AMALAN MAHENDRAN

Data Scientist and PhD Student in Statistics

CONTACT

- amalan0595@gmail.com
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SKILLS

R (Data Analysis) (tidyr,dplyr) — 8+ yrs

R (Visualisation) (ggplot2,plotly) — 8+ yrs

R (Report Writing) (rmarkdown,quarto) — 5+ yrs

Develop R Packages (devtools,usethis, roxygen2,testthat, covr, pkgdown, drat) — 8+ yrs

R (Dashboard) (Shiny,flexdashboard, golem,DT) — 5+ yrs

Latex and MS Office — 8+ yrs

Spatial Analysis (ArcGIS and QGIS) — 1+ yrs

SAS and SQL — 3 yrs

Python, C++ and Java — 2 yrs

Teaching — 2 yrs

Presentation — 5 yrs

EDUCATION

PhD in Statistics — Feb, 2020 - ongoing
School of Mathematical Sciences, Faculty of Science, Queensland University of Technology, Australia.

Title - New methods in experimental design for subsampling big data, Final seminar completed and preparing for thesis lodgement.

B.Sc. (Hons) in Statistics, — Mar, 2013 - Dec, 2016
Department of Statistics and Computer Science, Faculty of Science, University of Peradeniya, Sri Lanka.

CGPA with 3.87/4.00 CGPA.
Subjects: Statistics, Mathematics, Computer Science.

Bayesian Statistical Learning by Dr. Matias Quiroz — Jan, 2022 - Feb, 2022
Summer School in the Mathematical Sciences, Australian Mathematical Science Institute.

WORK EXPERIENCE

Research Fellow in Transport Engineering and Planning — April, 2025 - ongoing
School of Civil and Environmental Engineering, Faculty of Engineering, Queensland University of Technology, Australia.

Conducting crash safety analysis using state-of-the-art modelling tools. Responsible for data cleaning, preparation, and evaluation of suitable analytical methods based on project requirements.

Teaching Assistant and Tutor — Jul, 2024 - Nov, 2025
School of Mathematical Sciences, Faculty of Science, Queensland University of Technology, Australia.

Help students to successfully handle the industry-collaborated project. Mark team work logs, presentation and modelling reports. MXB 348 - Work Integrated Learning in Statistics.

Temporary Lecturer — Jan, 2017 - Jul, 2018
Department of Statistics and Computer Science, Faculty of Science, University of Peradeniya, Sri Lanka.

Prepare and conduct lectures and practicals.
Set and mark exam papers, quizzes, tutorials.
CS 100 - Computer Applications (Practical) - Instructor (2017/2018).
ST 103 - Statistics Applications 1 - Instructor and In-charge (2017).
ST 104 - Statistical Applications 2 - Instructor and In-charge (2017).
ST 204 - Sampling Techniques - Tutor (2017).
ST 205 - Statistical Simulation - Tutor (2017).
CS 202 - Data Structures Practical - Tutor (2017/2018).
ST 301 - Regression Analysis - Instructor (2017/2018).
ST 305 - Multivariate Methods I - Tutor (2018).
ST 407 - Linear Models - Tutor (2017).
AS 404 - Data Integrity Management and Data Analysis - Instructor (2018).

AWARDS

Australian Government Research Training Program Stipend and fees offset (International).

(Queensland University of Technology, Australia)

Presidents Awards for Scientific Research 2019-2021.

(National Research Council Sri Lanka)

Department of Statistics and Computer Science Alumni Prize for Excellence in Statistics.

(University of Peradeniya, Sri Lanka)

University Prize for Academic Excellence.

(University of Peradeniya, Sri Lanka)

PUBLICATIONS

Mahendran, A., Thompson, H., & McGree, J. M. (2023).A model robust subsampling approach for Generalised Linear Models in big data settings. Statistical Papers, 1-21. `Published`

Link

Amalan Mahendran, Pushpakanthie Wijekoon, (2019). fitODBOD: An R Package to Model Binomial Outcome Data using Binomial Mixture and Alternate Binomial Distributions. Journal of Open Source Software, 4(39), 1505. `Published`

Link

Ozim, C. O., Mahendran, R., Amalan, M., & Puthussery, S. (2023). Prevalence of human immunodeficiency virus (HIV) among pregnant women in Nigeria: a systematic review and meta-analysis. BMJ open, 13(3), e050164. `Published`

Link

Mahendran R, Puthussery S, Amalan M. Prevalence of antenatal depression in South Asia: a systematic review and meta-analysis. J Epidemiol Community Health Published. `Published`

Link

A subsampling approach for large data sets when the Generalised Linear Model is potentially misspecified `Writing`

Mahendran, A., Thompson, H., & McGree, J. M.

NeEDS4BigData: An _R_ Package for New Experimental Design Based Subsampling Methods for Big Data `Writing`

Mahendran, A., Thompson, H., & McGree, J. M.

CONFERENCES & WORKSHOPS

Model-Oriented Data Analysis and Optimum Design Conference 2023 `8 - 15 Jul, 2023`
Southampton, United Kingdom

Presentation: A model robust subsampling approach for Generalised Linear Models in big data settings

Australasian Applied Statistics Conference 2022 `28 Nov - 2 Dec, 2022`
Victoria, Australia

Poster: A model robust design approach for optimally subsampling big data

R PACKAGES

fitODBOD: Modeling Over Dispersed Binomial Outcome Data Using BMD and ABD.

R package version 1.5.4.

fitODBODRshiny: Shiny Application for R Package "fitODBOD".

R package version 1.0.2.

SLPresElection: Presidential Election Data of Sri Lanka from 1982 to 2015.

R package version 1.0.0.

OlympicRshiny: Shiny Application for Olympic Data.

R package version 1.0.2.

SouthParkRshiny: Data and Shiny Application for the Show "SouthPark".

R package version 1.0.0.

NeEDS4BigData: Implementing subsampling methods to find informative samples from big data.

R package under preparation

EXTRACURRICULAR

- Consulting Rajarata University to prepare the **statistics curriculum for Data Science** (2019).

- **Article Reviewer** of Rajarata International Research Conference (2019).

- Successfully completed a Three-day induction program conducted for Temporary Academic staff, by the **Staff Development Centre**, University of Peradeniya (2017).

- Member of the **Data Science Unit** of Post Graduate Institute of Science, University of Peradeniya (2017-2018).

- Member of the **Media Publicity Committee** for the Annual Research Congress 2017 (Rescon2017), 2017.

- **Organising Committee member** of Industry Day 2017, Faculty of Science, University of Peradeniya (2017).

- Organised activities for **"Statistical Camp 2017"**, Department of Statistics and Computer Science, Faculty of Science, University of Peradeniya (2017).

- Organised a short introduction session explaining statistics and its applications for school students at the "Faculty Open Day-2017- Faculty of Science, University of Peradeniya" (2017).

- Team member for conducting **one-day Statistical Seminars** for Advanced level Students in Mathematics Stream (2016).

- Group leader and an active member and winning group from **"Statistics Camp 2015"** conducted by the Department of Statistics and Computer Science (2015).

REFERENCES

Prof. James McGree,
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School of Mathematical Sciences,
Faculty of Science,
Queensland University of Technology,
Brisbane, QLD, 4000.
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