Alex Lewandowski

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Papers & Preprints

Learning Curricula By Encoding Student Trajectories
A. Lewandowski, C. Muslimani, M. Taylor, J. Luo *09/2021*
» Preprint

Disentangling Generalization in Reinforcement Learning with Contextual Decision Processes
A. Lewandowski, D. Schuurmans, J. Luo *09/2021*
» Preprint

LISPR: An Options Framework for Policy Reuse with Reinforcement Learning
D. Graves, **A. Lewandowski**, J. Jin, Z. Zhang, Y. Zaky, J. Luo *2/2021*
» Preprint

ZORB: A Derivative-Free Backpropagation Algorithm for Neural Networks
V. Ranganathan, **A. Lewandowski** *12/2020*
» Beyond Backpropagation Workshop (NeurIPS 2020, Oral Presentation)

Recurrent Open-loop Control in Offline Reinforcement Learning
A. Lewandowski, D. Schuurmans *12/2020*
» Offline Reinforcement Learning Workshop (NeurIPS 2020)

Generalization Across Space and Time in Reinforcement Learning
A. Lewandowski *12/2020*
» Pre-registration Experiment Workshop (NeurIPS 2020)

Batch and Sequential Policy Optimization with Doubly Robust Objectives
A. Lewandowski, D. Schuurmans *12/2019*
» Optimization Foundations of Reinforcement Learning Workshop (NeurIPS 2019)

Return Distribution Estimation for Off-Policy Control
A. Lewandowski, D. Schuurmans *08/2019*
» Deep Learning and Reinforcement Learning Summer School.

Batch Normalized Deep Kernel Learning for Weight Uncertainty
A. Lewandowski *12/2017*
» Bayesian Deep Learning Workshop (NIPS 2017)

Education

Ph.D. in Computing Science
University of Alberta *2019 – Present*
» Specialization: Statistical Machine Learning
» Supervisor: Dale Schuurmans

M.Sc. in Statistics
University of Alberta *2016 – 2018*
» Specialization: Statistical Machine Learning
» Supervisors: Ivor Cribben & Rohana Karunamuni
» Thesis: Recurrent and Bayesian Kernel Learning for Small Data with Applications to Neuroimaging

Honours Bachelor in Mathematics
University of Waterloo *2012 – 2016*
» Major: Mathematical Economics

Work Experience

Research Associate, Noah's Ark Lab
Huawei Technologies Co., Ltd. *01/2021 – 12/2021*
» Supervisor: Jun Luo
» Researching auto-curriculum and generalization in reinforcement learning, with applications to autonomous vehicles.

Teaching Assistant, Department of Computer Science
University of Alberta *01/2019 – Present*
» Organized discussion groups and worksheets for new introductory reinforcement learning course.
» Guided students through projects and group assignments for foundations in information retrieval.

Research Assistant, Department of Computer Science
University of Alberta *08/2018 – Present*
» Supervisor: Dale Schuurmans
» Researching methods that bridge the gap between online and batch reinforcement learning

Teaching Assistant, Department of Mathematical and Statistical Sciences
University of Alberta *09/2016 – 04/2018*
» Led help sessions in Introduction to Applied Statistics, Statistics I/II, Applied Regression Analysis and Time Series Analysis.
» Provided one on one assistance with assignments for first and second year classes at the Decima Robinson Support Centre.

Research Assistant, Department of Mathematical and Statistical Sciences
University of Alberta *05/2017 – 07/2018*
» Supervisor: Ivor Cribben
» Implemented Gaussian process and deep learning methods to classify patients based on fMRI data using TensorFlow.
» Developed stochastic variational methods for recurrent neural network parameterized kernels in Gaussian process classification.

Honors & Awards

President's Doctoral Prize of Distinction
University of Alberta, Department of Computing Science 2021

NSERC Postgraduate Scholarships – Doctoral
University of Alberta, Department of Computing Science 2021 - 2024

Josephine Mitchell Scholarship
University of Alberta, Department of Mathematical and Statistical Sciences 2018

Profiling Alberta's Graduate Students Award
University of Alberta, Department of Mathematical and Statistical Sciences 2017

Josephine Mitchell Scholarship
University of Alberta, Department of Mathematical and Statistical Sciences 2017

Queen Elizabeth II Graduate Scholarship
University of Alberta, Department of Mathematical and Statistical Sciences 2016

Term Dean's Honour List
University of Waterloo 2015

President's Scholarship
University of Waterloo 2012

Service

Organizer ICLR Reinforcement Learning Social 2020, NeurIPS SSBM Social 2020, ICLR SSBM Social 2021

Reviewer TNNLS 2018-2019, Neurips OPTRL Workshop 2019, ICLR 2020, ICLR 2021 (Outstanding Reviewer Award), ICML RL4RealLife Workshop 2021, NeurIPS 2021, NeurIPS Offline RL Workshop 2021