

CURRICULUM VITAE

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GAR GOEI LOKE

Age, Date of Birth : 29 yrs, 19/10/1989
Place of Birth : Singapore
Citizenship : Singaporean
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Employment History

- Jun 2019 – : NUS Business School, National University of Singapore
Present Visiting Assistant Professor, Department of Analytics & Operations
- Feb 2019 – : Smart Nation and Digital Government Office, Prime Minister's Office
May 2019 Senior Manager, Government Data Office. Roles include:
- Overseeing data governance policies and practices across government agencies and their partners
- Aug 2018 – : Government Technology Agency (GovTech)
Feb 2019 Quantitative Analyst, Data Science and AI Department. Roles include:
Collaborating with agency policy units to scope, diagnose and analyse quantitatively policy levers, leading to concrete changes in policy actions or products that are integrated in daily policy operations
- Jan 2014 – : Public Service Division, Prime Minister's Office
Aug 2017 Lead Analyst (HR Intelligence), Strategic Planning & Research.
As Team Lead for PSD's data scientists, my role involved helping to shape the development trajectory of data science within PSD, drafting research workplans for the team, mentoring and training, and project management of key analytics projects. At times, I also participated as an individual contributor, though less frequently. My team was responsible for:
- Studying the effectiveness of HR policies in the Singapore Public Service
 - Applying statistical learning, mathematical modelling and optimization in HR areas such as organizational structure, performance management, recruitment, retention, remuneration, and employee engagement
 - Providing consultancy to public service agencies and helping them develop nascent HR Analytics capabilities
- I also supported the Engineering Planning Office with efforts to grow engineering capabilities in the Public Service and across Singapore.

Academic Papers and Presentations

- 1 Bandi, C., G. G. Loke. 2018. Exploiting Hidden Convexity in Queueing Networks – A Novel Approach to Optimal Flow Control. Submitted to Operations Research.
 - Online version at <https://ssrn.com/abstract=3190874>To be presented at:
 - Mostly OM 2019, Shenzhen
 - MSOM Conference 2019, Singapore
 - Applied Probability Seminar Conference 2019, Brisbane
 - INFORMS Annual Meeting 2019, Seattle
- 2 Jaillet, P., G. G. Loke, M. Sim. 2018. Risk-based Manpower Planning – A Tractable Multi-Period Model. Major Revision in Operations Research.
 - Online version at <https://ssrn.com/abstract=3168168>Presented at:
 - MSOM Conference 2018, Dallas
 - INFORMS Annual Meeting 2017, Houston
- 3 Xie, J., G. G. Loke, M. Sim, S. W. Lam. 2018. The Analytics of Bed Shortages – Coherent Metric, Prediction and Optimization. Submitted to Operations Research.
 - Online version at <https://ssrn.com/abstract=3041878>
 - The paper was awarded Best Student Paper at POMS-HK 2018.

On-going Work and Working Papers

- 1 Dynamic Flow Control in Fork-Join Queues
 - On-going work with C. Bandi and M. Zhou
 - This project is supported by a Google Cloud Platform grant
- 2 Inventory Decisions for a Subscription-based Fashion Retailer
 - On-going work with Z. Hu, Q. Tang and G. Yang
- 3 Water Management and Dispatch from a Robust Perspective
 - Work done with Public Utilities Board and GovTech
- 4 Jurong Port – Workforce Planning & Scheduling
 - On-going work with J. Pang, K. C. Tan, Q. Sun, R. Wang and J. Y. Cheng
 - Collaboration with Jurong Port
- 5 A Risk-based Model for Joint Capacity and Assignment – A General Model
 - On-going work with Y. F. Lim and P. Wang
 - Collaboration with Resorts World Sentosa

Education History

2015 – 2019 : Department of Mathematics, National University of Singapore
PhD student, advised by Prof Toh Kim Chuan (Department of Mathematics) and Prof Melvyn Sim (Department of Analytics & Operations)

2008 – 2012 : Fitzwilliam College, University of Cambridge
Masters of Mathematics (Distinction)
BSc (Hons) 2nd Class Upper

Other Experiences / Achievements

2012 : Directed, co-produced and scripted a University-level amateur musical performance

2011 : Casted in a major role in a University-level amateur musical performance

2010 : Trained the Singapore team to the International Mathematics Olympiad in Kazakhstan (Observer B)

2008 – 2012 : Public Service Commission Overseas Merit Scholarship (Specialist)

2007 : Represented Singapore in the International Mathematics Olympiad in Hanoi (Bronze)