

# Lakshan Madhushanka

📍 Sri Lanka    ✉ lakshan@sjp.ac.lk    ☎ +94 71 888 1 665    🌐 lakshan.info    in Lakshan-Madhushanka

## Education

---

### Bachelor of the Science of Engineering (Honours)

Nov 2016 – Sep 2021

University of Peradeniya, Sri Lanka

Specialized in Electrical and Electronic Engineering

GPA: 3.25/4.00

## Employment

---

### Lecturer (On Contract)

Dec 2023 – Present

Faculty of Engineering, University of Sri Jayewardenepura

- Conduct lectures for all undergraduate levels in the Department of Computer Engineering.
- Subjects taught: Machine Learning, Intelligent Systems, Data Mining, Computer Vision, Embedded Systems.

### Temporary Instructor (Teaching Assistant)

May 2023 – Nov 2023

Faculty of Engineering, University of Sri Jayewardenepura

- Conducted laboratory classes for Computer Engineering undergraduates.
- Evaluated lab reports, quizzes, and assignments.

### Temporary Instructor (Teaching Assistant)

Sep 2021 – Mar 2023

Faculty of Engineering, University of Peradeniya

- Assisted lecturers in delivering courses and practical sessions.
- Conducted laboratory sessions in Robotics, Control and Automation Lab for Electrical and Electronic Engineering students.

### Electrical Engineer Intern

Nov 2019 – Feb 2020

Ceylon Electricity Board, Colombo 02, Sri Lanka

- Worked in system planning, design, and maintenance across generation, transmission, and distribution.

### Electronic Engineer Intern

Feb 2019 – May 2019

Huawei Technologies Lanka Co. (PVT) Ltd., World Trade Center, Colombo 01

- Worked on the Huawei Cisco Router Swap Project at the Dialog Data Communication Division.
- Focused on tasks in aggregation network transition and optimization.

## Engineering Projects

---

### VisualLidar Fusion Based Deep Learning Framework for Autonomous Vehicle

2021

#### Navigation

Developed a control system using off-the-shelf hardware and open-source software.  
Applied advanced machine learning for localization.

### Advanced Blind Spot Monitoring System for Commercial Vehicles

2020

Designed a plug-and-play device to detect vehicles in the blind spot and automatically activate the rearview camera feed.

### Image and Video Encoder/Decoder with Quality Optimizer

2019

Built a media compression and optimization tool with adjustable quality trade-offs using OpenCV and embedded controls.

### Smart Capacitor-Based Wood Moisture Sensor

2018

Created a capacitive sensor system to measure wood moisture levels accurately and affordably.

### Guitar Tuner Using PIC Microcontrollers and Assembly Language

2018

Developed an embedded system for real-time frequency detection and visual tuning assistance.

## Publications

---

- [1] G.S.K. Bhagya, **N.K.B.L.M. Bandara**, A.L.H.E. Perera, S.P. Wijesekara, A. Chandrasekara, G.M. Somaratne, “Predictgl: An ai-driven web application for glycemic load prediction using nutritional composition data,” in *Proceedings of the Peradeniya University International Research Sessions (iPURSE 2025)*, Aug. 2025.

## Awards and Recognitions

---

### Academic Awards

- **2022 Eng. E.W. Karunarathna Award**, Institution of Engineers, Sri Lanka (IESL)  
For the best undergraduate project in Electrical Engineering across all Sri Lankan universities.
- **2022 W.P. Jayasekara Prize**, University of Peradeniya  
For the best final-year project in Electrical and Electronic Engineering.
- **2021 Prof. Suhada Jayasuriya Grant Scholarship**  
Awarded for the best Robotics and Automation Project.
- **2021 Silver Medalist Sahasak Nimawum 2021**, Sri Lanka Inventors Commission  
Recognized for the project Advanced Blind Spot Monitoring System.
- **2021 First Runners-Up**, IEEE Asia Pacific Region Humanitarian Project Video Contest

### Other Recognitions

- **2023 IEEE STEM Champion**, IEEE Education Activities

Recognized globally for outstanding contribution to Pre-University STEM education. One of only 26 worldwide; second Sri Lankan to receive the honor.

- **2022 Section Outstanding Volunteer (Student Category)**, IEEE Sri Lanka Section Awards
- **2022 Best Affinity Group Project**, IEEE Sri Lanka Section (Affinity Group Category)
- **2020 IEEE Tech Narrator**  
Best Content Creator and Most Popular Content among Sri Lankan universities.
- **2018 Best Project**, AIESEC in Kandy

## Certificates and Courses

---

### Online Courses

- **2023 Self-Driving Cars Specialization**, University of Toronto (Coursera)
- **2023 Python for Computer Vision with OpenCV and Deep Learning**, Udemy
- **2023 Natural Language Processing with Python**, Udemy
- **2023 Object Localization with TensorFlow**, Udemy
- **2023 Learning How to Learn**, McMaster University & UC San Diego (Coursera)

## Professional Experiences

---

- **2025 Project Monitoring Committee**, IEEE Humanitarian Technologies Board
- **2025 Secretary**, IEEE EMBS Sri Lanka Chapter
- **2024 Treasurer**, IEEE Sri Lanka Section
- **2024 Editor**, IEEE EMBS Sri Lanka Chapter
- **2023 Chair Student Activities**, IEEE Sri Lanka Section
- **2023 Lead Technical Activities and Events Committee**, IEEE Asia Pacific Region Student Activities Committee
- **2022 Chairperson SIGHT**, IEEE Sri Lanka Section
- **2022 Training and Webinar Coordinator**, IEEE Asia Pacific Region Student Activities Committee
- **2021 Committee Member**, IEEE Young Professionals Sri Lanka
- **2021 Student Representative**, IEEE PES Humanitarian Activities Committee (R10)
- **2020 Co-Chair**, IEEE Sri Lanka Section Congress
- **2019 Communications Committee Member**, IEEE SIGHT Global Steering Committee
- **2019 Motion Graphic Designer**, IEEE Presidents Forum (Sri Lanka Section)
- **2019 Publicity & Promotions**, IEEE YESIST12 Asia (Sri Lanka Section)
- **2018 Design Team Member**, IEEE Innovation Nation (Sri Lanka Section)
- **2019-2021 Promotions, Design, Program Committees**, IEEE StudPro, SLInspire, and other events

## Professional Memberships

---

- **Member Institute of Electrical and Electronic Engineers (MIEEE)** , Membership No: 94952078, Since 2018
- **Member IEEE Computer Society**, Membership No: 94952078, Since 2021
- **Member IEEE Engineering in Medicine and Biology Society (EMBS)**, Membership No: 94952078, Since 2023
- **Associate Member Institution of Engineers, Sri Lanka (IESL)**, Membership No: AM-33349, Since 2019
- **Associate Engineer Engineering Council, Sri Lanka (ECSL)**, Membership No: 219534, Since 2024

## Skills

---

- **Programming Languages:** Python, MATLAB, C, C++, Assembly,  $\text{\LaTeX}$
- **Frameworks & Libraries:** TensorFlow, PyTorch, Keras, OpenCV, Scikit-learn, ROS
- **Data Science & ML:** Pandas, NumPy, Matplotlib, Seaborn, Classical ML, Deep Learning, CNN, NLP, Transfer Learning, Vision Transformers, Computer Vision
- **Medical Imaging & Analysis:** OCT Imaging, Histopathology Scanning, Digital Slide Scanning, Microscopy (Brightfield & Fluorescence)
- **Simulation & Tools:** COMSOL Multiphysics, Proteus, PSSE, Gazebo, Rviz, Jupyter, Google Colab
- **Embedded Systems & Robotics:** Jetson AGX Orin, Jetson Nano, Raspberry Pi, Arduino
- **Platforms & Dev Tools:** Linux, Windows, Git, GitHub, VS Code, Overleaf
- **Soft Skills:** Leadership, Project Management, Public Speaking, Technical Writing, Teaching
- **Languages:** Sinhala (Native), English (Fluent), French (Basic)

## References

---

### Prof. Lilantha Samaranayake

Dean of the Faculty, Professor

Department of Electrical and Electronic Engineering

Faculty of Engineering, University of Peradeniya, Sri Lanka

**Email:** lilantha@ee.pdn.ac.lk [✉](mailto:lilantha@ee.pdn.ac.lk)

**Phone:** +94 81 239 3426

### Dr. Udaya Wijenayake

Head of the Department, Senior Lecturer

Department of Computer Engineering

Faculty of Engineering, University of Sri Jayewardenepura, Sri Lanka

**Email:** udayaw@sjp.ac.lk [✉](mailto:udayaw@sjp.ac.lk)

**Phone:** +94 76 465 5928

**Prof. Jennifer C. Dela Cruz**

Professor

School of Electrical, Electronics, and Computer Engineering

Mapúa University, Manila, Philippines

**Email:** [jennifer.c.delacruz@ieee.org](mailto:jennifer.c.delacruz@ieee.org) 

**Phone:** +63 918 990 0122