
SUMMARY

I am a second-year PhD student in **robotics/ML** and **computational cognitive science**. My research is primarily concerned with **social cognition and learning** in humans and artificial agents. I am also interested in (multi-agent) reinforcement learning, moral cognition, and AI alignment (among other topics).

EDUCATION

- **University of Edinburgh** Edinburgh, UK
PhD, Centre for Doctoral Training in Robotics and Autonomous Systems *Sep 2022 – ongoing*
- **Imperial College London** London, UK
MEng Molecular Bioengineering; 1st class honours *Oct 2017 – Jul 2021*

EMPLOYMENT

- **UCL Visual Plasticity Lab** London, UK
Research Assistant *Mar 2022 – Sep 2022*
- **PolyAI** London, UK
Software Engineer *June 2020 – June 2021*
- **MedEngine** Berlin, Germany
Software Engineer / Research Engineer *June 2018 – Oct 2019*

TEACHING

- **Seminar in Cognitive Modelling** University of Edinburgh
Teaching assistant + marker *2023-24*

SELECTED PAPERS

- **Taylor-Davies, M.** & Lucas, C.G. *Rational compression in choice prediction* (International Conference on Cognitive Modeling 2024)
- **Taylor-Davies, M.** & Lucas, C.G. *Balancing utility and cognitive cost in social representation* (Information-Theoretic Principles in Cognitive Systems Workshop, NeurIPS 2023)
- McCallum, S., **Taylor-Davies, M.**, Albrecht, S. & Suglia, A. *Is feedback all you need? leveraging natural language feedback in goal-conditioned reinforcement learning* (Goal-Conditioned Reinforcement Learning Workshop, NeurIPS 2023, **selected for spotlight talk**)
- **Taylor-Davies, M.**, Droop, S. & Lucas, C.G. *Selective imitation on the basis of reward function similarity* (CogSci 2023)

INVITED TALKS

- *Social learning and social groups* @ Human Decision-making Lab, Edinburgh University (November 2023)
- *Imitation, preferences and group identity* @ Computational Cognitive Development Lab, Brown University (November 2023)

REVIEWING

- CogSci 2024
- CogSci 2023