

Freddie Bickford Smith

fbickfordsmith.com

EDUCATION

University of Oxford

Sep 2020 – Jun 2024

- DPhil Machine Learning (CDT programme in Autonomous Intelligent Machines & Systems)
- Funded by a four-year EPSRC studentship and a Kellogg College scholarship

University College London

Sep 2018 – Sep 2019

- MSc Data Science & Machine Learning (distinction)
- Modules: Advanced DL & RL, Applied ML, Bioinformatics, Graphical Models, Intro to DL, Intro to ML, Intro to Data Science, Multi-Agent AI

University of Bristol

Sep 2013 – Jun 2017

- MEng Mechanical Engineering (first-class)
- Relevant topics: calculus, computational modelling, control theory, linear algebra, robotics, statistics
- Secretary of the Design Society (2014-15)
- Member of the Officer Training Corps (2014-15)

Eton College

Sep 2008 – Jun 2013

- Maths, Further Maths, Physics, Economics (A*A*AA)
- Shortlisted for Royal Economic Society 'Young Economist of the Year' (2012)
- Secretary of the Entrepreneurship Society (2012-13)

WRITING

[4] Bickford Smith, Luo, Roads, Love (2020). The perceptual boost of visual attention is task-dependent in naturalistic settings. 'Bridging AI & Cognitive Science', ICLR.

[3] Bickford Smith (2019). When is visual attention useful? MSc thesis, University College London.

[2] Bickford Smith, Lo, Vossos (2017). An investigation into methods of joining fibre-reinforced plastics for Formula Student. MEng thesis, University of Bristol.

[1] Bickford Smith (2016). Applications of 3D printing for Formula Student: optimisation of the impact attenuator. BEng thesis, University of Bristol.

EXPERIENCE

Love Lab

Sep 2019 – Dec 2020

- Post-MSc research assistantship
- Stage 1: revising and condensing my MSc thesis [3] to form an ICLR workshop paper [4]
- Stage 2: extending the study (in progress)
- Supervisors: Brad Love, Brett Roads (University College London)
- Paper [4]: arxiv.org/abs/2003.00882
- Code: github.com/fbickfordsmith/attention-iclr

Love Lab

Jun 2019 – Sep 2019

- MSc research: the perceptual influence of attention
- Supervisors: Brad Love, Brett Roads, Ed Grefenstette (University College London)
- Thesis [3]: fbickfordsmith.com/pdf/msc-thesis.pdf
- Code: github.com/fbickfordsmith/attention-msc

Bristol Composites Institute

Oct 2016 – Apr 2017

- MEng research: ways of joining composite materials
- Group work with two other students
- Supervisor: Fabrizio Scarpa (University of Bristol)
- Thesis [2]: fbickfordsmith.com/pdf/meng-thesis.pdf

Design & Manufacturing Futures Lab

Oct 2015 – Apr 2016

- BEng research: 3D printing components for cars
- Supervisor: Ben Hicks (University of Bristol)
- Thesis [1]: fbickfordsmith.com/pdf/beng-thesis.pdf

ACADEMIC SERVICE

- Volunteering at ICLR 2020
- Maths tutoring for students in London (2019-20)

PRACTICAL SKILLS

Bash, Git, LaTeX, Matlab, Python (with Matplotlib, NumPy, Pandas, Scikit-learn and TensorFlow)