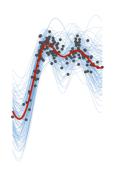# Haziq Jamil

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https://haziqj.ml 🌐

🌐 View this CV
online at
haziqj.ml/cv

I am an **Assistant Professor in Statistics** at *Universiti Brunei Darussalam* (UBD). My expertise lie in statistical methodology and computation, with applications towards the natural and social sciences.

I am passionate about bringing data and technology to the forefront of our daily interaction with the world. Using the R programming language, I build statistical models for data analysis in order to gain insights, make predictions, and aid decision-making. I am frequently engaged in cross-disciplinary research collaborations and statistical consultations.

Research Interests

Latent variable models

Binary and multinomial probit models

Hedonic pricing models

Gaussian processes

Composite likelihood methods

Spatio-temporal models

Bayesian estimation

Education

2014 — 2018	**PhD in Statistics**, London School of Economics and Political Science Supervisors: Wicher Bergsma[1] and Irini Moustaki[2] Thesis: *Regression modelling using priors depending on Fisher information covariance kernels (I-priors)*[3]
2013 — 2014	**MSc in Statistics (distinction)**, London School of Economics and Political Science
2006 — 2010	**BSc & Master in Mathematics, Operational Research, Statistics and Economics (first class honours)**, University of Warwick Supervisor: David Firth[4] Dissertation: *The analysis of paired comparison data using Bradley-Terry models with applications to football data*

Awards & honours

2023	**Teaching Excellence Award in the Sciences**, *Universiti Brunei Darussalam*
2020	**Arnold Zellner Thesis Award in Econometrics and Statistics (honourable mention)**[5], American Statistical Association (Business and Economic Statistics Section)
2013 — 2018	**In-Service Training Scheme Scholarship**, Public Service Commission, Prime Minister's Office, Brunei
2006 — 2010	**Supreme Commander of The Royal Brunei Armed Forces Scholarship**[6], Ministry of Defence, Brunei

Employment

2024 — 2027

Visiting Fellow
Department of Statistics, London School of Economics and Political Science[7]
The School's Visiting Appointments Scheme is a device to help Departments, Institutes and Centres invite staff who are either practitioners or academics in other institutions to conduct research and other activities.

2019 — present

Assistant Professor in Statistics
Mathematical Sciences, Faculty of Science, *Universiti Brunei Darussalam*[8]
I teach SM-1402 Basic Statistics, SM-2302 Software for Mathematicians, SM-4331 Advanced Statistics, SM-4335 Advanced Probability, and CU-0304 Sciences for University Study. I also supervise mathematics students' final year projects. In addition to my teaching duties, I am the current Postgraduate Coordinator (Mathematics). I previously held the post of Discovery Year[9] advisor (2019-2021).

2014 — 2018

Graduate Teaching Assistant
Department of Statistics, London School of Economics and Political Science[10]
I held various teaching roles ranging from secondary teaching to marking for masters (ST416 Multilevel Modelling, ST421 Development in Statistical Methods) and undergraduate level courses (ST312 Applied Statistics Project) at the LSE. In addition, I also held assistant invigilator and examiner roles for both the LSE and the University of London International Examinations respectively.

2010 — 2014
2018 — 2019

Research Officer
Centre for Science and Technology, Research and Development (CSTRAD), Ministry of Defence, Brunei[11]
I provided analytical insight into matters arising from strategic procurement activities of the Royal Brunei Armed Forces (RBAF). This entailed market research, cost-benefit analyses, and writing technical reports. I was a core team member for the procurement and delivery of 12 Sikorsky S-70i helicopters[12] (US$325M), and also the focal point for the development of tender evaluation criteria using the Analytic Hierarchy Process.

Service

2024 — present

Chair
Brunei R User Group[13]

2020 — present

Ad-hoc Reviewer
Annals of Applied Statistics[14]; Journal of the Royal Statistical Society: Series C[15]

2020 — present

Review Editor
Frontiers in Applied Mathematics and Statistics[16]

2020

Guest Lecturer
Universiti Teknologi Brunei[17]

2014 — 2015

MSc Programme Facebook Administrator
Department of Statistics, London School of Economics and Political Science
Acted as student liaison for incoming cohort of MSc Statistics 2015/16.

2013 — 2015

Auditor
Brunei Down's Syndrome Association (ABLE)[18]

Consultancy

2017 — 2018   **Data Analyst**
Universiti Brunei Darussalam
Project: The unmet needs of cancer carers in Brunei Darussalam.

2021 — 2022   **Statistical Modelling**
Ministry of Defence, Brunei
Project: Human performance optimisation

Grants and funding

2021 — 2024   **Extension of I-prior methodology to nominal response models** (~BND 7,000),
Faculty of Science Research Grant, *Universiti Brunei Darussalam*.
Role: *Principal Investigator*

2021 — 2023   **Examining spillover effects in regional trading blocs** (~BND 17,000), School of
Business and Economics Research Grant, *Universiti Brunei Darussalam*.
Role: *Member*

2021 — 2024   **Mathematical Modeling of Genetic Assimilation** (~BND 8,000), Faculty of
Science Research Grant, *Universiti Brunei Darussalam*.
Role: *Co-Principal Investigator*

2023 — 2024   **Predictive potential of graphical descriptors for QSPR/QSAR model learning
of compounds** (~BND 15,700), Faculty of Science Research Grant, *Universiti
Brunei Darussalam*.
Role: *Co-Principal Investigator*

2024   **R User Groups (RUGS) Program Grants** (USD 500), R Consortium[19]

Research output

Articles (peer-reviewed)

2023   A11   **Importance of Baseline Assessments: Monitoring of Sungai Brunei River's
Water Quality**
O. Onifade, N. Shamsuddin, *H. Jamil*, D. T. C. Lai, S. Gödeke
H2Open Journal, 6(4) 518–534. DOI: 10.2166/h2oj.2023.168

A10   **Extremal hyper-Zagreb index of trees of given segments with applications to
regression modeling in QSPR studies**
S. Hayat, M. Adil Khan, A. Khan, *H. Jamil*, M. Yasir Hayat Malik
Alexandria Engineering Journal, 80(1) pp.259–268

A09   **Statistical significance of valency-based topological descriptors for correlating
thermodynamic properties of benzenoid hydrocarbons with applications**
S. Hayat, N. Suhaili, *H. Jamil*
Computational and Theoretical Chemistry, 114259. DOI:
10.1016/j.comptc.2023.114259

A08   **The domination number of the king's graph**
M. Arshad, S. Hayat, *H. Jamil*
Computational and Applied Mathematics, 42(251). DOI: 10.1007/s40314-023-
02386-8

| 2022 | A07 | **Factors Affecting Readmission to a Drug Rehabilitation Centre** |

2022 A07 **Factors Affecting Readmission to a Drug Rehabilitation Centre**
F. Jali, E. Leong, *H. Jamil*
Journal of Population and Social Studies, 30, 591-601.

A06 **Iron and Manganese Mobilisation due to Dam Height Increase for a Tropical Reservoir in South East Asia**
S. Gödeke, *H. Jamil*, M. Schirmer, A. Bretzler, N. Shamsuddin, N. H. Mansor
Environmental Monitoring and Assessment, 194(5), 358.

A05 **Pairwise likelihood estimation for confirmatory factor analysis models with categorical variables and data that are missing at random**
M. Katsikatsou, I. Moustaki, *H. Jamil*
British Journal of Mathematical and Statistical Psychology, 75(2) 23-45.
🏆 Wiley Top Downloaded Article 2021

2021 A04 **Advocating Blended Learning for University Undergraduate Level Mathematical Instruction Beyond Covid-19**
H. Jamil, H. M. Ramli, E. Leong
In: Engineering and Sciences Teaching and Learning Activities: New Systems Throughout COVID-19 Pandemics, pp. 33-45. Ed. by Samsul Ariffin Abdul Karim and Saiful Azmi Hussain. Studies in Systems, Decision and Control, vol 381. Cham: Springer. ISBN: 978-3-030-79613-6.

A03 **Latent Class Analysis: Insights about design and analysis of schistosomiasis diagnostic studies**
A. Koukounari, *H. Jamil*, E. Erosheva, C. Shiff, I. Moustaki
PLOS Neglected Tropical Diseases, 15(2), e0009042.

2020 A02 **Bayesian Variable Selection for Linear Models Using I-Priors**
H. Jamil, W. Bergsma
In: Theoretical, Modelling and Numerical Simulations Toward Industry 4.0, pp. 107–132. Ed. by Samsul Ariffin Abdul Karim. Studies in Systems, Decision and Control, vol 319. Singapore: Springer. ISBN: 978-981-15-8986-7.

2018 A01 **Regression modelling using priors depending on Fisher information covariance kernels (I-priors)**
H. Jamil
PhD Thesis. London School of Economics and Political Science.
🎖 Arnold Zellner award, honourable mention (top 3)

Working papers (preprints and unpublished reports)

2023 W10 **Pairwise likelihood estimation and limited information goodness-of-fit test statistics for binary factor analysis models under complex survey sampling**
H. Jamil, I. Moustaki, C. Skinner
arXiv:2311.02543 [stat.ME]

W09 **Additive interaction modelling using I-priors**
W. Bergsma, *H. Jamil*
arXiv:2007.15766 [math.ST]

W07 **An Exploratory Investigation on Foreign Language Anxiety among English for Islamic Studies Learners in Brunei Darussalam**
N. Noorashid, *H. Jamil*
Manuscript in submission

2021	W06	**I think I understand: Investigating misconceptions regarding hypothesis test concepts among university students** A. Zaini, *H. Jamil*, E. Leong EdArXiv. DOI: 10.35542/osf.io/dj6x9
2020	W05	**Regression modelling with I-priors: With applications to functional, multilevel and longitudinal data** W. Bergsma, *H. Jamil* arXiv:2007.15766 [math, stat].
	W04	**Investigating the effect of load carriage on soldiers' performances using Bayesian structural equation models** *H. Jamil*, A. Salleh, L. Thieng Chan
2019	W03	**iprior: An R Package for Regression Modelling using I-priors** *H. Jamil*, W. Bergsma arXiv:1912.01376 [stat].
2017	W02	**Discussion contribution** W. Bergsma, *H. Jamil* TI Cannings, RJ Samworth (2017). Random-projection ensemble classification. JRSSB, 79.4, pp. 959-1035.
2010	W01	**Analysis of paired comparison data using Bradley-Terry models with applications to football data** *H. Jamil* Masters Thesis. University of Warwick.

Software

2021	S4	**R/iprior: Regression Modelling using I-priors** *H. Jamil* `CRAN 0.7.4` `downloads 37K`
2020	S3	**stat-tables: Open-source statistical tables for use in examinations, tests, and assignments** *H. Jamil* `release v0.2` `downloads 946`
2018	S2	**R/ipriorBVS: Bayesian Variable Selection using I-priors** *H. Jamil* `release v0.1.1`
	S1	**R/iprobit: Binary and Multinomial Probit Regression with I-priors** *H. Jamil* `release v0.1`

Talks

Further information regarding the following events are available at haziqj.ml/talk

2024	T22	**Adolphe Quetelet Seminar Series**, Ghent University Weighted pairwise likelihood and limited information goodness-of-fit tests for binary factor models
	T21	**Brunei R User Group Meetup**, UBD Startup Centre Analysing spatial data using R

2023	T20	**Social Statistics Seminar**, LSE, London, UK Spatio-temporal modelling of property prices in Brunei Darussalam
	T19	**Mathematical Science Departmental Seminar**, UBD, Brunei Pairwise likelihood goodness of fit tests for binary factor models
	T18	**International Meeting of the Psychometric Society (IMPS)**, University of Maryland, USA Pairwise likelihood goodness of fit tests for binary factor models
2022	T17	**Teaching and Learning Centre Workshop**, UBD, Brunei Quality Typography in Teaching Material: An interactive introduction to LaTeX
	T16	**Department of Statistics and Data Science Seminar**, NUS, Singapore Regression modelling using I-priors
	T15	**International Meeting of the Psychometric Society (IMPS)**, University of Bologna, Italy Selecting interaction effects in additive models using I-priors
2021	T14	**MINDEF Scholars Sharing Session**, Online Life After MINDEF
2020	T13	**IADA Seminar**, UBD, Brunei A latent variable model for maximal performance testing with dropouts for military applications
	T12	**Social Statistics Group Meetings**, LSE, London, UK Investigating the effect of load carriage on soldiers' performances using structural equation models
2019	T11	**UBDSBE Seminar Invitation**, UBD, Brunei Bayesian Variable Selection for Linear Models
	T10	**CSTRAD Sharing Session**, Ministry of Defence, Brunei Misconceptions in Demography
2018	T09	**FOS Research Seminar**, UBD, Brunei A Brief Guide to Variational Inference
	T08	**Inaugural Workshop on Data Science Theory and Practice**, LSE, London, UK Binary and Multinomial Regression using Fisher Information Covariance Kernels (I-priors)
	T07	**Social Statistics Group Meetings**, LSE, London, UK A Beginner's Guide to Variational Inference
2017	T06	**Turing Data Study Group**, The Alan Turing Institute, London, UK Can data science help identify potential drivers of extremism?
	T05	**International Meeting of the Psychometric Society (IMPS)**, University of Zürich, Switzerland Regression Modelling with I-Priors
	T04	**Department of Statistics PhD Presentation Event**, LSE, London, UK Binary probit regression with I-priors
2016	T03	**Social Statistics Group Meetings**, LSE, London, UK I-priors in Bayesian Variable Selection: From Reproducing Kernel Hilbert Spaces to Hamiltonian Monte Carlo

T01   **Department of Statistics PhD Presentation Event**, LSE, London, UK
Regression Modelling using I-priors

Skills

📈 **Programming, data analysis and visualisation** using R, BUGS/JAGS, Stan, Stata, Mplus, and Mathematica

⚗️ **Reproducible research** using Quarto, R Markdown, LaTeX, Git and AWS EC2

🖥️ **Web development** using HTML, CSS, Hugo, GitHub Pages and Netlify

Made with the R package pagedown. The source code is available from github.com/haziqj/cv. Document last rendered on 2024-04-17 17:04:01.216958 [UTC].

Links

1. http://stats.lse.ac.uk/bergsma/↵

2. http://stats.lse.ac.uk/moustaki/↵

3. https://phd.haziqj.ml/↵

4. http://www2.warwick.ac.uk/fac/sci/statistics/staff/academic-research/firth/↵

5. https://community.amstat.org/businessandeconomicstatisticssection/new-item/new-item2↵

6. https://scholarship.mindef.gov.bn/Theme/Home.aspx↵

7. http://lse.ac.uk/Statistics/↵

8. http://fos.ubd.edu.bn/↵

9. https://ubdmaths.github.io/dy/↵

10. http://lse.ac.uk/Statistics/↵

11. https://www2.mindef.gov.bn/cstrad/↵

12. https://news.lockheedmartin.com/2011-12-13-Sikorsky-Signs-with-Brunei-Ministry-of-Defence-for-Sale-of-S-70iTM-BLACK-HAWK-Helicopters↵

13. https://bruneir.github.io↵

14. https://imstat.org/journals-and-publications/annals-of-applied-statistics/↵

15. https://rss.onlinelibrary.wiley.com/journal/14679876↵

16. https://www.frontiersin.org/journals/applied-mathematics-and-statistics/↵

17. http://www.utb.edu.bn/↵

18. https://www.instagram.com/ablebrunei/↵

19. https://www.r-consortium.org/all-projects/r-user-group-support-program↵