

Alan Chan

Graduate Student in Artificial Intelligence

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Currently

PhD Student at MILA

Research interests

Reinforcement learning, fair and interpretable ML, fundamental science, mechanism design.

Affiliations

Montréal Institute for Learning Algorithms
Alberta Machine Intelligence Institute
Reinforcement Learning and Artificial Intelligence Laboratory

Education

Université de Montréal 2020 - now
PhD in Computer Science
Advised by Nicolas Le Roux

University of Alberta 2018 - 2020
MSc in Computing Science with a Specialization in Statistical Machine Learning
Advised by Martha White

University of Alberta 2014 - 2018
Honors BSc in Mathematics

Publications

Nath, S., Liu, V., Chan, A., White, A., and White, M, 2020. **Training Recurrent Neural Networks Online by Learning Explicit State Variables**. ICLR 2020. [Link](#)

De Asis, K., Chan, A., Pitis, S., Sutton, R.S. and Graves, D, 2020. **Fixed-Horizon Temporal Difference Methods for Stable Reinforcement Learning**. AAI 2020. [Link](#)

Chan, A. and Tuszynski, J.A., 2016. **Automatic prediction of tumour malignancy in breast cancer with fractal dimension**. Royal Society open science, 3(12), p.160558. [Link](#)

Employment

Intern Research Scientist at Huawei Canada, Noah's Ark May 2019 - Jan 2020
Research on control methods in reinforcement learning.

Research Student with Dr. Michael Kouritzin Jan 2018 - Apr 2019
My research focused on development of faster particle filters for dynamic time series estimation.

Research Student with Dr. Xinwei Yu May - Aug 2017, May - June 2018
My 2017 research focused on the study of the energy method for non-linear PDEs.
My 2018 project focused on understanding the differential geometry of map projections of the earth.

Research Student with Dr. Jack Tuszynski May - Aug 2016, May - Aug 2017

My research in 2016 focused on the use of fractal dimension as a feature in the diagnosis of breast cancer.
 My project during May-August involved data mining to help determine the mechanism of action for a specific drug.

Academic Service

Reviewer

ICML, ICLR, NeurIPS

Civic Activities

TA for AI4Good Summer Lab

Jun 2020 - Jul 2020

Organizing COVID-19 hackathon, guiding exercises on machine learning, group activity facilitation.

Volunteer at the U of A Sexual Assault Centre

Sep 2017-May 2019

Responsible for crisis intervention, administrative support, and campus awareness.

VP Training of the U of A Debate Society

Sep 2017-May 2018

Responsible for training all members of the club in debate.
 Created and maintained a central repository of resources now used by all members of the club.

Volunteer at The Landing

Sep 2015-Sep 2017

Responsible for managing website, communications team, and facilitating drop-in hours in a student space for gender and sexual diversity.

Competitive Debate

2011-2018

Competitive debate with participation in several regional and international tournaments.

Co-president of Youth Assisting Youth Integration Foundation

2013-14

Managed an organization that provided social and academic support to immigrant youth.

Volunteer with the Kids Help Phone Student Committee

2012-14

Worked to alleviate the stigma of mental health and fundraise for Kids Help Phone.

Awards

Scholarships

Queen Elizabeth II Graduate Scholarship 2018

Yahya Mathematics Scholarship 2017
 Erist Wilson Sheldon Memorial Prize in Mathematics

A Murray Thomas Gibson Memorial Scholarship in Mathematics 2016
 Cyril G Wates Memorial Scholarship

International Baccalaureate Diploma Scholarship 2014
 Robert Tegler Entrance scholarship at the University of Alberta
 Alexander Rutherford scholarship

Grants

NSERC Summer Research 2018

NSERC Summer Research 2017

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