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)

Moderate proficiency in French, beginner in German and Chinese

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

Research Interests

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, temporal graphs, evaluation, reliability

Applications: misinformation, political polarization, COVID-19, human trafficking, Go

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
Submitted, 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 Better Evaluation for Dynamic Link Prediction
Farimah Poursafaei[*], Andy Huang[*], Kellin Pelrine, Reihaneh Rabbany

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[*] Equal contribution

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

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, [NeurIPS Temporal Graph Learning Workshop](), 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, Berkeley SPAR, 2023

Project Adviser, COMP 599 - Network Science, McGill University, 2022

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

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

Invited Talks

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 and Reihaneh Rabbany
Scheduled 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

Professional and Volunteer Experience

FAR AI

Research Scientist Intern, December 2022 – Present
Combining 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.
Replicated and transferred attack without algorithmic assistance.

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, and more

Honors and Awards

Academic (graduate)

Graduate Excellence Award, CAD 41k 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.