

Janitha Rathnayake Systems Engineer

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 Janitha Rathnayake

 JanithaB

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 Kurunegala



Professional Experience

Electronic Engineer, Vega Innovations (Pvt) Ltd

01/2025 – Present

Maradana, Colombo

- Managed and maintained **AWS EC2 infrastructure**, DNS/domain configurations.
- Deployed and maintained **production MCP servers and backend services**.
- Operated **Linux/UNIX and NVIDIA Jetson platforms** supporting **production ML and edge AI systems**.
- Designed and implemented **MQTT-based edge-to-backend** data pipelines for reliable communication.
- Deployed **n8n workflows** on **Docker** to automate AI and data processes, and built AI agents using MCP-Use with LangChain integration.
- Streamlined workflows and defined best practices for system monitoring and maintenance.

Research Engineering Intern,

08/2023 – 10/2023

Katubedda, Moratuwa

SLIOT Design & Innovation Laboratory University of Moratuwa

- Developed and trained CNN models for sensor-based data analysis.
- Collected and processed experimental data from TENG devices.
- Assisted in sensor design and prototyping.
- Contributed to technical documentation and research papers.

Engineering Trainee, Sri Lanka Telecom

05/2022 – 08/2022

OPMC - Kurunegala

- Gained hands-on experience in Switching, Transmission, and Planning divisions.
- Worked in ADSL, NC (Network Configuration), and Maintenance divisions.

Education

B.Sc (Hons) in Electrical & Electronics Engineering, University of Peradeniya

12/2019 – 08/2024

- GPA: 3.2/4.0
- Coursework: AI & ML, Communication Systems, Programming & Networking

G.C.E Advanced Level Examination (Physical Sciences), Maliyadeva College

07/2015 – 08/2017

- All 'A' passes for Combined Mathematics, Physics & Chemistry
- Z-Score: 1.8146

Skills

Technical Fields

AI & ML, Networking, IoT, Edge AI, Automation

Operating Systems

Ubuntu, CentOS, Kali Linux, DietPi, Raspbian, Windows

Programming Languages

Python, C/C++, Java, JavaScript(Beginner)

Developer Tools

Visual Studio Code, IntelliJ IDEA, Cursor

Version Control

Git and Github

Other

- AWS & Cloud:** EC2, Route 53; configured DNS for multiple domains.
- Networking & Security:** Nginx reverse proxy for load balancing, secure IoT integrations, firewall management.

Certificates

Python Data Structures University of Michigan Coursera Certificate	Neural Networks and Deep Learning DeepLearning. AI Coursera Certificate	Learning Verilog for FPGA Development LinkedIn LinkedIn Certificate
Learning FPGA Development LinkedIn Certificate	Getting Started with RISC-V LinkedIn LinkedIn Certificate	Introduction to the Internet of Things and Embedded Systems  Coursera Issued May 2022 Credential ID T64GNCUVYSXC
Python Data Structures  Coursera Issued Nov 2020 Credential ID DKS2F6KM9NLK		

Projects

Mentoring Platform Microservices with Spring Boot, Ongoing

- Built backend services for a mentoring platform with Java Spring Boot, microservices, and MVC; handled user registration, session scheduling, and mentor-mentee matching.

Technologies: Java | Spring Boot | Microservices | MVC

Spiking Neuron Architecture for Information Processing

- Implemented an efficient gradient descent approach in neural networks, optimizing training and computational cost; analyzed performance and potential improvements.

Technologies: Python | SNNTorch | PyTorch

Person Identification using Gait Pattern

- Built TENG sensors to capture gait data and trained a CNN model for analysis.
- Developed a Python GUI application to collect and manage gait data.

Technologies: Arduino | Python | CNN | TENG

Other Experiences

IEEE PES Peradeniya Students' Chapter University of Peradeniya., Chair Person	07/2023 – 09/2024
IEEE PES Peradeniya Students' Chapter University of Peradeniya., Vice Chair	05/2022 – 07/2023
IEEE PES Peradeniya Students' Chapter University of Peradeniya., Volunteer	01/2022 – 05/2022
<ul style="list-style-type: none">Participated in IEEE PES APPEFC 2023 held in Chiang Mai, Thailand, alongside the IEEE R10 Chapter Chair meeting.Currently volunteering in Professional Activities IEEE PES SL Chapter	

Languages

- English
- Sinhala

Declaration

I hereby declare that the above-mentioned information is accurate to the best of my knowledge and belief.



Janitha Rathnayake

28/12/2025