Haziq Jamil

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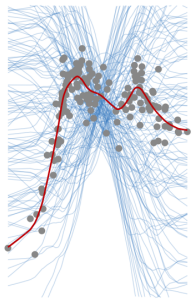

I am an **Assistant Professor in Statistics** at *Universiti Brunei Darussalam* (UBD). My expertise lie in statistical methodology and computation, with applications towards the natural and social sciences.

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 to analyse data to gain insights, make predictions, and aid decision-making. I am constantly engaged in cross-disciplinary research collaborations and statistical consultations.

View this CV online at *haziqj.ml/cv*

Research Interests

- Latent variable models
- Binary and multinomial probit models
- Bayesian estimation
- Variational inference
- Structural equation models
- Truncated normal distribution
- EM algorithms

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

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

2006 ***Anugerah Penuntut Terbaik Tahun 2005* (Best Student Award 2005)**, *Persatuan Guru-Guru Melayu Brunei* (PGGMB)

Experience

2019 — present

Assistant Professor in Statistics
Mathematical Sciences, Faculty of Science, *Universiti Brunei Darussalam*[7]
My teaching duties include SM-1402 Basic Statistics, CU-0304 Sciences for University Study, SM-4331 Advanced Statistics, SM-2401 Geometry, and SR-5101 Advanced Research Skills. I also have final-year mathematics project students whom I supervise. In addition to my teaching duties, I am one of the Discovery Year[8] advisors (2019-21).

2014 — 2018

Graduate Teaching Assistant
Department of Statistics, London School of Economics and Political Science[9]
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 — 2019

Research Officer
Centre for Science and Technology, Research and Development (CSTRAD), Ministry of Defence, Brunei[10]
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[11] (US$325M), and also the focal point for the development of tender evaluation criteria using the Analytic Hierarchy Process.

Service

2020 — present

Ad-hoc Reviewer
Annals of Applied Statistics[12]

2020 — present

Review Editor
Frontiers in Applied Mathematics and Statistics[13]

2020

Guest Lecturer
Universiti Teknologi Brunei[14]

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 Syndrom Association (ABLE: Ability Built through Learning and Experience)[15]

Consultancy

2017 — 2018

Data Analyst and Consultant
Universiti Brunei Darussalam
Project: The unmet needs of cancer carers in Brunei Darussalam.

2021

Data Analytics Consultant
Ministry of Defence, Brunei
Project: Human performance optimisation research

Grants and funding

2021 — 2022 **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*

Publications

Articles (peer-reviewed)

2021 A5 **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.

A4 **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. DOI: 10.1111/bmsp.12243.

A3 **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 A2 **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 A1 **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)

2021 W8 **I think I understand: Investigating misconceptions regarding hypothesis test concepts among university students**
A. Zaini, *H. Jamil*, E. Leong

2020 W7 **Increase in iron and manganese due to reducing conditions at a tropical catchment in South East Asia**
S. Gödeke, *H. Jamil*, M. Schirmer, A. Bretzler, N. Shamsuddin, N. H. Mansor

W5 **Factors Affecting Readmission to the Drug Rehabilitation Centre in Brunei Darussalam**
F. Jali, E. Leong, *H. Jamil*

W6 **Regression modelling with I-priors: With applications to functional, multilevel and longitudinal data**
W. Bergsma, *H. Jamil*
arXiv:2007.15766 [math, stat].

W4 **Investigating the effect of load carriage on soldiers' performances using Bayesian structural equation models**
H. Jamil, A. Salleh, L. Thieng Chan

2019 W3 **iprior: An R Package for Regression Modelling using I-priors**
H. Jamil, W. Bergsma
arXiv:1912.01376 [stat].

2017 W2 **Discussion contribution**
W. Bergsma, *H. Jamil*
TI Cannings, RJ Samworth (2017). Random-projection ensemble classification. JRSSB, 79.4, pp. 959-1035.

2010 W1 **Analysis of paired comparison data using Bradley-Terry models with applications to football data**
H. Jamil
Masters Thesis. University of Warwick.

Software

2021 S3 **iprior: Regression Modelling using I-priors**
H. Jamil
R package version 0.7.1

S1 **iprobit: Binary and Multinomial Probit Regression with I-priors**
H. Jamil
R package version 0.0.1

S2 **ipriorBVS: Bayesian Variable Selection using I-priors**
H. Jamil
R package version 0.1.0

Research dissemination

Posters and short presentations

2018 P3 **Inaugural Workshop on Data Science Theory and Practice**, LSE, London, UK
Binary and Multinomial Regression using Fisher Information Covariance Kernels (I-priors)

2017 P2 **Turing Data Study Group**, The Alan Turing Institute, London, UK
Can data science help identify potential drivers of extremism?

P1 **International Meeting of the Psychometric Society (IMPS)**, University of Zürich, Switzerland
Regression Modelling with I-Priors

Talks

Further information for the following talks are available at haziqj.ml/talk

2020 T10 **IADA Seminar**, UBD, Brunei
A latent variable model for maximal performance testing with dropouts for military applications

T09 **Social Statistics Group Meetings**, LSE, London, UK
Investigating the effect of load carriage on soldiers' performances using structural equation models

2019 T08 **UBDSBE Seminar Invitation**, UBD, Brunei
Bayesian Variable Selection for Linear Models

T07 **CSTRAD Sharing Session**, Ministry of Defence, Brunei
Misconceptions in Demography

2018 T06 **FOS Research Seminar**, UBD, Brunei
A Brief Guide to Variational Inference

T05 **Social Statistics Group Meetings**, LSE, London, UK
A Beginner's Guide to Variational Inference

2017 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

2015 T02 **Postgraduate Research Seminar**, LSE, London, UK
Two-stage Bayesian variable selection for linear models using I-priors

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 R Markdown, LaTeX, Git and AWS EC2

Web development using HTML, Hugo, Jekyll, GitHub Pages and Netlify

The source code for this document is available from github.com/haziqj/cv

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://fos.ubd.edu.bn/↩
8. https://ubd.edu.bn/admission/discovery-year.html↩
9. http://lse.ac.uk/Statistics/↩
10. https://www2.mindef.gov.bn/cstrad/↩
11. https://news.lockheedmartin.com/2011-12-13-Sikorsky-Signs-with-Brunei-Ministry-of-Defence-for-Sale-of-S-70iTM-BLACK-HAWK-Helicopters↩
12. https://imstat.org/journals-and-publications/annals-of-applied-statistics/↩
13. https://www.frontiersin.org/journals/applied-mathematics-and-statistics/↩
14. http://www.utb.edu.bn/↩
15. https://www.instagram.com/ablebrunei/?hl=en↩