# AMALAN MAHENDRAN

## RESEARCH INTEREST

I am mainly interested in research on big data and experimental design through algorithms using the R programming language. Especially developing new tools(R packages and Rshiny applications) ensuring industry standards. Furthermore willing to implement the said algorithms and methods in different fields of studies.

#### RESEARCH EXPERIENCE

- December 2016 Final year undergraduate constructing the R package "fitODBOD" to model binomial outcome data.
- October 2017 Participated in the challenge "Data for Climate Action" conducted by United Nations Global Pulse.
- September 2018 Use of statistical software R to develop individual projects and analyse TidyTuesday data-sets.
- February 2020 to Present Working on the topic of subsampling approaches for Big data through experimental design as a PhD student at the School of Mathematical Sciences and Centre for Data Science, Queensland University of Technology.

## PEER-REVIEWED PUBLICATIONS AND CONFERENCES

- 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. Link Conference presentation at Model-Oriented Data Analysis and Optimum Design 13.
- 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. Link
- Mahendran, A., Thompson, H., & McGree, J. M. (2022). A model robust design approach for optimally subsampling big data, Australasian Applied Statistics Conference 2022, Victoria, Australia, 28 November 2 December. 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. 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. Link

## NON-PEER-REVIEWED PUBLICATIONS

- Amalan Mahendran and Pushpakanthie Wijekoon (2023). fitODBOD: Modeling Over Dispersed Binomial Outcome Data Using BMD and ABD. R package version 1.5.1. R package
- Amalan Mahendran (2023). SLPresElection: Presidential Election Data of "Sri Lanka" from 1982 to 2015. R package version 1.0.0. R package
- Rshiny application for the "fitODBOD" R package version 1.0.0. Rshiny, R package
- Rshiny application to represent the Olympic Data from Kaggle. R package version 1.0.1 Rshiny, R package
- Rshiny application related to text and sentiment analytics for the tv show South Park. Rshiny

## APPOINTMENT

Temporary Lecturer,

January 2017- July 2018

Department of Statistics and Computer Science,

Faculty of Science, University of Peradeniya.

#### FREELANCE WORK

Consulting Rajarata University to prepare the statistics curriculum for Data Science - 2019 Article Reviewer of Rajarata International Research Conference 2019.

#### **EDUCATION**

• Summer School in the Mathematical Sciences, Australian Mathematical Science Institute. January 10 - February 4, 2022

Bayesian Statistical Learning by Dr. Matias Quiroz, University of Technology Sydney.

• University of Peradeniya, Faculty of Science,

March 2013 - December 2016

Department of Statistics and Computer Science.

B.Sc. in Statistics (Special) Honors. | First Class | Cumulative GPA -  $3.87 \setminus 4.00$  Subjects - Statistics | Computer Science | Mathematics.

## **HONORS**

Presidents Awards for Scientific Research 2019/2020/2021, National Research Council Sri Lanka.

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

University Prize for Academic Excellence.

Prize for Grade Transitional in Written English.

Prize for Grade Two in Spoken English.

## TEACHING EXPERIENCE

University of Peradeniya, Faculty of Science,

January 2017 - July 2018

Department of Statistics and Computer Science.

Prepare lecture notes. | Conduct lectures & practicals. | Set & mark exam papers, quizzes, tutorials.

CS 100 - Computer Applications (Practical) - Instructor (2017/2018).

ST 103 - Statistics Applications 1 - Instructor & In-charge (2017).

ST 104 - Statistical Applications 2 - Instructor & 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).

# ACADEMIC ACTIVITY

Successfully Completed a Three-day induction program conducted for Temporary Academic Staff, by the Staff Development Centre, University of Peradeniya.

Member of the Data Science Unit of Post Graduate Institute of Science, University of Peradeniya.

Member of the Media Publicity Committee for the Annual Research Congress 2017 (Rescon 2017).

Organizing Committee member of Industry Day 2017, Faculty of Science, University of Peradeniya.

Organized activities for "Statistical Camp 2017", Department of Statistics and Computer Science, Faculty of Science, University of Peradeniya.

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

## UNIVERSITY ACTIVITIES

Team Member for conducting one-day Statistical Seminars for Advanced level Students in Mathematics Stream.

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

Successfully completed the course in "R programming" conducted by The University of John Hopkins at Coursera.

## **OTHERS**

Institute of Western Music & Speech.

2000 - 2004

Spoken English & Written English

Grade ONE - Honors & Honors | Grade TRANSITIONAL - Honors & Honors |

Grade TWO - Honors & Honors | Grade THREE - Honors & Honors |

Grade FOUR - Merit & Honors.

# **MEMBERSHIP**

ORCID Member Research Gate.

## **PERSONAL**

Applied research statistician. Big data researcher. Experimental design scientist.