

Kellin Pelrine

Education

Ph.D. Machine Learning, McGill University, 2020-2025 (expected)

Supervisor: Reihaneh Rabbany

M.A. Economics, Yale University, 2018-2019

M.S. Applied Mathematics, University of Colorado Boulder, 2017-2018

B.A. Economics and Mathematics, University of Colorado Boulder, 2014-2018

“Summa cum laude in economics” and “With Distinction” and class rank 1 (tied)

Current Affiliations

McGill University, PhD Candidate

Mila – Quebec AI Institute, Student Member

Centre for the Study of Democratic Citizenship, Student Member

FAR AI, Research Scientist Intern

MutuAI, Scientific Advisor

Research Objectives and Experience

Overall Goal:

More practical AI systems

Questions:

How can we leverage *all* available data, to get the best possible results?

How can we make sure good results in the lab will translate to the real world?

Areas:

Multimodal learning, multitask learning, weak supervision, evaluation, reliability, temporal graphs, NLP

Applications:

Misinformation, political polarization, COVID-19, human trafficking, Go, game AI

Professional Experience

MutuAI

Scientific Advisor, May 2023 – Present

Advising the design and implementation of AI for non-player characters in games, and social assistants.

Bringing the latest research into product development.

FAR AI

Research Scientist Intern, December 2022 – Present

Combined ML and Go expertise to better understand vulnerabilities in superhuman Go-playing systems.

Analyzed algorithmic attacks and their evolution over training.

Studied the role of search in robustness, finding it is helpful but not sufficient.

[The “man who beat the machine”](#)

Machine Learning Sports

CTO, October 2019 – December 2020

Created a pitch recommendation system powered by machine learning to help professional baseball pitchers optimize their pitch selection.

McGill University

Project Adviser, COMP 599 - Network Science, Fall 2022

Mentored students throughout graduate-level projects, leading to substantively higher quality results.

Go (strategy board game)

Professional teacher, freelance

Volunteer teacher, multiple Go clubs and online

Past students including but not limited to:

Paul Barchilon, American Go Foundation Teacher of the Year 2006

Eric Wainwright, 2022 US Go Congress Codirector

David Weiss, Boulder Kids and Teens Go Club founder and teacher

Private lessons, group lectures/workshops/classes, game reviews.

Honors and Awards

Research and Academic (graduate)

Doctoral Training Scholarship, CAD 58k, Fonds de Recherche du Québec, 2023

Graduate Excellence Award, CAD 42k total, McGill University, 4 times, 2020-2023

GREAT Award, CAD 1k, McGill University, 2022

IVADO PhD Excellence Scholarship, CAD 75k, IVADO, 2021

Max Stern Recruitment Fellowship, CAD 14k, McGill University, 2020

Cowles Foundation Fellowship, USD 32k, Yale University, 2018

Academic (undergraduate)

Chancellor’s Recognition Award, CU Boulder, for perfect GPA, 2018

Sieglinde Talbott Haller Economics Scholarship, CU Boulder, 2016 and 2017

Jim and Laura Marshall Scholarship, CU Boulder, mathematics, 2016

Flock Leader Scholarship, CU Boulder, 2015

CU Esteemed Scholars Program: President Joseph A. Sewall Award, 2014

Go (strategy board game)

U.S. Team Member, [2012 World Mind Sports Games](#), 2012

Lille, France. 95 countries were represented. Invitation based on U.S. ranking and tournament results.

U.S. Team Member, [China-US Internet Go Tournament](#), 2020

One of 6 players selected by ranking to represent the U.S. in a friendship match with top Chinese amateurs.

Playoff for North American representative to Li Min Cup, 2014 and 2016

One of 8 participants by invitation.

Peer-Reviewed Research

Adversarial Policies Beat Superhuman Go AIs

Tony Tong Wang*, Adam Gleave*, Tom Tseng, Nora Belrose, Kellin Pelrine, Joseph Miller, Michael D Dennis, Yawen Duan, Viktor Pogrebniak, Sergey Levine, Stuart Russell
Forthcoming, ICML 2023.

Party Prediction for Twitter

Kellin Pelrine, Anne Imouza, Gabrielle Desrosiers-Brisebois, Sacha Lévy, Jacob-Junqi Tian, Zachary Yang, Aarash Feizi, Cécile Amadoro, André Blais, Jean-François Godbout, Reihaneh Rabbany
Submitted, ICWSM 2023.

Towards Reliable Misinformation Mitigation: Generalization, Uncertainty, and GPT-4

Kellin Pelrine, Meilina Reksoprodjo, Caleb Gupta, Joel Christoph, Reihaneh Rabbany
Submitted, ACL SRW 2023.

SWEET: Weakly Supervised Person Name Extraction for Fighting Human Trafficking

Javin Liu*, Vidya Sujaya*, Peter Yu*, Pratheeksha Nair, Kellin Pelrine, Reihaneh Rabbany
Submitted, ACL SRW 2023.

Better Bridges Between Model and Real World

Kellin Pelrine
Canadian AI Conference Graduate Student Symposium, 2023.

Towards Better Evaluation for Dynamic Link Prediction

Farimah Poursafaei*, Andy Huang*, Kellin Pelrine, Reihaneh Rabbany
NeurIPS Datasets and Benchmarks Track, 2022

Active Keyword Selection to Track Evolving Topics on Twitter

Sacha Lévy, Farimah Poursafaei, Kellin Pelrine, Reihaneh Rabbany
Workshop on Utility-Driven Mining and Learning, 2022

Extracting Person Names from User Generated Text: Named-Entity Recognition for Combating Human Trafficking

Yifei Li, Pratheeksha Nair, Kellin Pelrine, Reihaneh Rabbany
Findings of the Association for Computational Linguistics, 2022

* Equal contribution

Online Partisan Polarization of COVID-19

Zachary Yang, Anne Imouza, Kellin Pelrine, Sacha Lévy, Jiewen Liu, Gabrielle Desrosiers-Brisebois, Jean-François Godbout, André Blais, Reihaneh Rabbany
International Conference on Data Mining Workshops, 2021

OPPVIS: Visualizing Online Partisan Polarization of COVID-19

Zachary Yang, Anne Imouza, Kellin Pelrine, Sacha Lévy, Jiewen Liu, Gabrielle Desrosiers-Brisebois, Jean-François Godbout, André Blais, Reihaneh Rabbany
Poster, IEEE Visualization & Visual Analytics, 2021

The Surprising Performance of Simple Baselines for Misinformation Detection

Kellin Pelrine*, Jacob Danovitch*, Reihaneh Rabbany
The Web Conference, 2021.

ComplexDataLab at WNUT-2020 Task 2: Detecting Informative COVID-19 Tweets by Attending over Linked Documents

Kellin Pelrine, Jacob Danovitch, Albert Orozco Camacho, Reihaneh Rabbany
Workshop on Noisy User-generated Text, 2020.

Other Research

A Note on the Unconditional Bias of the Nadaraya-Watson Regression Estimator

Kellin Pelrine. Supervisor: Carlos Martins-Filho. Undergraduate Honors Thesis, 2018.

Workshop Organization

Co-organizer, [Temporal Graph Learning Workshop](#), proposal submitted to NeurIPS, 2023

Co-organizer, [Temporal Graph Learning Workshop](#), NeurIPS, 2022

Referee

The Web Conference, 2023

NeurIPS Temporal Graph Learning Workshop, 2022

NeurIPS, Datasets and Benchmarks Track, 2022

Workshop on Noisy User-generated Text, 2020

Research Mentoring

Research Supervisor, *Towards Reliable Misinformation Mitigation*

UC Berkeley Supervised Program for Alignment Research, 2023

Supervisor, intern Jacob Tian, Complex Data Lab, 2022-2023

Co-supervisor, intern Peter Yu, Complex Data Lab, 2022-2023

Invited Talks

Signed Social Networks: Methods and Applications to Disinformation and Conflict

Research by: Kellin Pelrine, André Blais, Jean-François Godbout, Reihaneh Rabbany

Scheduled at American Political Science Association Annual Meeting, 2023

Adversarial Policies Beat Superhuman Go AIs

Research by: Tony Tong Wang*, Adam Gleave*, Tom Tseng, Nora Belrose, Kellin Pelrine, Joseph Miller, Michael D Dennis, Yawen Duan, Viktor Pogrebniak, Sergey Levine, Stuart Russell

Co-presenter: Tony Tong Wang

Presented at Cross Labs, 2023

Party Prediction for Twitter

Research by: Kellin Pelrine, Anne Imouza, Gabrielle Desrosiers-Brisebois, Sacha Lévy, Jacob-Junqi Tian, Zachary Yang, Aarash Feizi, Cécile Amadoro, André Blais, Jean-François Godbout, Reihaneh Rabbany

Presented at Université de Montréal Political Science, 2023

Presented at IVADO Digital October, 2022

Presented at American Political Science Association Annual Meeting, 2022

Social Graphs

Guest Lecture

Presented at COMP 599 - Network Science, McGill University, 2022

Presented at COMP 599 - Network Science, McGill University, 2021

Political Polarization on Social Media

Research by: Kellin Pelrine, Anne Imouza, Gabrielle Desrosiers-Brisebois, Zachary Yang, Sacha Lévy, Aarash Feizi, Jiewen Liu, André Blais, Jean-François Godbout, Reihaneh Rabbany

Presented at American Political Science Association Annual Meeting, 2021

Using Social Media Data to Measure Polarization

Guest Lecture

Presented at PLU6904A - Les États-Unis de Trump à Biden, Université de Montréal/CÉRIUM, 2021

Marginal GAN

Research by: Kellin Pelrine

Presented at CU Boulder Econometrics Workshop, November 2019

ShapeAttack: Genetic Algorithm for Shape-Constrained Adversarial Robustness Testing

Research by: Kellin Pelrine

Presented at CU Boulder Econometrics Workshop, October 2019