James Ryan Requeima

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EDUCATION

University of Cambridge Cambridge, UK

Ph.D. in Engineering, Machine Learning Group

Advisors: Richard E. Turner and José Miguel Hernández-Lobato

University of Cambridge Cambridge, UK

MPhil. in Machine Learning, Speech and Language Technology

Advisor: Zoubin Ghahramani

Thesis: Integrated Predictive Entropy Search for Bayesian Optimization.

Awarded with distinction.

McGill University Montreal, CA

M.Sc. in Mathematics 2006-2008

Advisor: Daniel Wise

Thesis: Relative sectional curvature in compact angled 2-complexes.

GPA: 3.9/4.0.

University of Manitoba Winnipeg, CA

B.Sc. Honours in Mathematics 2001-2006

GPA: 4.3/4.5.

PROFESSIONAL EXPERIENCE

Invenia Technical Computing

Cambridge, UK

Senior Researcher

2013 - present

2016-Present

2015-2016

Developed and implemented machine learning techniques for Invenia's automated electricity grid and wind farm forecasting systems as well as risk management strategies for trading systems. Cofounded Invenia's research office, Invenia Labs, in Cambridge UK which currently has 40 full-time employees.

Montreal Institute for Learning Algorithms (MILA)

Montreal, CA

Research Intern

2019-2020

Supervisor: Yoshua Bengio

University of Cambridge, Engineering Department

Cambridge, UK

Teaching Assistant

2018

Advanced Machine Learning course.

Dawson College, Department of Mathematics

Montreal, CA

College Professor

2008 - 2019

Taught undergraduate level mathematics courses: Calculus, Linear Algebra, Probability and Statistics, Applied Mathematics for Civil Engineering, Business, Chemical Technology.

Community Service

Reviewer:

ICLR: 2017, 2021. ICML: 2021. NeurIPS: 2020, 2021, 2022.

Elected Student Representative:

Mphil in Machine Learning, Speech and Language Technology program, Cambridge University, 2015.

ACADEMIC AWARDS

SALTISE project grant to promote student-centered active learning in science.

2006-2008

2013

NSERC Postgraduate Scholarship.

2006-2007

Institut des Sciences Mathématiques award.

UofM Student Union Scholarship

2004, 2005, 2006

UofM General Scholarship

2002, 2003

PUBLICATIONS

Active Learning with Convolutional Gaussian Neural Processes for Environmental Sensor Placement.

T. R. Andersson, W. P. Bruinsma, S. Markou, D. C. Jones, J. S. Hosking, J. Requeima, A. Coca-Castro, A. Vaughan, A. Ellis, M. Lazzara, and R. E. Turner.

NeurIPS Workshop on Gaussian Processes, Spatiotemporal Modeling, and Decision-making Systems, 2022.

Challenges and Pitfalls of Bayesian Unlearning.

A. Rawat, J. Requeima, W. Bruinsma, and R. E. Turner. *ICML Updatable Machine Learning Workshop*, 2022.

Practical Conditional Neural Processes Via Tractable Dependent Predictions.

S. Markou*, J. Requeima*, W. Bruinsma, A. Vaughan, and R. E. Turner. *International Conference on Learning Representations*, 2022.

Efficient Gaussian Neural Processes for Regression.

S. Markou*, J. Requeima*, W. Bruinsma, and R. E. Turner. *ICML Uncertainty and Robustness in Deep Learning Workshop*, 2021.

The Gaussian Neural Process.

W. Bruinsma, J. Requeima, A. Y. K. Foong, J. Gordon and R. E. Turner. *Advances in Approximate Bayesian Inference Symposium*, 2020.

TaskNorm: Rethinking Batch Normalization for Meta-Learning.

J. Bronskill*, J. Gordon*, J. Requeima, S. Nowozin, and R. E. Turner. *International Conference on Learning Representations*, 2020.

Convolutional Conditional Neural Processes .

J. Gordon*, W. Bruinsma*, A. Y. K. Foong, J. Requeima, Y. Dubois, and R. E. Turner. *International Conference on Learning Representations*, 2020.

Fast and Flexible Multi-Task Classification Using Conditional Neural Adaptive Processes.

J. Requeima*, J. Gordon*, J. Bronskill*, S. Nowozin, and R. E. Turner. *Neural Information Processing Systems*, 2019.

The Gaussian Process Autoregressive Regression Model (GPAR).

J. Requeima*, W. Tebbutt*, W. Bruinsma*, and R. E. Turner. *International Conference on Artificial Intelligence and Statistics*, 2019.

Characterizing and Warping the Function Space of Bayesian Neural Networks.

D. Flam-Shepherd, J. Requeima, and D. Duvenaud. *NIPS Bayesian Deep Learning Workshop*, 2018.

Parallel and Distributed Thompson Sampling for Large-scale Accelerated Exploration of Chemical Space.

J. M. Hernández-Lobato*, J. Requeima*, E. O. Pyzer-Knapp, and A. Aspuru-Guzik *International Conference on Machine Learning*, 2017.

Mapping Gaussian Process Priors to Bayesian Neural Networks.

D. Flam-Shepherd, J. Requeima, and D. Duvenaud. *NIPS Bayesian Deep Learning Workshop*, 2017.

^{*} indicates equal contribution