Curriculum Vitae

Piyadi Gamage Jayani Lakshika
Department of Econometrics and Business Statistics
Monash University, Australia

Email: jayani.piyadigamage@monash.edu, jayanilakshika76@gmail.com
Website: https://jayanilakshika.netlify.app/
GitHub: https://github.com/JayaniLakshika
LinkedIn: https://www.linkedin.com/in/jayani-lakshika-9a0297162

🎓 Education

PhD candidate - Statistics
Faculty of Business & Economics, Monash University, Australia
Thesis title: New Interactive Visual Tools and Statistical Methodology for Selecting and Evaluating Non-linear Dimension Reduction Layouts of High-dimensional Data
July 2022 — January 2026

B.Sc. (Honours) in Statistics
University of Sri Jayewardenepura (USJ), Sri Lanka
Thesis title: Computer Vision System For Automated Medicinal Plant Identification
January 2017 — December 2020

Diploma in Computer System Design (DCSD)
National Institute of Business Management (NIBM), Sri Lanka
March 2016 — March 2017

Certificate in Business Accounting
Chartered Institute of Management Accountants (CIMA), Sri Lanka
December 2015 — September 2016

💼 Appointments Held

Teaching Associate
Department of Econometrics and Business Statistics, Monash University, Australia
January 2023 —

Teaching Assistant (Temporary Instructor)
University of Sri Jayewardenepura (USJ), Sri Lanka
July 2021 — July 2022

Associate Data Analyst
Vizuamatix (Pvt) Ltd, Sri Lanka
January — November 2021

Trainee Data Analyst
Vizuamatix (Pvt) Ltd, Sri Lanka
July 2020 —January 2021

Research Internship
Vizuamatix (Pvt) Ltd, Sri Lanka
Industrial training as a fulfillment of the degree B.Sc. (Honours) in Statistics
January — July 2020

📖 Publications

Papers

Gamage, J. P., Cook, D., Harrison, P., Lydeamore, M., & Talagala, T. S. (2025). cardinalR: Generating Interesting High-Dimensional Data Structures. arXiv preprint arXiv:2512.18172. (**Submit, The R Journal**)

Gamage, J. P., Cook, D., Harrison, P., Lydeamore, M., & Talagala, T. S. (2025). quollr: An R Package for Visualizing 2-D Models from Nonlinear Dimension Reductions in High-Dimensional Space. arXiv preprint arXiv:2512.18166. (**Submit, The R Journal**)

Gamage, J. P., Cook, D., Harrison, P., & Lydeamore, M. (2025). Stop Lying to Me: New Visual Tools to Choose the Most Honest Nonlinear Dimension Reduction. arXiv preprint arXiv:2506.22051 (**Revise & Resubmit, JCGS**)

Lakshika, J. P., & Talagala, T. S. (2021). Computer-aided Interpretable Features for Leaf Image Classification. arXiv preprint arXiv:2106.08077

Conference proceedings

Young Scientists' Conference on Multidisciplinary Research (YCMR) abstract publication (ISSN 2815-0260)	October 2021
17th applied science research poster and abstract publication (Page 74)	September 2021

Conference presentations and contributed talks

Visualise your fitted non-linear reduction model in high-dimensional space Australian Statistical Conference (ASC 2025) (Perth, Western Australia)	2025
Visualise your fitted non-linear reduction model in high-dimensional space Biometrics in the Bush Capital (BIBC2025) (Canberra, Australia)	2025
Visualise your fitted non-linear reduction model in high-dimensional space Monash EBS PhD Contest in International Day of Women in Statistics and Data Science (IDWSDS) (online)	2025
Visualise your fitted non-linear reduction model in high-dimensional space 2025 Joint Statistical Meetings, Nashville, Tennessee, USA	2025
Generating interesting high-dimensional data structures UseR! 2025, Penn Pavilion, Duke University, Durham, North Carolina, USA	2025
Visualise your fitted non-linear reduction model in high-dimensional space Data Science Club, University of Nebraska, Omaha (UNO), USA	2024
Visualise your fitted non-linear reduction model in high-dimensional space Graphics Group, University of Nebraska, Licoln (UNL), USA	2024
Visualise your fitted non-linear reduction model in high-dimensional space UseR! 2024, Salzburg, Austria	2024
Visualising how non-linear dimension reduction warps your data Faculty of BusEco Three Minute Thesis (3MT) competition, Monash University, Australia	2024

Visualise your fitted non-linear dimension reduction model in the high-dimensional data space Victorian branch of the Australian and New Zealand Industrial and Applied Mathematics Society (VicANZIAM) 2024 (RMIT university, Melbourne, Australia)	2024
Visualize your fitted non-linear dimension reduction model in the high-dimensional data space — Invited speaker Bioinformatics Seminar, Monash University, Australia	2024
With non-linear dimension reduction, when can you believe what you see? Australian Statistical Conference (ASC 2023) (Wollongon, Australia)	2023
Viewing the model from a non-linear dimension reduction in the high-dimensional data space — Invited speaker 12th-Conference of the Asian Regional Section of the International Association for Statistical Computing (IASC-ARS 2023) (Wollongon, Australia)	2023
Higher studies webinar — Invited speaker University of Sri Jayewardenepura (USJ), Sri Lanka	2023
Computer Vision System for Automated Medicinal Plant Identification — Invited speaker NUMBATs meeting, Monash University, Australia	2022
Computer Vision System for Automated Medicinal Plant Identification — Invited speaker Estadistica 2021, the Annual Statistics Day organized by the Statistics Society of University of Sri Jayewardenepura, Sri Lanka	2021
Computer Vision System for Automated Medicinal Plant Identification — Invited speaker Vx Tech Talk 2021, Vizuamatix Pvt. Ltd, Sri lanka	2021
Statistical machine learning for medicinal plant leaves classification — Presentation 17th Applied Statistics Conference, Solvenia	2021
Statistical machine learning for medicinal plant leaves classification — Speed-talk Young Scientists' Conference on Multidisciplinary Research (YSCMR 2021) which is organised by the Young Scientists' Association of the National Institute of Fundamental Studies, Sri Lanka (NIFS-YSA)	2021

👁 Visiting

Prof. Heike Hofmann, A/Prof. Susan Vanderplas, and Dr. Michelle Graham At the University of Nebraska, Lincoln, USA (six weeks)	October-December 2024
A/Prof. Ursula Laa At the University of Natural Resources and Life Sciences, Vienna (BOKU University), accompanied by Prof. Di Cook, Prof. Eun-Kyung Lee, and A/Prof. Natalia da Silva (one week)	July 2024

📦 R packages

airpurifyr: Provide an interface to scrape air quality data from https://openaq.org/

cardinalR: Collection of data structures.

quollr: Tool to visualise how non-linear dimension reduction warps your data

polarisR: Shiny app to compare models generated with `quollr` in high dimensions using different tour methods, featuring interactivity.

olympics: Provide an interface to scrape Olympic data from https://olympics.com/

MedLEA: Software which contains information about medicinal plants in Sri Lanka

DSjobtracker: Software which contains what skills and qualifications are required for data science related jobs

🏫 Teaching

Tutor

[ETC5242] **Statistical thinking**	2025
[ETC2420] **Statistical thinking**	2025
[ETC5510] **Introduction to data analysis**	2024
[ETC1010] **Introduction to data analysis**	2024
[ETC3250] **Introduction to machine learning**	2023 — 2024
[ETC5250] **Introduction to machine learning**	2023 — 2025
[ETC5521] **Exploratory data analysis**	2023
[STA 326 2.0] **R Programming**	2022
[STA 213 2.0] **Inferential Statistics**	2022
[STA 214 1.0] **Nonparametric Statistics**	2022
[STA 215 2.0] **Sampling techniques**	2022
[STA 115 1.0] **Elements of Sampling**	2022
[STA 113 2.0] **Descriptive Statistics**	2022
[STA 114 2.0] **Probability and Distribution Theory I**	2022
[STA 224 2.0] **Regression Analysis**	2021
[STA 225 2.0] **Design of Experiments**	2021
[STA 226 1.0] **Data Analysis II**	2021
[STA 123 2.0] **Probability and Distribution Theory II**	2021
[STA 124 2.0] **Data Analysis I**	2021
[STA 125 1.0] **Statistical Communication**	2021

🖵 Workshops

Reproducible Reporting and Research with Quarto	September 2025
Reproducible Reporting, Academic Papers, Presentations and Theses with Quarto	July 2025

🏅 Awards

PhD external experience fund
Monash University, Australia
2024

Monash Business School Prestigious International Conference Award
Monash University, Australia
2024

Co-Funded Graduate Research Scholarship, Monash Business School
Monash University, Australia
2022 — 2026

Diploma in Computer System Design (DCSD) — Gold medalist
National Institute of Business Management (NIBM), Sri Lanka
2017

OCTAVE competition — Finalists
Research abstract competition organized by OCTAVE company, Sri Lanka
2021

Stat Circle quiz competition — Winners
Team member of the winners at inter university quiz competition organized by the Stat Circle Faculty of Science, University of Colombo, Sri Lanka
2018

💬 Academic Service & Community Engagment

Monash Innovation Guarantee-Postgraduate (MIG-P)— Mentor
Monash University, Australia
June 2025

NUMBATs seminar organizer
Monash University, Australia
2025

UseR! 2024 Session Chair
Conference in Salzburg, Austria
2024

ASC Session Chair
Australian Statistical Conference in Wollongong, Australia
2023

WOMBAT tutorials — Helper
Monash University, Australia
2022

Statistical Consultancy Service — Department representative
University of Sri Jayewardenepura (USJ), Sri Lanka
2020

👥 Professional Memberships

American Statistical Association (ASA)   2025–

Statistical Society of Australia (SSA)   2022–

R-Ladies Melbourne   2022–

Statistics society
University of Sri Jayewardenepura (USJ), Sri Lanka   2017–2022

🧑 References

Prof Dianne Cook
dicook@monash.edu
https://www.dicook.org/
Professor
Department of Econometrics and Business Statistics
Faculty of Business and Economics
Monash University, Australia

Dr Michael Lydeamore
michael.lydeamore@monash.edu
https://www.michaellydeamore.com/
Senior Lecturer
Department of Econometrics and Business Statistics
Faculty of Business and Economics
Monash University, Australia

Dr Thiyanga S. Talagala
ttalagala@sjp.ac.lk
https://thiyanga.netlify.com
Senior Lecturer
Department of Statistics
Faculty of Applied Sciences
University of Sri Jayewardenepura, Sri Lanka