software Engineer graduate from the University of Plymouth, delivered at NSBM Green University, Sri Lanka, completed in May 2026. Skilled in full-stack web, mobile, and IoT application development, with hands-on experience building AI-integrated systems and secure digital platforms using RSA digital signatures and AES-256 encryption. Developed projects including a live AI study platform and a consent-based EHR system. Available from June 2026 for software engineering internships and entry-level roles.

EDUCATION

▪ University of Plymouth, UK (via NSBM Green University)

Oct 2023 – May 2026

BSc (Hons) in Software Engineering (Awaiting Conferral - Nov 2026)

Coursework: Data Structures & Algorithms, OOP, Database Systems, Software Engineering, Web & Mobile Development, AI & ML

PROJECTS

HealthLink - Privacy-Aware Digital Health Record System

🐙 GitHub

- Developed a cross-platform EHR (Next.js + React Native + Spring Boot) with 4 user roles and consent-based access control in real time.
- Developed a Python/FastAPI microservice (Gemini API) that extracts text, masks sensitive data, and summarizes medical PDFs with bilingual English and Sinhala output.
- Secured prescriptions end-to-end with RSA digital signatures and AES-256-GCM encryption, ensuring tamper-proof, verifiable records in transit and at rest.

ShowroomPro - 2D and 3D Furniture Visualization System

🐙 GitHub

- Developed a full-stack 2D/3D furniture platform (MERN + React Three Fiber) supporting 7 categories, drag-and-drop placement, and seamless blueprint-to-3D view switching.
- Served as Project Lead for a 4-member team, leading system architecture and full-stack development, including JWT authentication and Zustand-based scene state management with 30-step undo/redox functionality.

ZenPath - Online Mental Health Support System

🐙 GitHub

- Led a 6-member team to develop a telemedicine platform with 3 user roles and dashboards, online therapy via jitsi, and PHQ-9/GAD-7 assessments with automated severity classification.
- Designed Stripe-powered Zen Coins, a prepaid system with 2 transaction types (purchase and time-based deduction) with RBAC and a responsive React/Tailwind frontend.

Realtime Asset Tracker - IoT Solution

 GitHub

- Led a 7-member team to build a full-stack IoT solution (ESP32 + C++ + Node.js + React) for real-time GPS tracking, environmental monitoring, and automatic accident detection.
- Developed a live React dashboard with dynamic map visualization, configurable sensor thresholds, and a custom multi-channel alert system for threshold breaches and impact events.

StudyMate - AI Study Companion

 Live Application

 GitHub

- Developed a live AI study platform (Next.js + Gemini API) as sole developer, enabling PDF-to-quiz generation, text summarization, and mobile-responsive export functionality.
- Designed the full pipeline from PDF upload through Gemini API processing to formatted quiz output, with customizable difficulty settings and a clean single-page UI.

CERTIFICATIONS

- AgentX AI Agents Bootcamp - Zone24x7 & Leo Club, University of Moratuwa | Aug 2025
- Fundamentals of DevOps on AWS - AWS & Simplilearn SkillUP | June 2025
- Learning Next.js - LinkedIn Learning | May 2025
- Introduction to MERN Stack - Simplilearn SkillUP | Nov 2024

SKILLS

Languages	: JavaScript, TypeScript, Java, Python, C#, C
Frontend	: React, Next.js, React Native, Tailwind CSS, Nativewind, React Three Fiber
Backend	: Node.js, Express.js, Spring Boot, FastAPI, REST API Design
Databases	: MongoDB, MySQL, Firebase
AI & Integration	: Gemini API, LLM integration, AI Agents, AI-assisted development (Cursor, Antigravity)
Tools	: Git, GitHub, VS Code, Postman, Arduino IDE
Spoken Languages	: English (Professional), Sinhala (Native)

REFERENCES

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