JAKE CUNNINGHAM

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EDUCATION

Ph.D. Machine Learning *Oct 2021 - Present*
University College London, Department of Computer Science
Research: Sequence Models, Efficient Machine Learning, Gaussian Processes
Supervisor: Professor Marc Deisenroth

M.Sc. Computing (AI and Machine Learning) *Oct 2020 - Sep 2021*
Imperial College London, Department of Computing
Research Project: Stochastic Partial Differential Equations and Gaussian Processes
Supervisor: Dr Mark van der Wilk
Grade: Distinction 82.8%

M.Eng. Engineering Science *Oct 2016 - Jun 2020*
University of Oxford, Keble College, Department of Engineering
Research Project: Modelling Global Distribution of Floating Microplastics
Supervisor: Dr Ton van den Bremer
Grade: First Class Honours 75.6%

PUBLICATIONS AND SELECTED PREPRINTS

Reparameterized Multi-Resolution Convolutions for Long Sequence Modelling
Neural Information Processing Systems (NeurIPS), 2024
H.J.Cunningham, G.Giannone, M.Zhang, M.P.Deisenroth
https://arxiv.org/abs/2408.09453

RotRNN: Modelling Long Sequences with Rotations
ICML Next Generation of Sequence Modeling Architectures Workshop, 2024
R.Dolga, K.Biegun, **H.J.Cunningham**, D.Barber.
https://arxiv.org/abs/2407.07239

RecMoDiffuse: Recurrent Flow Diffusion for Human Motion Generation
arXiv Preprint arXiv:2406.07169, 2024
M.Mohamed, **H.J.Cunningham**, M.P.Deisenroth, L.Agapito
https://arxiv.org/abs/2406.07169

Actually Sparse Variational Gaussian Processes
International Conference on Artificial Intelligence and Statistics (AISTATS), 2023
H.J.Cunningham, D.de Souza, S.Takao, M.van der Wilk, M.P.Deisenroth.
https://arxiv.org/abs/2304.05091

The Role of the Unsteady Surface Wave-Driven Ekman–Stokes Flow in the Accumulation of Floating Marine Litter
Journal of Geophysical Research: Oceans, 2022
H.J.Cunningham, C.Higgins, T.S.van den Bremer.
https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2021JC018106

PROFESSIONAL EXPERIENCE

National Oceanography Centre *Sep 2022 - Mar 2023*
Research Engineer

Mercury Labs *Sep 2021 - Sep 2022*
Data Scientist

Waves and Flows Research Group, University of Oxford *Jun 2020 - Sep 2020*
Research Assistant

AMR International *Jun 2018 - Sep 2019*
Strategy Consultant

SCHOLARSHIPS AND AWARDS

G-Research Poster Prize *2024*
Awarded for best poster presentation

G-Research UCL Ph.D. Prize *2023*
Awarded for best PhD research proposal

UCL Department of Computer Science Studentship *2023*
Awarded a full scholarship for a Ph.D. in Machine Learning

Imperial Computing Distinguished project *2021*
Awarded for outstanding individual projects in terms of technical achievement.

Challenger Society for Marine Science Student Award *2020*
Awarded for demonstrating excellence in Marine Science Research.

Keble College Franklin Award *2020*
Awarded for best overall performance in 4th year Engineering Science.

Keble College Academic Scholarship *2018 - 2020*

REVIEWING

JMLR
AISTATS 2023 (Top reviewer)
Gaussian Processes Workshop, NeurIPS 2022

TECHNICAL SKILLS

Programming Languages Python, Matlab, Julia
Machine Learning Frameworks PyTorch, TensorFlow, JAX, GPflow