

NUWAN JALIYAGODA

SENIOR SOFTWARE ENGINEER — MSc IN ADVANCED SOFTWARE ENGINEERING (READING)

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🌐 NUWAN-JALIYAGODA

🔗 NUWAN.J

EDUCATION

MSc. in Advanced Computer Engineering (Reading)

University of Westminster, United Kingdom

2023 Oct – Present

Sri Lanka, Remote

BSc. (Hons) Computer Engineering, First Class Honours

University of Peradeniya, Sri Lanka - **GPA: 3.80/4.00**

2017 Jan – 2021 Sept

Peradeniya, Sri Lanka

WORK EXPERIENCE

Senior Software Engineer

Rhino Partners (Pte) Ltd, Singapore

2022 Sept – Present

Sri Lanka, Remote

- Currently working as a Full-stack senior software engineer, specialized in fin-tech related products.

Temporary Instructor

Department of Computer Engineering, University of Peradeniya

2021 Sept – 2022 Aug

Peradeniya, Sri Lanka

- Worked as a teaching assistant for the BSc. Computer Engineering undergraduate courses, including Computer Communication Networks, Computer Architecture, and Advanced Embedded Systems.
- Worked as an active contributor/resource person in the Swarm Robotics Research Group.

Trainee Software Engineer

LiveRoom (Pvt) Ltd

2021 Apr – 2021 Aug

Bandarawela, Sri Lanka

- Worked on developing an IoT-based smart Greenhouse Automation system. This included full-stack software development as well as embedded systems integration.

• Internet of things (IoT) for Smart Agriculture: Assembling and Assessment of a low-cost

• IoT system for Polytunnels

Research Article, PLOS One, May 2023 doi:10.1371/journal.pone.0278440

• Mixed-Reality Based Multi-Agent Robotics Framework for Artificial Swarm Intelligence Experiments

Research Article, IEEE Access, vol. 11, September 2023 doi:10.1109/ACCESS.2023.3317434

COURSEWORK / SKILLS

- Embedded Systems and IoT
- Web Development
- Swarm and Multi-agent Robotics
- Computer Networking
- Database Management System (DBMS)
- OOP Concepts
- Data Structures & Algorithms

SELECTED PROJECTS [More: <https://nuwanjaliyagoda.com/projects/>]

Enhancing Motion Planning in Shape-Changing Robots through Reinforcement Learning [↗](#)

Reinforcement Learning, Python, C++, TensorFlow

2024-Present

- The project (ongoing) aims to develop a Reinforcement Learning-based motion planning system for shape-changing robots that dynamically optimizes morphology and movement in real time.
- Conducted as a part of the MSc. Research Project

Mixed Reality based Simulation Platform for Swarm Robotics Experiments [↗](#)

NodeJS, MQTT, Java, Python, C++, HTML, three.js

2020-2021

- The main objective of this project was to implement a mixed reality-based simulator application with an efficient and reliable architecture for allowing both physical and virtual robots to collaboratively run swarm intelligence based algorithms in real-time.
- Website: pera-swarm.ce.pdn.ac.lk

Greenhouse Automation System with IoT Sensor Network [↗](#)

ESP32, MQTT, C++, NodeJS, Industrial Automation

2020

- The main objective of this project was to collect environmental data from Greenhouses while controlling the environmental conditions.
- This project was done with the collaboration of the Agricultural Biotechnology Center, University of Peradeniya.


TECHNICAL SKILLS

- **Languages:** C, C++, Python, PHP, Java, JavaScript, SQL, Verilog
- **Hardware Programming:** Arduino, ESP, PIC, Raspberry Pi, STM32, PLC Ladder
- **Technologies/Frameworks:** Linux, Git, GitHub, ReactJS, NPM, NodeJS, ExpressJS, JQuery, Bootstrap, Git, Laravel, NextJS
- **Hardware Prototyping:** PCB Designing and Manufacturing, 3D Printing, CAD, CAM
- **Computer-Aided Designing:** SolidWorks, AutoCAD, 3D Max, InventorHSM, Fusion360

ACHIEVEMENTS

- **Best Research Presentation - ESCaPE 2021**
Thesis Project Symposium of the Department of Computer Engineering, University of Peradeniya 2021
- **Winner - IEEE R10 Humanitarian Technology Products Competition**
IEEE Region 10 Humanitarian Technology Conference 2018
- **United Nations' Social Innovation Challenge**
Shortlisted for National Innovation Camp (Top 14 out of 700+ teams) 2018
- **1st Place - Sri Lanka Robotics Challenge**
Robotics Competition - School Category 2015
- **4th Place - International Schools' Software Competition**
South & East Asian Region, Rajalakshmi Engineering College, Chennai, India 2014

EXTRA CURRICULAR

- **Nenethambara Education Program** 
Volunteer Content Creator on Microcontroller Programming for School Kids 2021–2022
- **Dialog App Challenge 2018-19**
Mentoring and Guiding school teams 2018–2019
- **Global Ambassador Network Program, Dialog Ideamart**
Agent of Influence 2018
- **Society of Information and Communication Technology, Dharmaraja College, Kandy**
President - School 2008–2009

CERTIFICATIONS

- Reinforcement Learning Beginner to Master - AI in Python by Escape Velocity Labs via Udemy
- Control of Mobile Robots by Georgia Institute of Technology via Coursera
- Digital Manufacturing & Design by University at Buffalo and The State University of New York via Coursera
- Industrial IoT on Google Cloud Platform by Google Cloud via Coursera
- 3D Printing Hardware by University of Illinois at Urbana-Champaign via Coursera

REFERENCES

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