

DEEGHAYU SUWAHAS ADHIKARI

R&D Engineer @ AltaVision Solar

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SUMMARY

A graduate student in IT with expertise in electronics, AI, IoT, and web development. Experienced in developing AI-powered solutions and embedded systems for real-world applications. Passionate about creating user-centric, scalable technologies to enhance accessibility. Skilled in project management, machine learning, algorithm optimization, and cross-functional collaboration to drive innovative solutions.

EDUCATION

2025.05 - 2026	Master in Data Science and AI (Reading)	Faculty of Engineering, University of Moratuwa
2024.07 - 2025.08	Master in Information Technology (Reading)	Faculty of Science, University of Kelaniya
2021.07 - 2024.04	BSc in Physical Science (CS, Electronics and Physics) GPA 3.31/4.00	Faculty of Science, 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

EXPERIENCE

03.2025 - (Current)	Research and Development Engineer (IoT) Key Responsibilities: - Developed IoT prototypes by integrating sensors, microcontrollers, and communication modules with a focus on reliability and low power use. - Worked with cross-functional teams, field testing, and system optimization for deployment.	AltaVision, Homagama, Sri Lanka
03.2025 - (Current)	AI Engineer (Intern) Key Responsibilities: - Assisted in developing, testing, and improving AI applications. - Collaborated with senior developers in software and Web development. - Contributed to feature enhancements and user-centered design.	Mobios Private Limited, Colombo, Sri Lanka
05.2024 - 03.2025	Voluntary Research Assistant, Department of Physics and Electronics Key Contributions: - Developed machine learning algorithms for real-time data analysis and decision-making. - Conducted IoT projects, integrating sensor technologies to enhance system performance. - Conducted research in AI, IoT, and data analytics for faculty projects and publications.	University of Kelaniya, Sri Lanka
07. 2024 - 03. 2025	Graduate Teaching Assistant, Department of Physics and Electronics Key Contributions: - Assisted in courses such as embedded systems, signal processing, IoT, and computer architecture. - Mentored students through hands-on projects, offering technical support and guidance. - Developed content and lab exercises to promote active learning.	University of Kelaniya, Sri Lanka
2021 - 2023	Freelance Web Developer Key Contributions: - Developed responsive, user-centric web-sites/apps with basic HTML, CSS, JS to React and Next.js. - Ensured WCAG 2.2 compliance, enhancing accessibility for diverse users. - Collaborated with clients to deliver scalable, secure, high-performance solutions. - Optimized app performance with techniques such as lazy loading, code splitting, and SEO.	Remote, Freelancing

TECHNICAL SKILLS

Languages:
C++, Python, JavaScript, TypeScript

Frameworks/Tools:
React, Next.js, Radix UI, Tailwind CSS, Git, GitHub, VSCode, PyCharm, WebSockets, Vercel, Google Gemini

Specialties:
Web Development, AI and Machine Learning, IoT Systems, Embedded Systems

PROJECTS

2024 (Ongoing)	LifeSight: Accessibility Tool for Visually Impaired Users - An AI-powered tool designed to assist visually impaired individuals with daily tasks. - Includes real-time object recognition using computer vision and text-to-speech conversion. - Focused on accessibility features and personalized user experience. - GitHub: https://github.com/DeegayuA/lifesight2 .	Master in IT Project
2024	Queue Management System for Healthcare - Designed a customizable queue system to enhance patient flow at healthcare institutions. - Implemented an offline, scalable, low-battery system with cloud synchronization. - GitHub: https://github.com/DeegayuA/idh .	Project by EDIC, UOK
2023 - 2024	GreenWing: Quad-Copter based Intelligent Smart Irrigation System - Developed a smart irrigation system using AI and sensor technologies. - Integrated real-time weather data, machine learning algorithms, and IoT connectivity. - GitHub: https://github.com/DeegayuA/GreenWing .	Final Year Electronics Research Project
2023	AI-based Assignment-Solving Android App: SnapLearn - Developed an Android app using Gemini AI to provide comprehensive assignment-solving assistance. - Utilized Kotlin, Jetpack Compose, and integrated real-time OCR using ML Kit. - GitHub: https://github.com/DeegayuA/SnapLearn .	Android Project
2022 - 2023	Deep Learning Mini Projects - Implemented a series of deep learning models including: - Sinhala Character Recognition: Trained RNN-based image classification model. - Stock Price Prediction: Built an LSTM-based model for predicting stock prices. - English to Sinhala Translation: Developed a translation model using transformers. - Car Price Prediction: Built a machine learning model using Random Forest for predicting car prices.	Learning Projects

ACHIEVEMENTS AND AWARDS

02/2024	Participation - UWU ROBOT BATTLES 2.0: Death Race (2024) Competed in UWU Robot Battles 2.0: Death Race, showcasing robotics skills and teamwork.	Uva Wellassa University, Sri Lanka
11/2023	Second Runner Up - Sky of Icarus Custom-Drone competition - 2023 2nd runner-up in Sky of Icarus 2023 drone competition, showcasing drone skills and teamwork.	IESL Young Member Section, South Eastern University, Sri Lanka
04/2022	Best of the Class Final Year School Achieved Class Proficiency in the final year of high school, reflecting 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 - 2024	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

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.,
Randeniarchchi 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, Sri Lanka.
Queue Management, IoT, Data Encryption, QR, Cloud, Accessibility, Low Battery Indicators, Load Balancing, Power Efficiency.

LANGUAGES

Sinhala - Native,

English - Intermediate,

German - Beginner.

INTERESTS

- **Technology:** Web Development, AI/ML, IoT, Edge Computing
- **Research:** IoT, Electronic Designs, Computer Vision, Natural Language Processing
- **Social Impact:** Accessibility Innovation, Design for All, Inclusivity in Tech, Volunteering at University
- **Creative Hobbies:** Cinematography, DIY Electronics Projects, Arduino Raspberry Pi
- **Sports:** Chess, E-Sports
- **Personal Growth:** Reading,

REFERENCE

Professor A. L. A. K. Ranaweera
Professor,
Department of Physics and Electronics,
University of Kelaniya.
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Dr. J. A. Seneviratne
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Deeghayu Suwahas Adhikari

04/20/2025