

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](https://arxiv.org/abs/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](https://arxiv.org/abs/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](https://arxiv.org/abs/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](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 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, Lincoln (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	2024
Victorian branch of the Australian and New Zealand Industrial and Applied Mathematics Society (VicANZIAM) 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) (Wollongon, Australia)	
Viewing the model from a non-linear dimension reduction in the high-dimensional data space — Invited speaker	2023
12th-Conference of the Asian Regional Section of the International Association for Statistical Computing (IASC-ARS 2023) (Wollongon, Australia)	
Higher studies webinar — Invited speaker	2023
University of Sri Jayewardenepura (USJ), Sri Lanka	
Computer Vision System for Automated Medicinal Plant Identification — Invited speaker	2022
NUMBATs meeting, Monash University, Australia	
Computer Vision System for Automated Medicinal Plant Identification — Invited speaker	2021
Estadistica 2021, the Annual Statistics Day organized by the Statistics Society of University of Sri Jayewardenepura, Sri Lanka	
Computer Vision System for Automated Medicinal Plant Identification — Invited speaker	2021
Vx Tech Talk 2021, Vizuamatix Pvt. Ltd, Sri lanka	
Statistical machine learning for medicinal plant leaves classification — Presentation	2021
17th Applied Statistics Conference, Solvenia	
Statistical machine learning for medicinal plant leaves classification — Speed-talk	2021
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)	

⦿ Visiting

Prof. Heike Hofmann, A/Prof. Susan Vanderplas, and Dr. Michelle Graham	October-December 2024
At the University of Nebraska, Lincoln, USA (six weeks)	
A/Prof. Ursula Laa	July 2024
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)	

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 Engagement

Monash Innovation Guarantee-Undergraduate (MIG-UG) — Mentor Monash University, Australia	January 2026
ASC Session Chair Australian Statistical Conference in Perth, Australia	2025
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

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