PUTERI PARAMITA, PhD

Data Specialist

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SUMMARY OF QUALIFICATIONS

- I translate data from the technical side into data-driven business decisions within the scope of an organization/ project for the benefit of the wider communities. My expertise includes understanding historical data behaviours, forecasting future patterns, translating figures into layman's terms, connecting various data formats and sources, as well as converting insights into policies to support decision-makers.

- Over a decade of experience working on multi-disciplinary projects as a data scientist across the fields of Education, Engineering, Research, Transportation, Insurance, and Finance in the UK, Singapore, Indonesia, Australia, and Canada

- A Doctorate Degree in Transportation and Statistical Modelling from Queensland University of Technology (QUT), a Master of Transport Planning from the University of Leeds, UK, and a BSc. (Hons) in Statistics and Mathematics from the National University of Singapore, Singapore

- Proven ability to lead stakeholder engagements and communicate efficiently to peers, industry partners, and the public both orally and in writing.

NOTABLE ACHIEVEMENTS

- I curate the National Electronic Conveyancing Data Standard (NECDS) from all land registries in Australia on behalf of NECDS Ltd from all land registries in Australia. I also develop, communicate, and enforce Data Standards management policies, processes and procedures. (Australia, 2024-Current)

- I teach Master of Data Science and Bachelor of Information Technology students at James Cook University with core skills to uncover and communicate important information hidden in data using appropriate data visualisation and statistical analysis techniques. Specifically, I demonstrate the usage of cutting-edge techniques for visualising data in Tableau and SAS Viya software. (Australia, 2024-Current)

- I supported decision-makers in refining the best target markets for Suncorp Insurance products in NSW by establishing Dashboard and Self-service Reports as well as analysing historical and projection of Risk Equalisation Mechanism (REM) transactions between Suncorp and the Regulator Office in NSW to understand the risk profiles of Compulsory Third Party (CTP) policyholders as well as their respective claim patterns. (Australia, 2023)

- I reviewed and provided feedback on Manuscripts submitted for Scientific Journal Publication in the field of Transportation. In addition to assessing the strengths, weaknesses, applicability, and contributions of the research study to the real world, I specialize in providing advice on the data collection method, presentation of data, and appropriateness of the chosen analytical methodology (quantitative and/or qualitative). (Remotely from Australia, 2020 to Current)

- I contributed to a novel way of traffic monitoring practice by establishing a data-driven approach to quantify and reduce the error associated with assigning short-duration counts to traffic pattern groups. Precisely, I recommended that any pair of 48-hour counts provide sufficient data about a site's temporal traffic characteristics in reaching more accurate annual average daily traffic vehicle estimates than using any conventional approach. (Canada, 2019-2020)

- I contributed to the formulation of transport policies that incorporate commuters' behavioural patterns and focus on the mode shift from car to public transport in any Australian and international capital city via my Doctoral travel behaviour project. My project investigated the mode choice behaviour of commuters by utilizing the nationwide survey of commuters in Australia and employed the state-of-the-art Multinomial Logit Models. I wrote statistical programs to model my dataset and run simulations using Excel, R, and NLogit software. (Australia, 2015-2018)

EDUCATIONAL QUALIFICATIONS

Ph.D. Transportation and Statistical Modelling(2015 –2018)

Queensland University of Technology (QUT), Australia

Dissertation: "Modelling Commuters' Mode Choice: Integrating Travel Behaviour, Stated Preferences, Perception, and Socio-economic Profile", which was nominated for the "Outstanding Thesis Doctoral Award 2018 of the Queensland University of Technology". *My dissertation is available at https://eprints.qut.edu.au/122227/*

MSc. Transportation Planning (2009 – 2010)

The University of Leeds, Institute for Transport Studies, United Kingdom

Dissertation: "Comparison of United Kingdom Regional Freight Strategies"

BSc. (Hons) Statistics and Mathematics (2003 – 2007)

National University of Singapore, Singapore

Dissertation: "Constructing Some Robust Versions of Multivariate Mean"

PROFESSIONAL EXPERIENCE

Data Standards Curator, Titles Queensland (TQ), Brisbane, Australia (2024 - Current)

I undertake a wide range of data management activities for TQ customers, particularly in relation to the curation of the National Electronic Conveyancing Data Standard (NECDS) on behalf of NECDS Ltd. My responsibilities included:

- Develop, communicate and enforce data management policies, processes and procedures;
- Organise, manage and prioritise customer data requests, including scheduling regular requests;
- Ensure accurate and timely record keeping of service requests;
- Investigate and report to management on specific customer service issues;
- Work collaboratively with ICT staff, business staff and external suppliers; and
- Safeguard TQ's and NECDS' information assets, whether in digital, physical, or any other form, along with all the accompanying applications and devices

Lecturer, James Cook University (JCU), Brisbane, Australia, Part-Time (2024 - Current)

I teach Master of Data Science (Professional) students at JCU. I am responsible for delivering various contents within the Statistics, Data, and Information Technology disciplines, which include lecturers, tutorials, computer laboratories, workshops, student consultation, marking, and assessment activities.

Statistical Method Manuscript Reviewer and Editor for Scientific Journal Publication and Presentation at International Conference – Remote (2020 - Current)

I review and provide feedback on Manuscripts submitted for Scientific Journal. In addition to assessing the strengths, weaknesses, applicability, and contributions of the research study to the real world, I specialize in providing advice on the data collection method, presentation of data, and appropriateness of the chosen analytical methodology (quantitative and/or qualitative).

Data Governance and Compliance Advisor, SUNCORP, Brisbane, Australia (2023 – 2024)

I provided support Statutory Classes (SC) Portfolio and Products covering Compulsory Third Party (CTP) and Workers' Insurance Claims Contracts. I ensured compliance with CTP Schemes' financial obligations, including Levies, Risk Equalisation Mechanism (REM), Expense Submissions, submission of regulatory financial reports, and ad-hoc financial requests from the Regulator Office. My responsibilities included:

- Support development and implementation of data governance roadmap to achieve an uplift in data maturity;
- Subject matter expert on Data Governance Standards and Frameworks;
- Manage settlements and reconciliations of levies and MCPLs in the ACT;
- Manage settlements and reconciliations of levies and REMs in NSW;
- Ensure required reports are submitted to regulators within the given timeline;
- Investigate any issues and work with functional partners on timely resolutions;

- Continually review process and document procedures to ensure efficient processing of settlements and automation; and
- Work closely with First Line Risk on any data-related risks and incidents.

Planning Analyst, Home Lending, SUNCORP Bank, Brisbane, Australia (2021 - 2023)

I strategically planned workforces to support stakeholders across the Consumer Lending network by establishing ‘Workforce Planner” Tools and other daily productivity reporting dashboards for each team. In this case, I utilised Human Resource and Leave applications Datasets. Hence, each team leader in home lending had the capability to deliver high-quality services and maximize the overall performance of the contact centre business. My role fulfilled a key relationship interface with various teams and facilitated utilizing human resources best to respond to business objectives. My achievements include:

- Explored data insights and best practices, as well as provided recommendations for the planning of human resources within a team and the Home Lending department;
- Identified and improved systems, processes, and communications, as well as collaborated with peers to implement solutions that align with ‘Win in Home Lending’ and ‘Customer Obsession’ priorities; and
- Promoted consistency of process and planning through continuous improvement of standardized and efficient processes and reports to stakeholders.

Transport and Traffic Data Scientist (Post-Doctoral Researcher), University of Manitoba, Canada (2018 – 2020) - Project highlights:

Data-Driven Method to Reduce Error Associated with Assigning Short Duration Counts to Traffic Pattern Groups

I mined and analysed annual vehicle traffic volume (AADT) for the past 5 years to forecast future traffic on minor roads, which are not equipped with continuous traffic counting equipment, as well as proposed a data-driven approach to the assignment step in producing AADT using short-duration count data. This a novel contribution to the traffic monitoring practice by suggesting that any pair of 48-hour counts provide sufficient data about a site’s temporal traffic characteristics to yield more accurate annual average daily traffic vehicle estimates than could be produced using the conventional approach based on this assumed correlation.

The findings were published in a peer-reviewed journal and presented to transport practitioners across the world.

Development and Attribution of a Linear Referencing System (LRS) for Managing and Disseminating Traffic Volume Data on Rural Highway Networks

I created a methodology for developing an LRS to manage and disseminate system-wide traffic volume data, which has enabled practitioners to improve the spatial representativeness of a traffic volume map and revealed the importance of a highway network sampling program. Application of the methodology in Manitoba resulted in the development and attribution of a new LRS comprising 2164 sequences. This revealed the importance of periodically evaluating the data visualization and dissemination impacts that arise when changes are made to the sampling procedure within a traffic monitoring program and when physical modifications occur on the highway network.

Decision support tool to evaluate options for implementing a short-duration classification count program in a resource-constraint environment

I developed a machine learning-based tool to decide the implementation of a short-duration classification count program and presented a case study in Manitoba, Canada. The Tool enables decision-makers to simultaneously consider two broad and interrelated program objectives, namely, to achieve a specified target level of classification count coverage and to minimize resource requirements and expectations. It had been applied to Manitoba’s short-duration counting program as a case study to demonstrate its application. The Tool is considered generic and transferrable to other jurisdictions facing similar challenges

The findings were published in a peer-reviewed journal and presented to transport practitioners across the world.

Data Scientist for A data-driven model for long-term forecast based on emergency services data: Collaboration project among Queensland Fire and Emergency Services (QFES), Queensland Department of Housing and Public Works, University of Adelaide, Queensland University of Technology, DeepConnect and Data Analytics Consulting (Doctoral Internship), Australia (2018)

I contributed to the design and development of major model components, including the generation of 1000 Exposure scenarios that generate service demands for QFES using Python and SQLite, and an adequacy assessment model that analyses three QFES proposed capital and operational plans' ability to meet the scenario service demands. I supported other project members in a technical model-building capacity and developed a visualization of the various model outputs as well as stakeholder engagement meetings. Project details are available at https://www.youtube.com/watch?v=lYVMko3RXf4.

The project framework was published in an online publication and presented at an international conference, as well as replicated for other agencies' implementation in Queensland.

Travel Behaviour and Statistical Scientist (Doctoral Researcher), Science and Engineering Faculty, QUT, Australia (2015 –2018)

Modelling Commuters' Mode Choice: Integrating Travel Behaviour, Stated Preferences, Perception, and Socio-economic Profile

The project focused on mining commuters' data from five capital cities in Australia: Sydney, Melbourne, Brisbane, Perth, and Adelaide. It aimed to identify factors that influence commuters' mode choice and understand their decision-making process. The findings contribute to the formulation of transit policies that incorporate commuters' behavioural patterns and focus on mode shift from car to public transport in any Australian or international capital city.

The findings were published in a peer-reviewed journal and presented to transport practitioners in Australia and the USA.

Transport Planner and Data Scientist, AECOM, Singapore (2012 – 2015)- Project highlights:

Designing the National University Singapore (NUS) Alternative Transport System

I led the project and was the principal transport planner. I mined and analysed the commuters' and residents' travel behaviour data as well as vehicle traffic volume data, proposed the alternative internal transport system, modelled vehicle traffic, and pedestrians' movements, as well as wrote and presented the project report. These contributions played an important role in AECOM's admirable achievements in engineering a feasible and cost-efficient transport system. As of August 2019, NUS had implemented 75% of the action plans and the rest were underway.

Travel Smart, Singapore Travel Plan

I led the project and was the principal transport planner. I managed the project team members and budget, engaged the stakeholders, led the public consultancies, conducted market research, mined and analysed the train riders' dataset to inform future transport policies and potential fare reduction programs, as well as wrote and presented the project report. I developed a strong ability to take leadership roles concerning methodological elements in projects and to communicate effectively, in non-technical terms, with project team members and the public while working on this role.

Transport Planner, Engineer, and Data Scientist, Systra MVA, Singapore(2012) - Project highlights:

Urban Planning - Gedebage and Gading Serpong, Indonesia

I was the principal transport modeller and local expert. I mined the demographic dataset from each new residential area, modelled the potential internal and external human and vehicle movements in each area, provided recommendations to address foreseeable traffic issues and to improve residents' quality of life, as well as wrote and presented the project.

Urban Planning - Scientia Square, Indonesia

I was the principal transport modeller and local expert. I mined the vehicles volume data in and out of the carparks, assessed the design and the size of the parking area, modelled their movements with Vissim (a multi-modal traffic flow simulation software), provided recommendations to improve the access to and from the parking area, as well as wrote and presented the project.

Transport Planner and Data Scientist, Mott MacDonald, Singapore(2010-2012) - Project highlights:

North-South Corridor (NSC) Traffic Engineering Study, Singapore

I mined the traffic data from the surrounding project area, assessed traffic impacts, as well as verified road signing, road surface markings, the number of lanes, and the status of the roadside vegetation across the study area.

Urban Transport Pre-Feasibility Study and Enhancement of Bus Operation Control Solo, Indonesia

I coordinated the project team members and local experts. I managed the budget, engaged the stakeholders, mined, reviewed, and analysed official government documents and local transport policies, and proposed local traffic regulation changes to improve the local traffic issues.

Bioinformatics Data Scientist& Statistician, Genome Institute of Singapore, Singapore (2007 – 2009)

I developed a machine learning-based tool to investigate abnormal behaviours of p-values and False Discovery Rate of microarray data of yeast, *Schizosaccharomyces pombe,* and statistically analysed the *batch-effect* problem in yeast experiments.

The findings were published in a peer-reviewed journal and presented to fellow genomic scientists across the world.

AWARDS

APR Internship Scholarship, Australia (2018)

This sponsorship covers a monthly stipend to assist with the general living costs within the duration of the Ph.D. Internship.

Science and Engineering Faculty, QUT Scholarship, Australia (2015 – 2018)

Scholarship for an HDR student undertaking research doctorate studies in Science and Engineering Faculty to assist with the general living costs

QUT International HDR Tuition Fee Sponsorship, Australia (2015 – 2018)

This sponsorship covers tuition fees for the enrolment in the Doctor of Philosophy (IF49) within the standard duration of the IF49 course.

Singapore Scholarship Recipient offered by Ministry of Foreign Affairs, Singapore (2003 – 2007)

Full Scholarship for a year undergraduate degree in National University of Singapore to assist with general living costs and full tuition fees within 4 years of study

VOLUNTEERING EXPERIENCE

- I was a regular advisor for PhD Advisory Team led by Brockhurst Consulting based in Melbourne, Australia to develop a special coaching program dedicated to near-completion Ph.D. candidates and recent Ph.D. graduates transitioning to the real world.
- I am an alumni ambassador for the Institute for Transport Studies (ITS),University of Leeds, United Kingdom. I am an Industry Mentor for ITS Graduate Students since 2017. Occasionally, I organize Brisbane-based alumni of the University of Leeds.
- I was a regular volunteer as a shop assistant at Vinnies- St. Vincent de Paul shop in Brisbane.

RELEVANT SKILLS

Probability & Statistics	Data Mining	Business Acumen	Critical Thinking
Programming	Data Analysis	Communication Skills	Risk Analysis
Multivariate Calculus & Linear Algebra	Unstructured Data Analysis	Teamwork	Process Improvement
Database Management	Machine Learning	Data Intuition	Data Modelling
Data Visualization	Regression & Classification	Problem-solving & Good Business Intuition	Systems Engineering
	Intellectual Curiosity		

SOFTWARE PROFICIENCY

Microsoft Office:	Word, Excel, PowerPoint, Access, Outlook
Programming:	Python, Visual Basic (Macros)
Geospatial analysis:	ArcMap, QGIS
Statistics:	Tableau, IBM Cognos, Microsoft Power BI, Nlogit, R Programming(statistics), SPSS, E-Views, MatLab, SAS Viya,
Online survey tools:	Snapsurvey, Google Survey, Survey Monkey, Google Forms, Microsoft Forms