

# Max Davy

## Academics

### MSc in Social Data Science (University of Oxford, 2025-2026)

My thesis studies how LLMs' self-preference for LLM-written content amplifies the marginalisation of minority political perspectives. My coursework includes Applied Machine Learning & LLMs, AI governance, Digital Ethics, and Algorithmic Auditing.

### Bachelor of Science, Honours (Applied Math) (University of Sydney, 2017-2020)

Double major in applied mathematics and computer science. Avg. mark of 92/100 (4.0 GPA).

**Honours thesis:** I developed a theoretical extension to Discrete Morse Theory (thesis) and wrote optimised algorithms applying it to pure mathematics. I received First-class honours.

#### **Awards & scholarships:**

- John Coutts scholarship (7500 AUD) for highest mark across maths cohort in final year
- University of Sydney Academic Merit Prize (top 600 of 70000 students by average mark)
- Vice-Chancellor's Global Mobility Scholarship (5000 AUD), 2018
- Dean's List of Excellence in 2017, 2019, 2020 (ineligible in 2018 due to exchange)
- Sydney Scholars Award (30000 AUD), awarded for top 0.1% of high school students

#### **Other parts of university:**

- Semester exchange at Technical University Berlin (2018-2019), where I got the top mark in mechanism design and algorithmic game theory classes & co-authored a paper.
- Several research projects, including improving cost-effectiveness of diagnostic methods for epilepsy (report), surveying deep learning quantisation (pre-print), and using brain signals to interact with a game, for which I led a team of first-year students (report).

## Research

- **Davy, M.**, (2026). "The Missing Metrics in DSA Content Moderation Transparency" *DSA Observatory*. <https://dsa-observatory.eu/2026/01/08/the-metrics-were-missing-in-dsa-content-moderation-transparency/>
- Maghsudi, S. & **Davy, M.** (2021). Computational Models of Human Decision-Making with Application to the Internet of Everything. *IEEE Wireless Communications*, 28(1), 152–159. <https://doi.org/10.1109/MWC.001.2000250>

#### **Ongoing:**

- (Oxford Institute for Ethics in AI) **Davy, M.**, Goldring, T., Formosa, P., Millière, R., "Content-style entanglement in diffusion models".
- (Oxford Internet Institute) **Davy, M.**, Röttger, P. "LLMs' preference for LLM-written material amplifies the marginalisation of minority political perspectives".
- (Oxford Witt Lab) **Davy, M.**, Shumailov, I., de Witt, C., "Applying neurosymbolic methods to detect the zone of possible agreement in multi-agent AI negotiation"

## Work & volunteering experience

### Senior Data Scientist, Canva (May 2023 - June 2025)

I worked in Trust & Safety, which builds services to protect Canva users and the wider online community. I worked on moderating user generated content, moderating and reducing the bias of generative AI, detecting bot attacks and inauthentic behaviour, account safety & security.

- Built methodology to reduce bias of our AI image generation tools.
- Reduced hacked customer accounts by 50% via company-wide collaboration.
- Reduced cost of vendor tools by >700k USD per annum while preserving protections.
- Built ML classifiers to automatically detect violative content with 95% precision.
- Avoided >10 million scam views annually by automating review of viral websites.

**Recognition:** Promoted at earliest opportunity.

### Data Scientist, Atlassian (Jan 2021 - May 2023)

I worked in Ecosystem, which enabled external developers to sell add-ons for Atlassian products.

- Led team of 4 to produce a data insights tool now used by >100 Marketplace partners.
- Influenced business to reallocate ~2 million in resources away from an ineffective project.
- Won hackathon by generating image alt-text via OCR for search & accessibility
- Initiated Atlassian's first program for hiring women data interns, filling 33% of cohort.

**Recognition:** 'High Anticipated Future Impact' rating (top 2%); promoted at earliest opportunity.

### Associate Data Scientist, Commonwealth Bank Australia (2018-2020)

I interned in the AI Labs team, where I analysed biases in machine learning models, and the Financial Wellbeing Team, where I developed customer financial wellbeing indicators.

### Crisis Supporter, Lifeline (2020)

I volunteered at Lifeline (a suicide hotline), independently taking ~100 hrs of calls over 6 months.

### Information Management Intern, United Nations Peacekeeping (2019)

I interned remotely for the peacekeeping mission in Cyprus, improving data quality.

### Academic Tutor, University of Sydney (2019-2020)

I tutored Intro to AI, and Data Structures and Algorithms (teaching, marking, and Q&A).

### Debating Coach (2017-2020)

I coached senior debating for Sydney Grammar School, Kambala School, and Scots College.