DENNIS LIU

tdennisliu@gmail.com
www.linkedin.com/in/dennis-liu-5037
tdennisliu.github.io
github.com/tdennisliu

Australian, engineer, data scientist

Education

The University of Adelaide

Ph.D candidate: Mathematics (Statistics)
2017 to present

- Utilising Bayesian statistical learning,

- Proficiency in Python and standard quantitative packages (numpy, pandas, sklearn etc.),

- Developing novel models and construct appropriate learning algorithms to infer parameters,

- Applying object-orientated programming to improve interpretability. Click here for more.

Awards & Achievements

Invited speaker to WHO Pacific Region COVID-19 Science and Research Seminar	2020
ARC Centre of Excellence for Mathematical and Statistical Frontiers Public Lecture	2019
Data to Decisions CRC Big Data Scholarship	2017
Dean's Merit Certificate for Outstanding Academic Achievement	2009-2012
Max & Bette Mendelson Foundation Scholarship	2010
South Australian Principal's Scholarship	2009
Australian Student Prize	2009

My research focuses on building frameworks to model social behaviours and infectious diseases using digital, non-traditional datasets. I am interested in analysing human behaviours and analysing their effects on models and forecasts of public health measures.

B. Ma. Comp. Sci (Applied)	2011- 2015
B. Eng. (Chemical) with First Class Honours	2009- 2013

Publications & Conferences

Estimating temporal variation in transmission of SARS-CoV-2 and physical distancing behaviour in Australia. *The Doherty Institute*	2020
How to flatten the curve of coronavirus, a mathematician explains. *The Conversation*	2020
Elucidating user behaviours in a digital health surveillance system to correct prevalence estimates. *Epidemics*	Pending publication
Predicting influenza testing associated with family doctors by using a web-based surveillance system.	Acceptance pending
Complex Human Data Summer School	2018

EMPLOYMENT EXPERIENCE

Santos Ltd.

Unit Controller Engineer   2015 to 2017

My previous employment required me to work in a remote location in a gas plant control room, where gas production is to be processed all hours of the day.

- Communicate issues with other stakeholders clearly and concisely
- Important commercial and safety decisions are regularly made independently, often employing critical problem solving skills to arrive to a solution

Graduate Facilities Engineer   `2014 to 2015`

As a facilities engineer, I was responsible for various facility assets producing oil and gas, optimising production. Projects were delivered in a timely and economic manner, with deliverables and risks communicated clearly to key stakeholders for approval.

- Optimisation of gas engines and compressors
- Project management
- Risk assessment

Globe Education Centre

Mathematics and Science Tutor   `2009 to 2014`

- Tutored students from the ages of 5 to 18 years of age in mathematics and science
- Supervised individuals and large classes

KEY STRENGTHS

- Clear communication skills in time constrained environments,

- Project management,

- Collaborative working.

REFEREES

Lewis Mitchell

Organisation:	The University of Adelaide
Position:	Senior Lecturer
Email:	lewis.mitchell@adelaide.edu.au

Glenn Lydyard

Organisation:	Santos Ltd.
Position:	Manager Operations Technology (Digital)
Email:	glenn.lydyard@santos.com

Sungkook Kwon

Organisation:	Globe Education Centre
Position:	Director
Email:	skkwon@gecaustralia.com