

# Manikya Alister

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## Education

### Doctor of Philosophy (Cognitive Science)

2022 – 2025 (expected)

The University of Melbourne

Melbourne, Australia

Accepted with full scholarship and living stipend

Thesis topic: *Learning from others: A computational and experimental study of how social reasoning shapes human inference*

### Summer School for the Computational Modelling of Language

Irvine, USA

The University of California, Irvine.

August 2022

Accepted with full scholarship and travel grant.

### Bachelor of Psychological Science (Honours Class 1)

Brisbane, Australia

The University of Queensland (UQ)

2017 – 2020

Honours GPA: 7/7, Cumulative GPA: 6.8/7.

Won best Honours thesis, graduated top of my cohort.

Thesis: *Prioritisation under pressure: The effect of deliberation time on multiple goal pursuit*

### Short Term Global Exchange

Santiago, Chile

Universidad de Los Andes

January 2018

Intensive Latin American Business and Politics course

## Honours and Awards

**University Medal** Top ~2% of graduates across the university. 2020

**Australian Psychological Society Prize** #1 ranked graduate in cohort of ~250 students 2020

**McElwain Prize** Best honours thesis in the School of Psychology 2020

**High Achiever Award** Perfect GPA of 7 across the whole calendar year) 2020

2019

2018

## Skills

**Data Analysis** Specializing in Bayesian statistical & computational modelling, machine learning, and natural language processing.

**Programming** R (including Shiny), Python, JavaScript, CSS, HTML, Stan

**Spoken Languages** English (native), Spanish (conversational)

**Research Design** With experience designing and implementing novel experiments, replications, and surveys across multiple platforms and software.

**Other Programs/Software** Github, LaTeX, SPSS, Jamovi, Qualtrics, Microsoft Office

### Peer Reviewed Publications

7. Grainger, S. A., Henry, J. D., **Alistair, M.**, Bourdaniotis, X. E., Mead, J., Bailey, T. G., Coombes, J. S., & Vear, N. (2023). Cardiorespiratory fitness and muscular strength do not predict social cognitive capacity in older age. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, gbad101. [Link](#).
6. **Alistair, M.**, Ransom, K. J., & Perfors, A. (2023). Inferring the truth from deception: What can people learn from helpful and unhelpful information providers? *Proceedings of the Annual Meeting of the Cognitive Science Society*, 45(45). [Link](#).
5. **Alistair, M.**, McKay, K.T., Sewell, D.K., Evans, N.J., (2023). Uncovering the Cognitive Mechanisms Underlying the Gaze Cueing Effect. *Quarterly Journal of Experimental Psychology*. [Link](#).
4. McKay, K. T., Grainger, S. A., **Alistair, M.**, & Henry, J. D. (2023). Enhancing ecological validity of gaze-cueing stimuli is associated with increased gaze following for older but not younger adults. *Psychology and Aging*, 38(6), 562–572. [Link](#).
3. **Alistair, M.**, Ransom, K.J., Perfors, A. (2022). Source independence affects argument persuasiveness when the relevance is clear. *Proceedings of the Annual Meeting of the Cognitive Science Society* 44 (44). [Link](#).
2. McKay, K.T., Talipski, L.A., Grainger, S.A., **Alistair, M.**, Henry, J.D. (2022). How Does Ageing Affect Social Attention? A Test of Competing Theories using Multi-Level Meta-Analysis. *The Journals of Gerontology: Series B*. [Link](#)
1. **Alistair, M.**, Vickers-Jones, R., Sewell, D.K., Ballard, T.J., (2021). How do we Choose Our Giants? Perceptions of Replicability in Psychological Science. *Advancements in Methods and Practices in Psychological Science*. [Link](#).

### Manuscripts Under Review/Revisions

8. **Alistair, M.**, Herbert, S., Sewell, D.K., Neal, A. Ballard, T.J., (Under Review). The Impact of Cognitive Resource Constraints on Goal Prioritization. [Preprint](#).

### Scholarships & Funding **\$217, 605 AUD Total**

Cognitive Science Society Travel Award <b>\$1,780</b>	2023
UC Irvine Travel Scholarship <b>\$750 + food and accomodation</b>	2022
Research Training Scholarship (tuition + living stipend for PhD) <b>\$208,075</b>	2022-2025
UQ Summer Research Scholarship <b>\$7000</b>	2018 & 2019

### Research Experience

**Doctoral Candidate, University of Melbourne** Jan 2021 – 2025 (expected)

Led all aspects of several research studies that involved collecting data from over 2,000 participants, implementing web-based surveys and gameified experimental tasks, and coordinating research teams made up of interstate and international personnel. Applied Bayesian and Frequentist quantitative analysis techniques to generate insights from multiple diverse data sets. Communicated insights to different audiences in 5+ empirical research papers and 8+ presentations at domestic and international scientific conferences.

**Research Associate, University of Adelaide/Defence Science** May – September 2023

I was hired to build a software prototype that leverages state of the art LLMs, empirically grounded computational models of belief formation, and other natural language processing tools to track, and analyse how different narratives emerge on social media and how they influence the information environment.

**Research Assistant, University of Queensland** Jan 2021 – Dec 2021

My main duties included simulating computational models of decision-making, fitting them to experimental data and estimating their parameters using Bayesian hierarchical and individual-level techniques, and writing up the findings for publications.

**Summer Research Scholar, University of Queensland** Summer 2018/19 & 2019/20

On two occasions I received a scholarship to work on two different research projects over the summer. My main duties included reviewing literature, creating surveys using Qualtrics, cleaning and analysing data using R, extracting meta-data of 10,000+ journal articles from the Web of Science, and writing up findings for publication.

## Teaching Experience

### Supervision

Ee Von Soh (Primary Supervisor), Summer Research Scholar, 2023-24

### Academic Tutoring (Academic Tutor = Teaching Assistant in Australia)

**Academic Tutor, University of Melbourne** Semester 1 2022, 2023

**PSYC30013:** Research Methods for Human Inquiry

My main duties included teaching the R programming language and statistics to two in-person classes per week and marking assignments.

**Lead Academic Tutor, UQ School of Psychology** Semester 2 2021

**PSYC1030:** Introduction to Developmental, Social, and Clinical Psychology

After just one semester, I was promoted to lead tutor for this subject. My main duties as lead tutor included working directly under the course coordinator to help guide, mentor, and organise the other tutors. I also continued to perform the normal teaching and marking duties expected of any tutor.

**Academic Tutor, UQ School of Psychology** Semesters 1 & 2 2021

**PSYC1030:** Introduction to Developmental, Social, and Clinical Psychology

**PSYC2371:** The Science of Everyday Thinking

My main duties included independently teaching multiple classes per week planning and facilitating weekly workshops, and marking assignments.

## Other Tutoring

### Private Tutor, Union College & St Johns College

March 2021 – present

Union and St Johns college are on-campus residential facility for students at the University of Queensland. My main duties included tutoring residents in several psychology, neuroscience, and research methodology subjects.

## Professional Experience

### Freelance Data Scientist

August 2022 – Present

**Good Data Institute:** Consolidated their internal database of volunteers and automated their intake processes. Designed and deployed a web-based dashboard using R shiny that informs and visualizes several aspects of their organisation including diversity and equity and project impact.

**QLD Mind Project:** Consulted on data analysis and implemented reproducible Bayesian and frequentist statistical models using R.

### Assistant, Institute for Continuing and TESOL Education

March 2017 - April 2021

This institute provided English Language courses and international development training for overseas students and government departments. My main duties included scheduling, organising, setting up, and providing tech support for various events within the institute such as meetings, English classes, welcome events, tours, and activities for visiting students.

## Talks & Conference Presentations (\*Presenter)

### International Conference Presentations

6. **Manikya Alister\***, Nathan Evans. (2023, July) *A model to describe how cognitive processes change across time*. Annual Meeting of the Cognitive Science Society, Sydney, Australia.
5. **Manikya Alister\***, Keith J. Ransom, Andrew Perfors. (2023, July) *Inferring the truth from deception: What can people infer from helpful and unhelpful information providers?*. Annual Meeting of the Cognitive Science Society, Sydney, Australia.
4. **Manikya Alister\***, Keith J. Ransom, Andrew Perfors. (2022, July) *Source Dependence Influence Argument Persuasiveness When Relevance is Clear*. Annual Meeting of the Cognitive Science Society, Toronto, Canada.
3. **Manikya Alister\***, Keith J. Ransom, Andrew Perfors. (2022, July) *Source Dependence Influence Argument Persuasiveness When Relevance is Clear*. Annual Meeting of the Cognitive Science Society, Toronto, Canada.
2. **Manikya Alister\***, Kate T. McKay, David K. Sewell, Nathan J. Evans (2021, November), *A computational modelling investigation of the mechanisms subserving the gaze-cueing effect*, 62nd Meeting of the Psychonomic Society (Remote).
1. **Manikya Alister**, Raine Vickers-Jones, David K. Sewell, Timothy Ballard\*, (2020, November), *How do we choose our giants? Perceptions of replicability in psychological science*, 61st Meeting of the Psychonomic Society (Remote).

### Domestic Conference Presentations

6. **Manikya Alister\***, Keith J. Ransom. (2023, September) *Rhetorical Mapping and Narrative Detection Online*. DSTG Mis/Disinformation Conference, Melbourne.
5. **Manikya Alister\***, Keith J. Ransom, Andrew Perfors. (2023, February) *Inferring the truth from deception: What can people infer from helpful and unhelpful information providers?*. Australasian Mathematical Psychology Conference, Melbourne.
4. **Manikya Alister\***, Kate T. McKay, David K. Sewell, Nathan J. Evans (2022, February), *A computational modelling investigation of the mechanisms subserving the gaze-cueing effect*, Australasian Mathematical Psychology Conference (Remote).
3. **Manikya Alister\***, Raine Vickers-Jones, David K. Sewell, Timothy Ballard (2021, February), *Perceptions of replicability in psychological science*, Australasian Mathematical Psychology Conference (Remote). ([recording](#))
2. **Manikya Alister**, Scott Herbert\*, Timothy Ballard (2021, February), *Pursuing Multiple Goals under Time Pressure: A Computational Investigation*, Australasian Mathematical Psychology Conference (Remote). ([recording](#))
1. **Manikya Alister\***, Raine Vickers-Jones, David K. Sewell, Timothy Ballard (2020, November), *Perceptions of replicability in psychological science*, UQ Centre for Perception & Cognitive Neuroscience Mini-Conference, Brisbane

### Workshops/Tutorials

1. *How to code an MCMC sampler from scratch*. Weekly Bayesian Analysis Workshop for Graduate Students, University of Melbourne School of Psychological Sciences

### Seminar Talks

5. *This is your life*. Complex Human Data Hub Seminar Series, University of Melbourne.
4. *What is the role of social inference in cognition?* Sydney Thinking and Reasoning Group, University of New South Wales, Sydney.
3. *Modelling systematic changes in diffusion model parameters across time*. 2021, Information Processing Group, University of Melbourne.
2. *Perceptions of replicability in psychological science*. 2021, Centre for Research in Social Psychology Seminar, UQ School of Psychology
1. *The effect of deliberation time on multiple goal pursuit*, 2020, Centre for Business and Organisational Psychology Seminar, UQ School of Psychology

### Reviewing

*Computational Brain and Behaviour*  
*Cognitive Science Society*

### Professional Memberships

<b>Cognitive Science Society</b>	May 2022 – Present
<b>Australasian Mathematical Society</b>	Jan 2022 – Present
<b>2022 AMPC Planning Committee</b>	Jan 2021 – Feb 2022
<b>Australian Psychological Society</b>	March 2021 – March 2022
Honorary membership for winning the Australian Psychological Society Prize	

## Referees

Provided upon request