

Sanjula Herath

Software Engineering Intern | AI & Machine Learning

☎ 076 916 9052 ✉ sanjula692@gmail.com GitHub: github.com/sanjulaonline in linkedin.com/in/sanjulaherath

Portfolio: sanjula.online

SUMMARY

Computer Science undergraduate with **3+ years of industry experience** building production-grade AI applications, scalable backend systems, and real-time platforms using Python, Node.js, React, and cloud technologies.

SKILLS

PROGRAMMING | Python, JavaScript, TypeScript, Java, Go, Rust, HTML5, CSS3

AI & MACHINE LEARNING | Scikit-Learn, Pandas, NumPy, OpenAI API, Gemini AI, RAG, LangChain, TensorFlow, Model Evaluation, Jupyter

BACKEND & SYSTEMS | Node.js, Express.js, NestJS, FastAPI, gRPC, REST APIs, Microservices, Redis, System Design

FRONTEND | React, Next.js, React Native, Tailwind CSS, Three.js

INFRASTRUCTURE | Docker, Google Cloud, AWS, PostgreSQL, MongoDB, Linux, Kubernetes, CI/CD, WebSockets, MQTT

EXPERIENCE

COULLAX | Node.js, Next.js, AI/ML, PostgreSQL
Software Engineer | Mar 2023 – Present, Malabe, Sri Lanka

- Engineered Node.js REST APIs **servicing 30+ country** deployments, reducing client onboarding **time by 40%**.
- Contributed to AI-powered chatbot systems and automation workflows, reducing manual processing time by an **estimated 60%** for key client workflows.

FREELANCE (GLOBAL CLIENTS, FIVERR) | Python, Node.js, ReactJS, AI APIs

Full-Stack Developer | Jun 2021 – Present, Sri Lanka (Remote)

- Delivered **10+ full-stack projects** on Fiverr with 5-star ratings; clients across US, UK, and EU - AI chatbots, REST APIs, and React dashboards.
- Designed real-time data pipelines using Node.js, Express, and WebSockets delivered production-ready solutions.

SELECTED PROJECTS

SKILLCHECKER | **AI-Powered Interview Platform**

• **Next.js, Node.js, OpenAI API, PostgreSQL, AWS**

- Designed AI-driven interview workflows using OpenAI API to objectively assess technical and soft skills.
- Built automation for candidate evaluation, reducing manual screening effort significantly.
- Implemented response analysis for communication, problem-solving, and accuracy scoring.

SOTERCARE | **IoT Health Monitoring**

• **React Native, NestJS, PostgreSQL, RAG, Docker, MQTT**

EDUCATION

UNIVERSITY OF WESTMINSTER

BSc (Hons) in Computer Science

Jan 2025 – Present | London, UK (via IIT Sri Lanka)

- Built and deployed multiple production-grade applications with real-world users, including a 3D AI visualization platform with **10,000+ interactions**.

HIGHLIGHTS

- Built and shipped products actively used across **30+ countries**
- 11,400+ real user interactions** on a publicly deployed AI platform
- 3+ years of real-world engineering** experience alongside undergraduate studies

LEADERSHIP EXPERIENCE

Nexus Spring of Code |

Community Ambassador – Managing contributor engagement and community initiatives for a 150+ member Open Source program.

GSSoC |

Campus Ambassador – Leading student outreach and community initiatives at IIT Sri Lanka, mobilizing 220+ participants within a global Open Source ecosystem of 49,000+ contributors.

SOLANA ECOSYSTEM |

Technical Speaker – Deliver a technical session on Solana blockchain architecture and real world web3 applications.

ALGORAND FOUNDATION |

Technical Speaker – Delivered a technical session on the Algorand blockchain architecture and decentralized application development.

IEEE COMPUTER SOCIETY |

Technical Team Member – Contribute to technical initiatives, and collaborate on engineering focused programs.

AWS CLOUD CLUB |

Member – Engaged in cloud computing workshops, technical discussions, and community knowledge sharing initiatives.

- Designed dual-device wearable system (ESP32) deployed to 1,000+ real users, communicating via BLE to a Raspberry Pi edge gateway with real-time health monitoring.
- Implemented ML-based fall detection and real-time motion classification with edge-to-cloud data pipeline.
- Built React Native app for live monitoring, health analytics, and automated alerts.

Phantom-Mail | Disposal Email Infrastructure Platform

• **Rust, PostgreSQL, Axum, Tokio, Python FastAPI, AWS EC2, Docker, SMTP, MQTT**

- Deployed live on **AWS EC2 via Docker Compose**, configuring DNS, MX, SPF, reverse PTR, and production networking for real-world mail delivery.
- Implemented a custom SMTP server with STARTTLS, async concurrent processing, and per-IP/global rate limiting for secure high-performance message handling.
- Integrated a Python ML microservice for OTP extraction, spam scoring, and email classification, deployed live on AWS using Docker Compose.

CHATGPT VISUALIZER | 3D Conversation Graph

• **Three.js, React Three Fiber, TypeScript**

- Built a 3D spatial visualization system for rendering AI conversations as explorable graphs.
- Achieved 10,400+ user interactions through public deployment and organic sharing.
- Optimized rendering performance for dynamic conversation nodes using React Three Fiber.

DEMENTIA PREDICTION ANALYSIS | ML Pipeline

• **Python, Scikit-Learn, Pandas, Jupyter**

- Built end-to-end ML pipeline including preprocessing, EDA, and feature engineering.
- Evaluated logistic regression, decision trees, and random forests using precision, recall, and ROC-AUC.

3D-AI-BOT | Browser Automation

• **JavaScript, Three.js, Gemini AI**

- Integrated Gemini AI backend for real-time DOM analysis, content extraction, and conversational workflows.

NOMADS TRAVEL COMPANION | AI Travel App

• **React Native, Go, Python, Google Maps API, WebSocket**

- Designed an AI-powered mobile app for personalized real-time travel recommendations in Sri Lanka.
- Built location-aware system for curated stays, transport guidance, and offline tourist support.

CERTIFICATIONS

- AlgoKit Workshop Sri Lanka 2025
- Responsible AI: Global Risks, Governance, and Human Oversight
- AWS Cloud Practitioner Essentials
- AWS Certified Cloud Practitioner Official Practice
- Python for Deep Learning: Build Neural Networks in Python

PROBLEM SOLVING

- Solved **100+ LeetCode problems** focused on Data Structures & Algorithms.
- Strong understanding of algorithms, debugging, and system design fundamentals.

COURSEWORK

- Machine Learning
- Advanced Algorithms
- Software Engineering
- Data Structures
- Applied Statistics
- Distributed Systems

INTERESTS

- AI/ML • Open Source • Blockchain
- IoT • System Design • Rugby

REFERENCES

Mr. Torin Wirasingha

Senior Lecturer, IIT

torin.w@iit.ac.lk

+94 76 820 9747

Mr. Ushan Sankalpa

Senior Software Engineer, Coullax

ushan@coullax.com

+94 71 305 4513