

DEEGHAYU SUWAHAS ADHIKARI

Teaching Assistant | Voluntary Research Assistant @ UOK

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SUMMARY

A recent graduate and electronics teaching assistant with a strong foundation in software engineering, IoT, and embedded systems. With hands-on experience in real-time communication and autonomous systems, currently pursuing a Master's in IT. Proven expertise in developing resource-efficient IoT-based solutions, and keen to apply machine learning and computer vision skills to autonomous drone research. Skilled in managing projects, optimizing algorithms, and leading teams toward innovative solutions.

EDUCATION

Ongoing	Master in Information Technology (Reading)	University of Kelaniya
2021 - 2024	BSc in Physical Science (Computer Studies, Electronics and Physics) With a 2nd class upper division pass	University of Kelaniya
06/2023	Certificate - Responsive Web Design	www.freecodecamp.org
11/2023	Certificate - Machine Learning with Python	www.freecodecamp.org
10/2024	Certificate - JavaScript Algorithms and Data Structures (Beta)	www.freecodecamp.org

PUBLICATIONS

Abstract MO-37	Autonomous Quadcopter-based Intelligent Irrigation System for Enhancing Crop Care International Conference on Applied and Pure Sciences, University of Kelaniya, Sri Lanka. 2024 Vimansa W. A. H.*, Adhikari A. M. N. D. S. , Rathnayaka R. M. P. B., Dilshan P. K. S. I., Attanayake A. M. V. A., Randeniarachchi R. A. N. D., Hemal S. B. N. H., Piyumal P. L. A. K., Kumarage W. G. C. - Developed an autonomous quadcopter system for smart irrigation, leveraging real-time monitoring for improved water usage and crop growth. Drone Programming, ESP32, ML, Battery Management, Solar Power, Data Fusion, Weather API, YOLOv8, Intelligent Algorithms, web app.
Abstract MP-14	Wireless Pager System for Enhancing Emergency Communication in Hospital Environment International Conference on Applied and Pure Sciences, University of Kelaniya, Sri Lanka. 2024 Gunarathna T. G. L.*, Adhikari A. M. N. D. S. , Bandara K. D. Y., Gunawardana K. D. B. H., Seneviratne J. A., Perera M. H. M. T. S. - Implemented a LoRa pager system for efficient emergency communication, enhancing responsiveness in hospital settings. LoRa, ESP32, Raspberry Pi, 433 MHz modules, local/cloud storage.
Abstract SO-09	A Cost-effective and Adaptable Queue Management System to Increase Efficiency in Patient Queue Management International Conference on Applied and Pure Sciences, University of Kelaniya, Sri Lanka. 2024 Adhikari A. M. N. D. S. , Gunarathna T. G. L., Bandara K. D. Y., Gunawardana K. D. B. H., Seneviratne J. A., Perera M. H. M. T. S. - Designed a QR-based, offline queue system to optimize patient flow at the National Institute of Infectious Diseases. HTML, CSS, JavaScript, PHP, SQLite3, AES-256 encryption, ESP32, mDNS, Random Forest.

TECHNICAL SKILLS

Languages: C++, Python, JavaScript, HTML, CSS

Frameworks/Tools: React, Git, GitHub, VSCode, PyCharm, WebSockets,

Specialties: Web Development, IoT Systems, Embedded Systems, Real-Time Systems, QR Technology, Algorithm Optimization

PROJECTS

2023 - 2024	Quadcopter Based Intelligent Irrigation System Electronics Research Project wing.scienceontheweb.net Merging electronics and agriculture, utilizing quadcopter technology with intelligent sensors for autonomous irrigation.	http://green-
2024	AI-based Assignment-Solving Android App Developing an Android application integrating Gemini AI to provide comprehensive assignment-solving assistance. Utilizing Kotlin and Jetpack Compose, Real-time OCR using ML kit.	https://github.com/DeegayuA/SnapLearn
2024	Deep Learning Mini Projects A series of mini deep learning projects: <ol style="list-style-type: none">Sinhala character recognition deep learning model training image classification using RNN. (https://github.com/DeegayuA/Deep-Learning-Mini-Project-01)Stock Price Prediction using LSTM Recurrent Neural Networks. (https://github.com/DeegayuA/Deep-Learning-Mini-Project-02)English to Sinhala translation model using transformers. (https://github.com/DeegayuA/Deep-Learning-Mini-Project-03)	https://github.com/DeegayuA
2021	Portfolio Website Dynamic portfolio website showcasing skills and projects built using HTML, CSS, and JavaScript only.	https://deeghayu.netlify.app

ACHIEVEMENTS AND AWARDS

02/2024	Participation - UWU ROBOT BATTLES 2.0: Death Race (2024) Competed in the UWU Robot Battles 2.0: Death Race, demonstrating robotics skills and collaborative spirit.	Uva Wellassa University, Sri Lanka
11/2023	Second Runner Up - Sky of Icarus Custom-Drone competition - 2023 Achieved second runner-up in the Sky of Icarus 2023 drone competition, demonstrating expertise in drone technology and teamwork.	IESL Young Member Section, South Eastern University, Sri Lanka
04/2022	Best of the Class Final Year School Attained Class Proficiency in final year of high school, underscoring commitment to academic excellence.	Gurukula National College, Kelaniya
11/2018	Merit Certification Open Day Robotic Competition Achieved a Merit Certification at the District Level Open Day Robotic Competition.	NERDC, Sri Lanka
06/2018	Participation SLIIT GAMEFEST 2K18 Showcased involvement in SLIIT GAMEFEST 2K18, a game development competition.	SLIIT

LEADERSHIP AND TEAMWORK

2021 - 2023	Steam - VidE Event Coordinator, VidE - 21/22, Head of Photography 20/21, Member 19/20	Media Unit, FOS, UOK
2022 - 2023	Inventors Club Vice President 21/22, Junior Treasurer 20/21	University of Kelaniya
2022 - 2023	E-Waste Project Junior Electronics Lead 20/21, Electronics Lead 21/22	Electronic Development and Innovation Center University of Kelaniya
2021 - 2022	Astronomy and Space Science Association Co-Coordinator 20/21, Main Web Developer 19/20 and 20/21, Committee Member 19/20	University of Kelaniya
2022	Statistic and Computer Science Students' Association Editor 20/21	University of Kelaniya

LANGUAGES

Sinhala - Native,

English - Intermediate,

German - Beginner.

REFERENCE

Professor A. L. A. K. Ranaweera

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Deeghayu Suwahas Adhikari

11/11/2024