

## Glen van den Bergen

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My career has been shaped by a keen interest in technology and an aptitude to learn new ways of solving problems with software. I have developed computational models, optimisation algorithms, data processing, analysis and visualisations. I understand the value of data and how it can inform evidence-based decision making. In the next phase of my career I want to apply these skills to solve challenges in data orchestration and model deployment to production systems, to deliver insights, efficiency and value. In working with others I believe building trust and understanding their needs leads to productive outcomes.

During my free time when I'm not tinkering with projects on the Raspberry Pi or reading articles on [news.ycombinator.com](https://news.ycombinator.com) I'm either indulging my 3 year old son's obsession with dinosaurs at the museum, baking sourdough bread, putting on a batch of homebrew, or gardening.

### EDUCATION

#### UNIVERSITY OF QUEENSLAND

Brisbane, Qld  
Apr 2016 – Oct 2019

#### PHD CANDIDATE

In my research I used computer models and algorithms to optimise the properties of antimicrobial peptides to better understand their activity and selectivity on cellular membranes.

This required using a diverse technology stack for building a computational model, data analysis, evolution-based algorithms, and molecular dynamics computer simulations on Australian supercomputers from National Computation Infrastructure (NCI) and the Pawsey Supercomputing Centre. Parts of my research are available as online tools at [atb.uq.edu.au/asp](https://atb.uq.edu.au/asp) and [atb.uq.edu.au/peg](https://atb.uq.edu.au/peg).

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#### UNIVERSITY OF QUEENSLAND

Brisbane, Qld  
Jan 2012 – Nov 2015

#### MASTER OF BIOINFORMATICS

Studied theory and practice of biological sciences, including utilisation of software to organise and analyse biological data, such as DNA data from high-throughput sequencing technologies. Awarded the **Dean's Commendation for Academic Excellence** with a cumulative GPA of 6.75 out of 7.

Achievements include:

- Data Mining: High Distinction (7/7)
- Computational Statistics: Distinction (6/7)
- Bioinformatics courses: High Distinction (7/7)
- Research courses: High Distinction (7/7)

#### QUEENSLAND UNIVERSITY OF TECHNOLOGY

Brisbane, Qld  
Jan 2002 – Nov 2006

#### BACHELOR OF I.T. / BACHELOR OF COMMUNICATION DESIGN

Studied fundamental and advanced concepts in programming and software engineering using Java and C/C++. Learned skills in illustration, animation, 3D modelling, and interactivity using multimedia software packages.

Achievements include:

- Software Engineering Principles: High Distinction (7/7)
- Media Technology 2: Distinction (6/7)

## WORK HISTORY

### UNIVERSITY OF QUEENSLAND

Brisbane, Qld  
Aug 2015 – Apr 2016

#### RESEARCH ASSISTANT

Continued research from Masters of Bioinformatics on predicting structure of antimicrobial peptides using evolutionary algorithms to optimise peptide structure. As an additional responsibility, updated and automated the API documentation of the Automated Topology Builder ([atb.uq.edu.au](http://atb.uq.edu.au)) and developed web administration features.

### SPEEDWELL

Brisbane, Qld  
Jun 2012 – July 2015

#### SENIOR TEST ANALYST

Defined, executed, and reported testing outcomes for web and smartphone applications via test plans, test cases, bugs reports, and fix verifications. Coordinated a team of offshore testers in Manila, Philippines and conducted team and professional development exercises. Various websites and mobile apps were developed for clients such as Allianz, Department of the Prime Minister and Cabinet, Brisbane Airport Corporation, Tourism and Events Queensland, Ardent Leisure, Domino's Pizza, and Personalised Plates Queensland.

### GLOBAL X

Brisbane, Qld  
Aug 2011 – Jun 2012

#### SENIOR TEST ANALYST

Established software-testing and release practices within an Agile process using the Scrum framework. Performed requirements analysis of software systems and definition of acceptance criteria. Performed paired testing with software engineers during development for rapid turnaround on defect identification and resolution.

### KROME STUDIOS

Brisbane, Qld  
Feb 2008 – May 2010

#### TECHNICAL WRITER

Documented features of in-house development tools for interactive entertainment including usage manuals and video tutorials. Worked closely with developers to document technical information in an accessible format for creatives i.e. designers and artists.

### KROME STUDIOS

Brisbane, Qld  
Nov 2006 – Feb 2008

#### SENIOR TEST ANALYST

Managed a team of testers on projects across multiple platforms to investigate interactive software, identify defects, record and manage defects, and report software quality to project managers.

## 'SOFT' SKILLS, KNOWLEDGE, AND EXPERIENCE

- Leadership** While a Senior Test Analyst I lead a team of testers in Manila, Philippines. In Manila I conducted professional development exercises. I cultivated a culture of independence, creativity and personal responsibility. During my PhD I mentored undergraduate and honours students, instilling in them the technical and conceptual skills required for their research.
- Scrum + Agile development** I have worked on multiple software projects that implemented Agile development with the Scrum framework for iterative and adaptive software development; including sprint planning, daily stand-up, review, and retrospectives with clients, product owners, scrum masters, and developers.
- Communication skills** I have presented talks and posters on my PhD research at local and international conferences in Edinburgh (UK), Dublin (Ireland), and Switzerland. I am able to tailor my presentation style to specialist and general audiences for complex topics. I have also written research articles (one under review and another in preparation), requiring clarity and conciseness to make a coherent and convincing argument.
- Cultural experience** As a child I grew up on Bougainville Island, located 1000 km east of Papua New Guinea, and as a teenager I lived in Malaysia for two years. The time spent living in these countries, and travelling abroad in my adulthood, has given me an abiding respect and appreciation for different cultures and perspectives.

## TECHNICAL SKILLS, KNOWLEDGE, AND EXPERIENCE

- Python and libraries** I regularly use Python for data extraction, processing, analysis, and output. This includes advanced tasks; such as clustering, optimisation, multi-dimensional arrays, graphs and networks, and data visualisation; on datasets consisting of millions of data points.
- Command-line interface** I have experience in Linux and Unix-like operating systems for computational work and automation. This includes the use of Bash, ssh, Git to version control source code, Vim for advanced text editing, and many other CLI tools.
- High-performance computing** My PhD studies involved extensive use of a variety of National supercomputing facilities requiring tools such as Slurm (Simple Linux Utility for Resource Management) and PBS (Portable Batch System). Over the course of my research the cumulative computation from these calculations are in the order of 7.4 million CPU hours, resulting in terabytes of data.
- Web development** As a Senior Test Analyst my work required an understanding of front- and back-end technologies. I have also created web pages to make the software tools of my PhD research publicly available; these are accessible at [atb.uq.edu.au/asp](http://atb.uq.edu.au/asp) and [atb.uq.edu.au/peg](http://atb.uq.edu.au/peg). I have also used the Django web-development framework for personal projects.
- Digital multimedia** I have completed a Diploma of Multimedia which gave skills in creating and editing raster and vector based images using the Adobe suite, and using multimedia tools for 2D and 3D animation.

## COMMUNITY ENGAGEMENT

### UNIQUEST

Brisbane, Qld  
July 23 – 24 2019

### RESEARCH COMMERCIALISATION WORKSHOP

Took part in two-day workshop focusing on the process of bringing inventions to market, industry engagement, intellectual property management, and research commercialisation models.

### ABACBS/COMBINE

Brisbane, Qld  
June – Nov 2016

### MEMBER OF ORGANISING COMMITTEE FOR COMBINE SYMPOSIUM

Helped organize and run the COMBINE Symposium for students and early career researchers. Duties included managing logistics, graphic design, operational tasks, providing assistance to delegates, and chairing the careers panel.

### OPEN KNOWLEDGE FOUNDATION

Brisbane, Qld  
Oct 2015

### HEALTH HACK 2015 (BRISBANE)

Volunteered at the Brisbane chapter of Health Hack 2015 to assist Karmen Condić-Jurkic in recruiting participants to the project for a molecular dynamics repository. Project was awarded 2<sup>nd</sup> place prize for \$2000 worth of legal services and counselling.

### PYCON

Brisbane, Qld  
Aug 2015

### PYTHON CONFERENCE AU 2015

Volunteered as an organiser at PyCon AU 2015.

### ROTARY

Brisbane, Qld  
May 2006  
May 2005

### ROTARY YOUTH LEADERSHIP AWARDS (RYLA)

RYLA is a youth leadership development program to promote personal and professional development including topics on public speaking, goal setting, interpersonal skills and more. Attended in 2005 as a participant and in 2006 as a volunteer team leader.

## REFEREES

### UNIVERSITY OF QUEENSLAND

Brisbane, Qld

### PROF. ALAN E. MARK

Principal Investigator of Molecular Dynamics Group, School of Chemistry & Molecular Biosciences. Employer as a Research Assistant and supervisor for my PhD.

### UNIVERSITY OF QUEENSLAND

Brisbane, Qld

### ASSOC. PROF. MIKAEL BODEN

Program Director of Bioinformatics, School of Chemistry & Molecular Biosciences. Co-supervisor for my PhD and coordinator during Masters of Bioinformatics.

### WALTER & ELIZA HALL INSTITUTE

Melbourne, Vic

### DR. MELISSA DAVIS

Joint Head, Division of Bioinformatics, Walter & Eliza Hall Institute of Medical Research. Mentor and research project owner during Masters of Bioinformatics.

### UNIVERSITY OF QUEENSLAND

Brisbane, Qld

### DR. DAVID POGER

Senior Research Fellow in Molecular Dynamics Group, School of Chemistry & Molecular Biosciences. Work colleague and mentor during PhD.

Contact details of referees available on request.