

NISHANKAR SATHIYAMOCHAN

+94 076-4246-658 ✉ nishannishankar@gmail.com 🌐 Portfolio 📄 LinkedIn 🐙 GitHub 🔗 ResearchGate
🎓 Google Scholar

🎓 Education

University of Peradeniya

B.Sc (Hons) in Computer Engineering, CGPA: 3.50/4.00

Kandy, Sri Lanka

Nov 2018 – Dec 2023

Hartley College

GCE Advanced Level - Physical Sciences

Point Pedro, Sri Lanka

Jan 2009 – Aug 2017

- Results: Combined Mathematics (A), Chemistry (A), Physics (B)

📖 Publications

Journals

J1. S. Nishankar, N. Pathirana, P. Sanjeevani, A. G. Perera, and S. Thuseethan, “Does Explainability Transfer? A Controlled Benchmark of Attribution Methods on Vision Transformers and CNNs” Jul 2026

Neurocomputing, Elsevier | Under Review | [arXiv:2608.02396](https://arxiv.org/abs/2608.02396)

J2. S. Nishankar, P. Sanjeevani, A. Perera, and S. Thuseethan, “HiLRP: Toward One Trustworthy Explanation for Vision Transformer: Conservation-Valid Attribution via Attention Primitives” 2026

Pattern Recognition, Elsevier | Submitted

J3. Tharindu Godage, **Sathiyamohan Nishankar**, Selvarajah Thuseethan, Shanmuganathan Vasanthapriyan, Zhongwei Liang, “Trends, Challenges and Future Directions in Deep Learning for Citrus Leaf Disease Recognition: A Survey” Jun 2026

Artificial Intelligence Review, Springer | Q1 | IF: 18.8 | CiteScore: 14.9 | SJR: 3.01 | [DOI](#)

J4. S. Nishankar, V. Pavindran, T. Mithuran, S. Nimishan, S. Thuseethan, and Y. Sebastian, “ViT-RoT: Vision Transformer-Based Robust Framework for Tomato Leaf Disease Recognition” Jun 2025

AgriEngineering, MDPI, vol. 7, no. 6, p. 185 | JCR Q2 / CiteScore Q1 | IF: 3.1 | CiteScore: 4.7 | SJR: 0.559 | [DOI](#)

J5. S. Nishankar, T. Mithuran, S. Nimishan, V. Pavindran, and S. Thuseethan, “TOM-SSL: Tomato Disease Recognition using Pseudo-labelling based Semi-supervised Learning” Jul 2025

AgriEngineering, MDPI, vol. 7, no. 8, p. 248 | JCR Q2 / CiteScore Q1 | IF: 3.1 | CiteScore: 4.7 | SJR: 0.559 | [DOI](#)

J6. George, R., **Nishankar, S.**, Thuseethan, S., Wimalasooriya, C., Sebastian, Y., Ragel, R. G., & Liang, Z., “U-FedTomAtt: Ultra-lightweight Federated Learning with Attention for Tomato Disease Recognition” Feb 2026

IEEE Transactions on Information Forensics and Security | Q1 | IF: 8.7 | CiteScore: 14.9 | SJR: 2.14 | Under Review | [arXiv:2602.16749](https://arxiv.org/abs/2602.16749)

J7. George, R., **Nishankar, S.**, Thuseethan, S., & Ragel, R. G., “UtVAA: Ultra-tiny Vision Transformer with Affix Attention for Mobile Image Classification” Jun 2026

arXiv preprint | Under Review | [arXiv:2606.14735](https://arxiv.org/abs/2606.14735)

J8. T. Shyamalee*, **S. Nishankar***, S. Thuseethan, C. Wimalasooriya, and Y. Sebastian, “Deep Semi-supervised Learning for Medical Image Analysis: A Survey” (*Equal Contribution) Sept 2025

ACM Computing Surveys | Q1 | IF: 28.0 | CiteScore: 28 | SJR: 5.8 | Minor Revision

J9. Balenthira Thanusanth, Selvarajah Thuseethan, **Sathiyamohan Nishankar**, Romiyal George, Roshan G. Ragel, Bimali S. Weerakoon, Ayesha Jayasinghe, and Ananthamoorthy Krishnamoorthy, “Architecture-aware Robustness Evaluation of Explainable Deep Learning for Breast Cancer Diagnosis” Jun 2026

J10. Thilini Bakmeedeniya, Selvarajah Thuseethan, Roshan G. Ragel, Palanisamy Vigneshwaran, and **Sathiyamohan Nishankar**, “From Unimodal to Multimodal Deep Physiological Signal Analysis in Health-care: A Survey” Mar 2026

Computer Science Review | Q1 | IF: 17.5 | CiteScore: 38.4 | SJR: 3.28 | Under Review

J11. Romiyal George, **Sathiyamohan Nishankar**, Selvarajah Thuseethan, Kandiah Pakeerathan, Roshan G. Ragel, “SLIF-Brinjal: An In-Field Leaf Dataset for Disease Recognition in Precision Agriculture” Feb 2026

Scientific Data, Nature Portfolio | Q1 | IF: 6.9 | CiteScore: 12.6 | SJR: 1.91 | Under Review

Conferences

C1. M. Shakishnavi, K.P.N. Jayasena, and **S. Nishankar**, “A Unified Zero Trust Orchestration Framework for Kubernetes: Design, Integration, and Functional Verification” 2026

APAN Conference | Accepted

C2. M. Shakishnavi, K.P.N. Jayasena, and **S. Nishankar**, “A Multi-Layer Zero Trust Security Framework for Kubernetes” 2026

MERCon | Accepted

C3. M. Shakishnavi, K.P.N. Jayasena, and **S. Nishankar**, “Observability-Driven Security Evaluation of a Unified Zero Trust Framework for Kubernetes: Cross-Layer Event Correlation and Automated Response Validation” 2026

InCiT Conference | Accepted

Current Researches

5. S. Nishankar, et al., “**SSA-HQNN: Spatial Superpixel Attention-Guided Hybrid Quantum Neural Network for Image Classification**”, (Drafting). 2026

- Proposed SSA-HQNN, a hybrid quantum–classical architecture that uses learned spatial superpixel attention (SSA) to directly condition a trainable quantum encoding for image classification.
- Evaluated across seven benchmarks (including medical imaging modalities like PathMNIST and PneumoniaMNIST), achieving up to 93.9% and 90.3% accuracy respectively while matching or exceeding the AUC of classical baselines.
- Designed a highly parameter-efficient backbone requiring as few as 60K trainable parameters, achieving a $\sim 100\times$ reduction in model size compared to ResNet-18.

Honors & Awards

Best Researcher Award (Faculty Level)

Sabaragamuwa University (2025)

1st Place: Pre Aces Hackathon, Inter-University Coding Competition

2022

Professional Experience

Part time Research Intern

March 2026 – Present

University of Southern Queensland, Australia

Supervisor: Dr Asanka Perera

- Developing **M3-Score**, a new evaluation metric for diffusion-based generative models in medical imaging, built on features from a frozen radiology-pretrained vision transformer.
- Working on **3D Computer vision** 3D reconstruction.
- XAI BenchMark Study.
- HiLRP Universal Explanation for Vision Transformers.

Lecturer

Apr 2025 – Present

Sabaragamuwa University of Sri Lanka

Dept. of Software Engineering

- Teaching undergraduate courses and supervising final year research projects.

- **University Business Linkage (UBL) Coordinator:** Facilitating collaboration between industry partners.
- **Assistant Research Coordinator:** Managing departmental research activities.

Lecturer

University of Jaffna

Apr 2024 – Apr 2025
Dept. of Computer Engineering

Instructor

University of Peradeniya

Jan 2024 – Apr 2024
Dept. of Computer Engineering

Freelance Software Developer

Remote (Self-Employed)

2022 – Present

- Developed DUCAS AI to automate daily reporting in construction using Azure, GPT-4o, and FastAPI.

Software Engineering Intern

Infinity Innovators Pvt

Dec 2022 – Apr 2023

Colombo, Sri Lanka

- Developed WAKA, a full-stack online vehicle marketplace for NZ using React.js and AWS.

Teaching Experience

Sabaragamuwa University of Sri Lanka – Lecturer

2025 – Present

- Taught: **Artificial Intelligence, Computer Communication Networks, High Performance Computing (HPC), Cloud Computing, and Game Design and Development, Parallel and Distributed Computing, Cloud Computing**

University of Jaffna – Lecturer on Contract

2024 – 2025

- Taught: **Embedded Systems, Computing, Digital Image Processing, and Applied Algorithms.**

University of Peradeniya – Instructor

2024

- Led instruction for: **Artificial Intelligence, Computer Communication Networks, and Advanced Database Management Systems.**

Projects

Efficient Transfer Learning and XAI for Histopathology

2023

- Utilized XAI methods (SHAP, LIME, GradCAM) to enhance model trust.

Road Sign Detection in Low Light Conditions

2023

- Developed an AI system using YOLOv8 to detect signs in low-light conditions.

Academic Service & Memberships

Publication Chair

ComURS Symposium (2026), ICARC International Conference (2026)

Open Track Co-Chair

ICARC International Conference (2026)

Registration Chair

ICARC International Conference (2026)

Editor

ICARC (2026), ComURS (2026), ICSUSL (2025)

Reviewer ICARC (2026), ComURS (2026), Moratuwa Engineering Research Conference (MERCon) (2026)

Member Institute of Electrical and Electronics Engineers (IEEE)

Technical Skills

Programming: Python, Node.js, Express.js, Django, Flask, FastAPI, Java, C++, SQL

AI/ML: PyTorch, TensorFlow, Keras, OpenCV, Scikit-learn, YOLOv8, Hugging face, Nerfstudio

Cloud/DevOps: AWS (Serverless, EC2, S3), Azure, Docker, Git, React.js, Flutter

Collaborations

Dr. S. Thuseethan

- Lecturer in Information Technology, Charles Darwin University, Australia
- Email: Thuseethan.selvarajah@cdu.edu.au

Dr Asanka Perera

- Lecturer (Mechatronic Engineering) in University of Southern Queensland, Australia.
- Email: Asanka.Perera@unisq.edu.au

Dr Pubudu Sanjeewani

- Associate Lecturer, RMIT University, (Melbourne, Australia)
- Email: pubudu.sanjeewani@rmit.edu.au