CIAN EASTWOOD

Edinburgh, United Kingdom

✉ cian.eastwood@gmail.com | 🏠 Personal website | ⊡ Github | in LinkedIn | 🎓 Google scholar

Education

PhD Candidate in Machine Learning
University of Edinburgh & Max Planck Institute for Intelligent Systems, Tübingen

Sept 2018 - Current
UK & Germany

- Supervisors: Prof. Chris Williams and Prof. Bernhard Schölkopf
- Research interests: Intersection of representation learning, transfer learning and causality, e.g. out-of-distribution generalization, causal representation learning, disentanglement, domain generalization and domain adaptation.
- Awards: Enlightenment Scholarship, NUI Travelling Doctoral Studentship

MSc in Artificial Intelligence – Distinction (84%)
University of Edinburgh

Sept 2016 - Sept 2017
UK

- Thesis: Experiments with Information-Maximising Generative Adversarial Networks
- Courses: Various courses in AI, e.g. probabilistic modelling and reasoning, pattern recognition and NLP
- Awards: Best Thesis, The Informatics Scholarship, UK/EU Masters Scholarship

Exchange Program
University of Toronto

Aug 2014 - Dec 2014
Canada

- Courses: Programming languages, computer networks, compilers, and formal methods of software design

BSc in Computer Science – Graduated Top of Class (88%)
National University of Ireland (NUI), Maynooth

Sept 2012 - June 2016
Ireland

- Courses Broad range of courses in computer science and mathematics
- Awards: Intel Medal—graduated top of class, STEM Scholarship, Entrance Scholarship

Professional Experience

Research Intern (AI)
Meta

Aug 2022 - Feb 2023
New York, US

- *Supervisors:* Mark Ibrahim, Diane Bouchacourt, Pascal Vincent.
- Led a project on contrastive learning through a causal lens. Significantly improved downstream performance.

Research Assistant
University of Edinburgh

Nov 2017 - Sept 2018
Edinburgh, UK

- Developed deep generative models for human motion synthesis within Prof. Taku Komura's computer-graphics group.
- Collaborative research environment.

Tutor
University of Edinburgh

Sept 2018 - Jan 2022
Edinburgh, UK

- Delivered 10-to-15-student tutorials for Machine Learning & Pattern Recognition and Introduction to Machine Learning.

Intern Analyst
Accenture

Feb 2015 - Aug 2015
Dublin, Ireland

- Large-scale professional software development within an agile team. Developed features which affect millions annually.

Publications

[1] "DCI-ES: An Extended Disentanglement Framework with Connections to Identifiability"
C Eastwood*, A Nicolicioiu*, J von Kügelgen*, A Kekić, F Träuble, A Dittadi, B Schölkopf
Preprint

[2] "Probable Domain Generalization via Quantile Risk Minimization"
C Eastwood*, A Robey*, S Singh, J von Kügelgen, H Hassani, G J Pappas, B Schölkopf
36th Conference on Neural Information Processing Systems (NeurIPS 2022)

[3] "Align-Deform-Subtract: An Interventional Framework for Explaining Object Differences"
C Eastwood*, N Li*, C K I Williams
Workshop on Objects, Structure and Causality Workshop at ICLR 2022

[4] "On the DCI Framework for Evaluating Disentangled Representations: Extensions and Connections to Identifiability"
C Eastwood*, A Nicolicioiu*, J von Kügelgen*, A Kekić, F Träuble, A Dittadi, B Schölkopf
Workshop on Causal Representation Learning at UAI 2022

[5] "Source-Free Adaptation to Measurement Shift via Bottom-Up Feature Restoration"
C Eastwood*, I Mason*, C K I Williams, B Schölkopf
*10th International Conference on Learning Representations (ICLR 2022, **Spotlight**)*

[6] "Unit-Level Surprise in Neural Networks"
C Eastwood*, I Mason*, C K I Williams
*Workshop on "I Can't Believe it's Not Better" at NeurIPS 2021 (**Spotlight**, **Didactic Award**) and PMLR 163:33-40*

[7] "Learning Object-Centric Representations of Multi-Object Scenes from Multiple Views"
N Li*, **C Eastwood***, R Fisher
*34th Conference on Neural Information Processing Systems (NeurIPS 2020, **Spotlight**)*

[8] "A Framework for the Quantitative Evaluation of Disentangled Representations"
C Eastwood*, C K I Williams
6th International Conference on Learning Representations (ICLR 2018)

Awards

2022	NeurIPS Top Reviewer
2022	ICLR Highlighted Reviewer
2019	NUI Travelling Doctoral Studentship in Artificial Intelligence
2018	University of Edinburgh Enlightenment PhD Scholarship
2017	Informatics Dissertation Prize (Award for best thesis in the MSc Artificial Intelligence)
2016	Informatics Masters Scholarship
2016	UK/EU Masters Scholarship
2016	The Intel Medal (Award for best results in the BSc Computer Science)
2012	NUI Undergraduate STEM Scholarship
2012	NUI Undergraduate Entrance Scholarship
2012	600 points in The Leaving Certificate (Final secondary-school exams, 99.7th percentile nationally)

Invited Talks

[A] "Distribution shift and causal/disentangled representations"
Computational Intelligence, Vision, and Robotics Lab, New York University, December 2022

[B] "Probable domain generalization via quantile risk minimization"
Copenhagen Causality Lab, University of Copenhagen, November 2022 (virtual)

[C] "Shift happens: How can we best prepare?"
(Neuro)Science of Deep Learning Group, Massachusetts Institute of Technology, November 2022 (virtual)

[D] "Tackling distribution shift and out-of-disitribution generalization"
Seminar on Out-of-Distribution Generalization, Saarland University, November 2022 (virtual)

Reviewing

2023	ICLR, ICML
2022	ICLR, NeurIPS
2021	NeurIPS

Skills

Programming	Python (PyTorch, Pandas, NumPy, Scikit-learn. etc.)
Miscellaneous	Linux, Shell (Bash/Zsh), LaTeX, Git, Microsoft Office

References available upon request.