

David Gareth Trye

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Technical Skills

General Programming: Python, R, MATLAB, C#, Java, SQL
Web-based Technologies: HTML, CSS, SVG, JavaScript, Svelte, D3.js, Observable Plot, Vega-Lite, GitHub
Other Tools: Tableau, Excel/Sheets, Weka, Visual Studio, Visual Studio Code

Qualifications & Education

PhD in Computer Science (Information Visualisation), University of Waikato 2020–2024

I developed novel visualisation techniques for categorical data and demonstrated their effectiveness through applications in linguistics. My thesis comprises several publications and is currently under examination.

BCMS (Hons), University of Waikato 2016–2019

I completed a Bachelor of Computing and Mathematical Sciences with First Class Honours, majoring in Computer Science. My dissertation involved using machine learning (ML) and natural language processing (NLP) techniques to collect, clean and analyse a corpus of tweets containing Māori loanwords.

Employment

Research Assistant in Computer Science, University of Auckland July 2024 – Present

I am currently assisting Dr. Vithya Yogarajan by visualising the output of large language models (LLMs) to detect potential bias. This work is being undertaken on a remote, part-time basis.

Doctoral Assistant in Computer Science, University of Waikato February 2020 – February 2023

I tutored two first-year programming papers, ENGEN103 (Engineering Computing) and COMPX102 (Object-Oriented Programming), while undertaking my PhD research. My responsibilities included preparing and running weekly tutorials and labs, liaising with other teaching staff, and proof-reading, supervising and marking assessments. I received consistently positive feedback from students in my course appraisals.

Student Ambassador, University of Waikato February 2019 – February 2020

I supported the Future Students team by sharing my University experience with prospective students at various recruitment events, including careers expos and school visits.

Sessional Assistant in Linguistics, University of Waikato February – June 2019

As Marking Tutor for LINGS202-19A, a second-year linguistics course on English grammar, I was responsible for planning and running weekly tutorials, marking homework and assignments, and helping students during my office hour.

Senior Residential Assistant at Student Village, University of Waikato July 2017 – November 2018

Working closely with a team of Residential Assistants, I was responsible for the welfare, discipline and security of the hall's 300 residents. This job required excellent interpersonal and organisational skills, and greatly improved my ability to deal with stressful situations.

Residential Assistant at Student Village, University of Waikato February – July 2017

As a Residential Assistant of Block 5, I had shared responsibility for 50 residents, and helped create an environment conducive to their academic, cultural and social success.

Telephone Interviewer, Versus Research, Hamilton March – November 2016

I conducted surveys over the phone to help clients better understand their customers.

Support Technician & Calling Officer, Wells, New Plymouth March 2012 – Dec 2016

While still at school and during University holidays, I provided technical support to meter readers and booked appointments over the phone for the installation of Smart Meters.

Awards

- Finalist at the [University of Waikato 2023 3MT Doctoral Challenge](#)
- University of Waikato Travel Grant to attend IV2023 Conference in Tampere, Finland (July 2023)
- Research and Enterprise Study Award, University of Waikato (April 2023 – March 2024, valued at \$35,400)
- University of Waikato Doctoral Scholarship (April 2020 – March 2023, valued at \$98,000)
- Special Commendation at the 2022 ALPSSGRAD Conference (November 2022)
- Research and Enterprise Study Award, University of Waikato (December 2020 – February 2021, valued at \$6,000)
- Research and Enterprise Study Award, University of Waikato (December 2019 – February 2020, valued at \$6,000)
- John Turner Prize (2019) – Awarded to the Computer Science student with the best Honours dissertation at the University of Waikato
- University of Waikato Travel Grant to attend CoEDL Linguistics Summer School in Melbourne, Australia (2019)
- Highly Commended Presentation at the 2019 ALPSSGRAD Conference (November 2019)
- Best Project Award (2019) – Presented to the Honours student with the best project at the Student Research Conference for the Department of Computer Science, University of Waikato
- University of Waikato Travel Grant to attend ACL 2019 Conference in Florence, Italy (2019)
- University of Waikato Summer Research Scholarship and one of three students chosen to speak at the Concluding Function (November 2018 – February 2019)
- Mataira Award for Contribution to Community Life at Student Village (2017 & 2018)
- FCMS Dean's Award for Excellence (2017) – presented to the top 10 students, in each level, at the Faculty of Computing and Mathematical Sciences
- Golden Key International Honour Society (2017) – Membership awarded to the top-achieving 15% of students at the University of Waikato
- Top Academic at Student Village, University of Waikato (2016)
- Vice-Chancellor's Academic Excellence School Leaver Scholarship (2016)
- Sir Ronald Syme Memorial Scholarship for Classical Studies (2016)
- NCEA Levels 1, 2 and 3 Endorsed with Excellence (2013, 2014 & 2015)

Service to Community

- Accredited Mental Health First Aider (expires June 2026, issued by Te Pou)
- University of Waikato Student Discipline Committee Member (April 2018 – June 2024)
- Reviewer for Academic Conference (ACL-SRW 2022)
- Events Coordinator and Academic Tutor at Student Village (2017 & 2018)
- Developed a website for Holy Trinity Fitzroy, New Plymouth (2015)
- Youth Group Leader at Holy Trinity Fitzroy, New Plymouth (2015)
- Honorary Ambassador of New Plymouth, for representing New Zealand at the Global Young Leaders' Conference in America (2014)

General Interests

I am passionate about new technologies and the possibilities they hold for the future. My other interests include linguistics, reading, travelling and the outdoors. In my spare time, I enjoy keeping active and socialising with family and friends.

Referees

Professor Mark Apperley, Department of Software Engineering, University of Waikato
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Professor David Bainbridge, Department of Computer Science, University of Waikato
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Associate Professor Andreea Calude, Department of General and Applied Linguistics, University of Waikato
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