

PERSONAL DETAILS

Location San Francisco Bay Area, CA
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ACADEMIC EXPERIENCE

Postdoctoral Research - Machine Learning 2022-2023
Massachusetts Institute of Technology. Sinha Lab.

Understanding and improving the generalisation behaviour of neural networks when handling out-of-distribution data.

PhD - Machine Learning and Character Animation 2017-2022
The University of Edinburgh. Supervisor - Prof. Taku Komura

General domain adaptation research and applications to animation.
Thesis: "Few-shot Learning in Changing Domains"

Postgraduate Tutor 2019
The University of Edinburgh, Part-time

Tutor of Machine Learning and Pattern Recognition for MSc students. Giving a weekly class covering machine learning fundamentals and assisting with student's questions.

MSc. Artificial Intelligence (Distinction) 2016-2017
The University of Edinburgh

Undergraduate Tutor 2016
The University of Edinburgh, Part-time

Tutor of Discrete Maths and Mathematical Reasoning for 2nd year students. Assisting with problem sheets and answering questions about the course material.

BSc. Mathematics (1st) 2012-2015
Imperial College London

AWARDS

Best Paper - SIGGRAPH 2022
Awarded for *DeepPhase: Periodic Autoencoders for Learning Motion Phase Manifolds.*

Didactic Award - ICBINB NeurIPS Workshop 2021
Awarded for *Unit-level Surprise in Neural Networks.*

Best Student Paper - Pacific Graphics 2018
Awarded for *Few-shot Learning of Homogeneous Human Locomotion Styles.*

EPSRC Doctoral Training Partnership 2017-2021
Full funding award for 4 year PhD studies.

Class Prize - Artificial Intelligence 2017
Student with the best overall marks in Msc. Artificial Intelligence cohort.

INDUSTRIAL EXPERIENCE

Member of Research Staff

2023-Present

Fujitsu Research of America.

Research on foundation models and self-improving systems.

Associate Software Engineer

2015-2016

Accenture, Full-time

Consultancy software testing services for an SAP implementation.

PUBLICATIONS

Ian Mason, Anirban Sarkar, Tomotake Sasaki, Xavier Boix

2023

Modularity Trumps Invariance for Compositional Robustness.

ArXiv Preprint: 2306.09005.

A. Sarkar, M. Groth, I. Mason, T. Sasaki, X. Boix

2023

Deepphys: Deep Electrophysiology, Debugging Neural Networks Under Distribution Shifts.

ArXiv Preprint: 2303.11912.

Sebastian Starke, Ian Mason, Taku Komura

2022

DeepPhase: Periodic Autoencoders for Learning Motion Phase Manifolds.

SIGGRAPH.

Cian Eastwood*, Ian Mason*, Christopher Williams, Bernhard Schölkopf

2022

Source-Free Adaptation to Measurement Shift via Bottom-Up Feature Restoration.

*ICLR (spotlight). *Joint First Author.*

Ian Mason, Sebastian Starke, Taku Komura

2022

Real-Time Style Modelling of Human Locomotion via Feature-Wise Transformations and Local Motion Phases.

Proceedings of the ACM on Computer Graphics and Interactive Techniques, 5(1).

Cian Eastwood*, Ian Mason*, Christopher Williams

2021

Unit-Level Surprise in Neural Networks.

*Proceedings of Machine Learning Research, 163. *Joint First Author.*

Ian Mason, Sebastian Starke, He Zhang, Hakan Bilen, Taku Komura

2018

Few-Shot Learning of Homogeneous Human Locomotion Styles.

Computer Graphics Forum, 37(7).

TALKS

Compositions of Corruptions: Modularity & Independent Mechanisms

Oct 2022

Internal Workshop, Fujitsu Research, Kawasaki, Japan

Using Unit-Level Information for Low-Shot Adaptation

Nov 2021

Gatsby Computational Neuroscience Unit, UCL, London, UK

Applications of Flow-Based Models to the Distribution of Human Poses

Dec 2020

IPAB Workshop, University of Edinburgh, Edinburgh, UK

Modelling Locomotion Styles with Feature-Wise Transformations
IPAB Workshop, University of Edinburgh, Edinburgh, UK

June 2020

Few-Shot Learning of Homogeneous Human Locomotion Styles
IPAB Workshop, University of Edinburgh, Edinburgh, UK

Mar 2019

SKILLS

Programming Proficient in Python. ML libraries: PyTorch, TensorFlow, Theano.
Also worked with: C#, C, MATLAB/OCTAVE.

Technologies Unity, Linux, Git, Vicon & Xsens motion capture.

Languages English (native), Spanish (intermediate).

OTHER ACTIVITIES

Community Working with *I Can't Believe It's Not Better* (<http://icbinb.cc>).
Co-organised workshop *Understanding Deep Learning Through Empirical Falsification* at NeurIPS 2022.

Interests Music (Guitar, Vocals), Fitness (Climbing, Yoga).