

SAHAN NAYANAJITH

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Research interests : Quantum Computing, Agentic AI, Deep Learning, Machine Learning, Computer Vision

EDUCATION

- University of Moratuwa** Moratuwa, Sri Lanka
B.Sc. of Engineering Honours Degree in Electronic and Telecommunication Engineering Graduated in Aug 2023
 - CGPA : 3.82/4.2
 - Dean's list : Semester 3,4,6,7,8
- Maliyadeva Model School, Kurunegala** Kurunegala, Sri Lanka
G.C.E. Advance Level (physical Science Stream) 2017
 - Z-score : 2.2397 - 3As for Combined Mathematics, Physics and Chemistry

PUBLICATIONS

- Digital IC Functionality Duplication Using Neural Networks** 2023
 - Anjana Bandara, **Sahan Nayanajith**, Ayesh Rajakaruna, Supun Chirantha, Subramaniam Thayaparan
 - 2023 IEEE 17th International Conference on Industrial and Information Systems (ICIIS), Peradeniya, Sri Lanka
 - DOI: [10.1109/ICIIS58898.2023.10253575](https://doi.org/10.1109/ICIIS58898.2023.10253575)

SKILLS

- Languages Python, Java, C, C++, JavaScript
- Tools and Frameworks Tensorflow, Pytorch, Node-RED, Spring Boot, MATLAB, LLM, Hugging Face
- Databases Oracle DB, MySQL, PostgreSQL, MongoDB, InfluxDB
- Other Technologies Git, Docker, CI/CD, Grafana

EXPERIENCE

- Software Engineer** June 2024 – Present
IronOne Technologies (Pvt) Ltd. Sri Lanka
 - Lead development of a Java EE-based capital market broker backoffice system, using JSP, Servlets, Oracle DB, and Spring Boot APIs, supporting critical trading and post-trade operations.
 - Drive end-to-end delivery of the broker back-office module, owning feature development, defect resolution, code quality, and production stability.
 - Drive the deployment and release management lifecycle, coordinating builds, deployments, and hotfixes to ensure reliable and smooth production rollouts.
 - Design and develop a machine learning-based real-time anomaly detection system using Django and Python to identify and prevent fraudulent transactions.
 - Technologies:** Java, Spring Boot, Oracle SQL, React, Python, Django, Git, Azure DevOps
- Freelance Software Engineer** Jan 2023 – Present
Upwork(Part Time) Remote
 - Recognized as a Top Rated Freelancer on Upwork, delivering software development and machine learning solutions for clients in the USA, Netherlands, Australia, and India.
 - Deliver custom Node.js and Node-RED solutions for client automation, API integrations, and interactive dashboard development across multiple business domains.
 - Design, develop, and deploy machine learning models for prediction and analysis, leveraging Hugging Face and Python-based ML frameworks.
 - Build and integrate LLM-powered solutions using OpenAI APIs to enable intelligent workflow automation, chatbots, and AI-driven applications.
 - Technologies:** Node.js, Node-RED, Python, LLMs, OpenAI, Hugging Face, TensorFlow

- Associate Software Engineer** Nov 2023 – June 2024
Altrium (Pvt) Ltd. *Sri Lanka*
 - Contributed to a Spring Boot-based microservices architecture for a smart payment integration platform, integrating with external Java SDKs for secure payment communications.
 - Managed Oracle SQL databases and implemented Redis caching to improve performance and scalability.
 - Wrote comprehensive unit and end-to-end tests, while ensuring high code quality and meeting non-functional requirements like availability and fault tolerance.
 - Supported CI/CD deployments using Jenkins and monitored builds for seamless delivery.
 - Technologies:** Java, Spring Boot, SQL, Git, Redis, Jenkins
- IoT Engineering Intern** Jan 2022 – July 2022
Millennium I.T.E.S.P. (Pvt) Ltd. *Sri Lanka*
 - Implemented IoT dashboards systems for real-time monitoring and data visualization, boosting efficiency.
 - Performed some solution evaluation, aligning IoT technology with client needs.
 - Significantly improved industrial performance by utilizing IoT technology for system automations.
 - Technologies:** IOtech EdgeXpert, Node-RED, MySQL, InfluxDB, Grafana, Python

PROJECTS

- Digital IC Functionality Duplication using Neural Networks** Oct 2022 - June 2023
 - Undergraduate final year research project focused on duplicating the functional behavior of digital integrated circuits (ICs) using neural networks, with emphasis on sequential logic systems.
 - Designed and implemented a TensorFlow-based neural network architecture capable of learning and emulating sequential digital logic behavior from real hardware signals.
 - Developed a data acquisition and training pipeline by collecting datasets from multiple sequential logic circuits implemented on an FPGA for supervised model training.
 - Demonstrated the approach by controlling a robotic arm driven by FPGA-based sequential logic, and successfully imitating the control behavior using the trained neural network model.
 - Performed model architecture design, hyperparameter tuning, experimental evaluation, and contributed to the publication of a research paper based on the project outcomes.
 - Technologies:** Python, TensorFlow, Verilog
- FlavorFusion - Cafe Management System** July 2023 - Oct 2023
 - Developed a web application to manage a restaurant products, orders, and bills with user login features.
 - Backend has been developed using Spring Boot and worked with Angular and Angular Material for frontend.
 - Technologies:** Java, Spring Boot, Angular, MySQL
- Forest Fire Prediction Using Weather Data Observations** Sep 2023 - Oct 2023
 - Developed ensemble ML model to analyze likelihood of a fire, based on rainfall, relative humidity, and temperature sensor data.
 - Designed a real-time web app to visualize sensor data and predictions.
 - Technologies:** Python, scikit-learn, Flask, Socket.IO

CERTIFICATE COURSES

- Machine Learning in Production** 2026
DeepLearning.AI [Certificate](#)
- Agentic AI** 2025
DeepLearning.AI [Certificate](#)
- MCP: Build Rich-Context AI Apps with Anthropic** 2025
DeepLearning.AI [Certificate](#)
- AWS Educate Introduction to Cloud 101** 2025
Amazon Web Services [Certificate](#)
- Deep Learning Specialization** 2023
DeepLearning.AI [Certificate](#)
- Machine Learning Foundations: A Case Study Approach** 2021
University of Washington [Certificate](#)

- **Social Media Coordinator (*Twitter*)**
Department of Electronic and Telecommunication Eng

Aug 2021 – Aug 2022
University of Moratuwa

REFERENCE

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