

# DENNIS LIU

tdennisliu@gmail.com  
[www.linkedin.com/in/dennis-liu-5037](http://www.linkedin.com/in/dennis-liu-5037)  
[tdennisliu.github.io](http://tdennisliu.github.io)

*To enact positive change and understand the greater world community*

---

## EDUCATION

### University of Adelaide

*Ph.D candidate: Mathematics (Statistics)*

2017 to present

*Data to Decisions CRC Big Data Scholarship*

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. I am proficient in Python and standard quantitative packages (numpy, pandas, sklearn etc.), and have some familiarity with R and Matlab.

Key skills involved are:

- Bayesian inference and machine learning
- Building and interrogating statistical models
- Event prediction

### *Publications & Conferences*

Elucidating user behaviours in a digital health surveillance system to correct prevalence estimates. Acceptance pending

Predicting influenza testing associated with family doctors by using a web-based surveillance system. Acceptance pending

Complex Human Data Summer School 2018

Policy Relevant Infectious Disease Simulation and Mathematical Modelling 2018

*B. Ma. Comp. Sci (Applied)*

2011 to 2015

- Overloaded course work 2011 to 2012, studied part time while working full time 2014 to 2015

*B. Eng. (Chemical) with First Class Honours  
Achievement*

2009 to 2013 *Dean's Merit Certificate for Outstanding Academic  
Achievement* 2009 to 2012

---

## 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 from over 600 wells and multiple facilities is fed to the plant through compressors controlled by myself, 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
  - Programming experience in Excel VBA, Matlab and Python
  - Project management
  - Experienced in working collaboratively and critical decision making
- 

### REFEREES

#### Lewis Mitchell

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

#### Glenn Lydyard

Organisation: Santos Ltd.  
 Position: Team Leader Advanced Analytics & Production Technologies  
 Email: glenn.lydyard@santos.com

#### Sungkook Kwon

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