

Richard Moulton

Department of Electrical and Computer Engineering
Queen's University

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Education

- PhD in Electrical and Computer Engineering**, Queen's University 2018-Present
SUPERVISORS: Dr. Karen Rudie and Dr. Stephen Scott
THESIS: Discrete-Event Systems for Modelling Decision-Making in Human Motor Control
- Master of Computer Science**, University of Ottawa 2016-2018
SUPERVISORS: Dr. Nathalie Japkowicz and Dr. Herna Viktor
THESIS: Clustering to Improve One-Class Classifier Performance in Data Streams
- Bachelor of Science, Honours Computer Science**, Royal Military College of Canada 2006-2010
SUPERVISOR: Dr. Louis Massey
SENIOR PROJECT: A Web-Based Implementation of a Topics Computation Agent

Professional Experience

- Research Assistant**, Queen's University 2018-Present
Queen's Discrete-Event Systems Lab
- Head Teaching Assistant**, Queen's University 2021-Present
ELEC 270 Discrete Mathematics with Computer Engineering Applications (Winter 2021)
- Teaching Assistant**, Queen's University 2019-Present
MNTC 313 Introduction to Programming (Fall 2020)
ELEC 270 Discrete Mathematics with Computer Engineering Applications (Winter 2019, 2020 & 2022)
- Aerospace Control Officer**, Canadian Armed Forces 2006-2016
Standards and Training Officer, Canadian Space Operations Centre (Nov 2013-Jun 2016)
Weapons Director Instructor, 51 AC & W (OT) Squadron (May 2013-Nov 2013)
Weapons Director, 21 AC & W Squadron (Sep 2011-May 2013)
Trainee, 51 AC & W (OT) Squadron (Jun 2010-Aug 2011)
Officer Cadet, Royal Military College of Canada (Jun 2006-May 2010)

Selected Academic Awards

- POSTGRADUATE SCHOLARSHIP DOCTORAL, NSERC 2019-2022
DEAN'S GRADUATE RESEARCH ASSISTANT AWARD, Faculty of Engineering and Applied Science,
Queen's University 2018-2021
BEST STUDENT DATA MINING PAPER RUNNER UP, ECML-PKDD 2018
UNIVERSITY OF OTTAWA EXCELLENCE SCHOLARSHIP, University of Ottawa 2016-2018
ALEXANDER GRAHAM BELL CANADA GRADUATE SCHOLARSHIP – MASTER'S, NSERC 2016-2017

Selected Publications

R. H. Moulton, “Discrete-Event Systems for Modelling Decision-Making in Human Motor Control,” in Advances in Artificial Intelligence: 32nd Canadian Conference on Artificial Intelligence, Canadian AI 2019.

R. H. Moulton. “Clustering to Improve One-Class Classifier Performance in Data Streams.” Master’s Thesis, University of Ottawa, 2018. WINNER OF THE CANADIAN ARTIFICIAL INTELLIGENCE ASSOCIATION’S 2019 AI MASTER’S THESIS AWARD.

R. H. Moulton, H. L. Viktor, N. Japkowicz, and J. Gama, “Clustering in the Presence of Concept Drift,” ECML PKDD 2018. BEST STUDENT DATA MINING PAPER RUNNER UP

Scientific Activities

Presentations and Talks

SHARED NEURAL RESOURCES INFLUENCE PERFORMANCE IN RAPID, INTERACTIVE BEHAVIOURAL TASKS
Society for Neuroscience Annual Meeting Poster Session Nov 2021

BOTTLENECKS LIMIT HUMAN PERFORMANCE IN MOTOR DECISION TASKS
Queen’s CNS, Decision Making and Adaptive Control Research Group Feb 2021

DATA MINING AND SOCIETY
Shad Queen’s Jul 2019

KNOWLEDGE DISCOVERY: APPLYING AI IN THE COMMUNITY
TEDxQueensu Salon: Me, Myself, A.I. Mar 2019

Visiting Researcher

University of Porto, STUDENT RESEARCHER, hosted by Dr. João Gama, May 2017-Aug 2017

Summer Schools

CIFAR Deep Learning/Reinforcement Learning Summer School, July 2019-Aug 2019
Summer School in Computational Sensory-Motor Neuroscience, July 2018-Aug 2018
1st International School on Discrete Event Systems, May 2018-June 2018

Academic Reviewer

Machine Learning (2018-2021), Discrete Event Dynamic Systems (2021), Data Mining & Knowledge Discovery (2017-2019), IEEE Transactions on Knowledge and Data Engineering (2017-2018)

IEEE CDC 2021, ECML-PKDD IoT Stream for Data Driven Predictive Maintenance 2019 & 2020, IEEE DSAA 2017, ECML-PKDD IoT Large Scale Learning from Data Streams Workshop+Tutorial 2017

Certifications

CERTIFICATE IN PROFESSIONAL DEVELOPMENT IN UNIVERSITY TEACHING AND LEARNING
Queen’s University Centre for Teaching and Learning

Open Source Projects

Massive Online Analysis, PROGRAMMER, 2017-2019

Community Involvement

Graduate Electrical and Computer Engineering Student Council (Queen’s University). Teaching Assistant/Research Assistant Union Representative, 2021-Present

Writ Large Writers’ Group (Kingston). Co-Organizer, 2019-Present.

Pathways to Education (Kingston), Tutor 2018-2021, Data Analyst – Program Outcomes 2018-2019.

RA Curling Club (Ottawa). Chair of the Evening Section Committee 2017-2018, Vice-Chair of the Evening Section Committee 2016-2017, League Convener 2016-2018