

Gavin J. Mooney

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PhD candidate at Monash University researching graph drawing readability metrics, investigating how computational measures of drawing quality relate to human perception, preference, and task performance. Strong publication record including a Best Paper Award at PacificVIS 2024. Experience in teaching, curriculum development, and data visualisation.

EDUCATION

PhD Computing Science

Feb 2023 – Present (expected Aug 2026)

Monash University, Clayton, Australia

Supervisors: Prof Helen Purchase and A/Prof Michael Wybrow

Thesis: Quantifying Readability: The Evaluation and Perception of Graph Drawings.

MSci Computing Science (1st Class Honours)

June 2022

University of Glasgow, United Kingdom

PUBLICATIONS

- [1] G. J. Mooney, J. Miller, M. Wybrow, S. G. Kobourov, and H. C. Purchase. *Stress in Graph Drawings: Perception, Preference, and Performance*. In Proc. 33rd International Symposium on Graph Drawing and Network Visualization (GD), 2025.
- [2] G. J. Mooney, A. Wolff, T. Hegemann, M. Wybrow, and H. C. Purchase. *Universal Quality Metrics for Graph Drawings: Which Graphs Excite Us Most?* In Proc. 33rd International Symposium on Graph Drawing and Network Visualization (GD), 2025.
- [3] L. Joos, G. J. Mooney, M. T. Fischer, D. A. Keim, F. Schreiber, H. C. Purchase, and K. Klein. *Show Me Your Best Side: Characteristics of User-Preferred Perspectives for 3D Graph Drawings*. In Proc. 33rd International Symposium on Graph Drawing and Network Visualization (GD), 2025.
- [4] G. J. Mooney, H. C. Purchase, M. Wybrow, S. G. Kobourov, and J. Miller. *The Perception of Stress in Graph Drawings*. In Proc. 32nd International Symposium on Graph Drawing and Network Visualization (GD), 2024.
- [5] G. J. Mooney, H. C. Purchase, M. Wybrow, and S. G. Kobourov. *The Multi-Dimensional Landscape of Graph Drawing Metrics*. In Proc. 17th IEEE Pacific Visualization Symposium (PacificVIS), 2024. **Best Paper Award.**

A full list of publications is available at gavjmooney.com.

AWARDS AND INVITATIONS

Best Paper Award – 17th IEEE Pacific Visualization Symposium (PacificVIS), 2024

Invited participant – Dagstuhl Seminar on Perception-Informed Network Visualization

WORK EXPERIENCE

Assistant Lecturer (PhD Teaching Fellow)

Feb 2025 – Present

Monash University, Faculty of Information Technology, Clayton

- Teaching FIT5147 (Data Exploration and Visualisation) and contributing to FIT2179 (Data Visualisation), including face-to-face teaching, marking, consultations, and student support.
- Developing unit materials and assessments, including a network visualisation assessment using D3.js drawing on research expertise in graph drawing.
- SETU teaching scores consistently High or Very High (most recent: 88/100), exceeding the faculty average.

Sessional Teaching Associate

Jul 2023 – Feb 2025

Monash University, Faculty of Information Technology, Clayton

- Delivered workshops and applied sessions for FIT5147, FIT3179 (Data Visualisation), and FIT1049 (IT Professional Practice).
- Served as Head Tutor for FIT3179 (Semester 2, 2024), coordinating the teaching team and managing unit administration.

Graduate Teaching Assistant

Aug 2021 – Jun 2022

University of Glasgow, School of Computing Science, United Kingdom

- Ran labs for senior undergraduate and masters students; managed 12 colleagues assisting with junior labs.
- Assisted with marking of assessed coursework and examinations.

SERVICE

Peer reviewer for IEEE TVCG, VIS and PacificVIS.

SKILLS

Languages & Tools	Python, JavaScript, HTML/CSS, D3.js, Java, C, Git, Unix, \LaTeX , Markdown, R
AI & LLM Tools	Proficient in AI-assisted development and research workflows using Claude, ChatGPT, and Claude Code; experience integrating LLMs into data analysis, writing, and software development pipelines
Research Methods	Human-subject experiment design, statistical analysis, web-based experiment platforms, interactive data visualisation
Communication	English (native); experience presenting at international academic conferences

INTERESTS

Music, (bass) guitar, travelling, snowboarding, chess, reading, walking, technology, video games, art.