

Curriculum Vitae

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

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Education

PhD candidate - Statistics

Faculty of Business & Economics, Monash University, Australia
Thesis title: Interactive and Dynamic Graphics for Studying Non-linear Dimension Reduction Models of High-dimensional Data
July 2022 —

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 — December 2020

Research Internship

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

Publications

Papers

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](https://arxiv.org/abs/2506.22051)

Lakshika, J. P., & Talagala, T. S. (2021). Computer-aided Interpretable Features for Leaf Image Classification. arXiv preprint [arXiv:2106.08077](https://arxiv.org/abs/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 2025
Australian Statistical Conference (ASC 2025) (Perth, Western Australia)

Visualise your fitted non-linear reduction model in high-dimensional space 2025
Biometrics in the Bush Capital (BIBC2025) (Canberra, Australia)

Visualise your fitted non-linear reduction model in high-dimensional space 2025
2025 Joint Statistical Meetings, Nashville, Tennessee, USA

Generating interesting high-dimensional data structures 2025
UseR! 2025, Penn Pavilion, Duke University, Durham, North Carolina, USA

Visualise your fitted non-linear reduction model in high-dimensional space 2024
Data Science Club, University of Nebraska, Omaha (UNO), USA

Visualise your fitted non-linear reduction model in high-dimensional space 2024
Graphics Group, University of Nebraska, Lincoln (UNL), USA

Visualise your fitted non-linear reduction model in high-dimensional space 2024
UseR! 2024, Salzburg, Austria

Visualising how non-linear dimension reduction warps your data 2024
Faculty of BusEco Three Minute Thesis (3MT) competition, Monash University, Australia

Visualise your fitted non-linear dimension reduction model in the high-dimensional data space 2024
Victorian branch of the Australian and New Zealand Industrial and Applied Mathematics Society (VicANZIAMS) 2024 (RMIT university, Melbourne, Australia)

Visualize your fitted non-linear dimension reduction model in the high-dimensional data space — Invited speaker 2024
Bioinformatics Seminar, Monash University, Australia

With non-linear dimension reduction, when can you believe what you see? 2023
Australian Statistical Conference (ASC 2023) (Wollongong, Australia)

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| 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, Vizumatix 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

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| 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

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

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| [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 |

Awards

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| 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

NUMBATs seminar organizer Semester 1,
Monash University, Austria 2025

UseR! 2024 Session Chair 2024
Conference in Salzburg, Austria

ASC Session Chair 2023
Australian Statistical Conference in Wollongong, Australia

WOMBAT tutorials — Helper 2022
Monash University, Australia

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

Professional Memberships

Statistical Society of Australias (SSA) 2022–

R-Ladies Melbourne 2022–

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

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. 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