Reid McIlroy-Young

mcilroyyoung@reidmcy.com | reidmcy.com | reidmcy | scholar

Industry

Senior AI Research Engineer, Chess Matches 2025–
Duolingo
Custom Model Training, Evaluation, Post Training, RL, Personalization
Built and manage production AI deployment for millions of users, 10k+ of req/m
Production (20M-1B) multi-modal hierarchical transformer chess behavioral models

Academic

Associate, Hire Aspirations 2026–
Harvard University
PI: Cynthia Dwork

Hire Aspirations Affiliate Postdoctoral Fellow 2023–2025
Harvard University
PI: Cynthia Dwork

PhD in Computer Science 2018–2023
University of Toronto
Advisor: Ashton Anderson
Thesis: *"Bridging the Gap Between Artificial and Human Intelligence Using Chess as a Model System"*

Masters in Computational Social Science 2016–2018
University of Chicago
Advisor: James Evans

BS Honors in Mathematical Physics 2011–2015
University of Waterloo

Upcoming Publications

Equitable Evaluation via Elicitation 2026
Elbert Du, Lunjia Hu, Cynthia Dwork, **Reid McIlroy-Young**, Han Shao & Linjun Zhang
Under Review, NeurIPS

'Prenatal' is a Marketing Condition 2026
Reid McIlroy-Young, Gabriela Becher, Diana Freed & Cynthia Dwork
Under Review, SOUPS

'Should I Take the Pills or Go to the Clinic?' Abortion Help Seeking On Reddit in a Fractured Legal Landscape 2027
Reid McIlroy-Young, Shravya Sompalli, Lauren Fishel, Kyla Zhang, Asha Davis & Diana Freed
Under Review, GROUP

Publications

Order-Independence With Fine Tuning — 2025
Katrina Brown & **Reid McIlroy-Young**
ICLR Workshop Building Trust in Language Models and Applications

Medical Data for Sale: Accessing Reproductive Health Information via the Data Brokerage Landscape — 2025
Diana Freed, **Reid McIlroy-Young**, Sarah Radway, Gabriela Becher, Diane Bernabei, Christina Lee & Cynthia Dwork
IEEE Security & Privacy

Learning to Imitate with Less: Efficient Individual Behavior Modeling in Chess — 2025
Zhenwei Tang, Difan Jiao, **Reid McIlroy-Young**, Jon Kleinberg, Siddhartha Sen & Ashton Anderson
KDD

The Folly of AI for Age Verification — 2025
Reid McIlroy-Young
AAAI 2025 Workshop on AI for Public Missions

Order-Independence Without Fine Tuning — 2024
Reid McIlroy-Young, Katrina Brown, Conlan Olson, Linjun Zhang & Cynthia Dwork
NeurIPS
`https://arxiv.org/abs/2406.06581`

Human-AI Alignment in Chess with Skill-Aware Attention — 2024
Zhenwei Tang, Difan Jiao, **Reid McIlroy-Young**, Jon Kleinberg, Siddhartha Sen & Ashton Anderson
NeurIPS
`https://arxiv.org/abs/2409.20553`

Designing Skill-Compatible AI: Methodologies and Frameworks in Chess — 2024
Karim Hamade, **Reid McIlroy-Young**, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
ICLR
`https://arxiv.org/abs/2405.05066`

Learning Personalized Models of Human Behavior in Chess — 2022
Reid McIlroy-Young, Russell Wang, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
KDD
`https://arxiv.org/abs/2008.10086`

Mimetic Models: Ethical Implications of AI that Acts Like You — 2022
Reid McIlroy-Young, Siddhartha Sen, Jon Kleinberg, Solon Barocas & Ashton Anderson
AIES
`https://arxiv.org/abs/2207.09394`

Detecting Individual Decision-Making Style: Exploring Behavioral Stylometry in Chess
Reid McIlroy-Young, Russell Wang, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
NeurIPS 2021
https://arxiv.org/abs/2208.01366

Aligning Superhuman AI with Human Behavior: Chess as a Model System
Reid McIlroy-Young, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
KDD 2020
https://arxiv.org/abs/2006.01855

From Welcome New Gabbers to the Pittsburgh Synagogue Shooting: The Evolution of Gab
Reid McIlroy-Young & Ashton Anderson
ICWSM 2019
https://arxiv.org/abs/1912.11278

Interdisciplinarity and insularity in the diffusion of knowledge: an analysis of disciplinary boundaries between philosophy of science and the sciences
John McLevey, Alexander V Graham, **Reid McIlroy-Young**, Pierson Browne & Kathryn S Plaisance
Scientometrics 2018
https://link.springer.com/article/10.1007/s11192-018-2866-8

Introducing metaknowledge: Software for computational research in information science, network analysis, and science of science
John McLevey & **Reid McIlroy-Young**
Journal of Informetrics 2017
https://www.sciencedirect.com/science/article/abs/pii/S1751157716302000

Conference Presentations

Towards Large Language Model Based Simulations of Individuals' Behaviour That Match the Real World
Reid McIlroy-Young, Linjun Zhang & Cynthia Dwork
International Conference on Computational Social Science 2024

A Unified Model for Human-AI Alignment in Chess
Zhenwei Tang, Difan Jiao, **Reid McIlroy-Young**, Jon Kleinberg, Siddhartha Sen & Ashton Anderson
International Conference on Computational Social Science 2024

From Opponent to Trainer: Designing AI Agents as Human Partners in Chess
Ashton Anderson, Jon Kleinberg, **Reid McIlroy-Young** & Siddhartha Sen
International Conference on Computational Social Science 2024

Alternatives to Winning: Exploring the Implications of Human-like Chess AI
Reid McIlroy-Young, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
International Conference on Computational Social Science 2023

Designing Human-Compatible AI: Methodologies and Frameworks in Chess — 2023
Karim Hamade, **Reid McIlroy-Young**, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
International Conference on Computational Social Science

Maia Chess: A human-like neural network chess engine — 2021
Reid McIlroy-Young, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
Microsoft Research Summit

Learning Personalized Models of Human Behaviour in Chess — 2021
Reid McIlroy-Young, Russell Wang, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
International Conference on Computational Social Science

Maia Chess: A Human-Like Neural Network Chess Engine — 2021
Reid McIlroy-Young, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
Aavhans Online Lecture Series

Learning Personalized Models of Human Behaviour in Chess — 2021
Reid McIlroy-Young, Russell Wang, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
Vector Institute Research Symposium

Maia Chess: A Human-Like Neural Network Chess Engine — 2020
Reid McIlroy-Young, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
ChessTech

Bridging the Gap between Superhuman AI and Human Behavior: Chess as a Model System — 2020
Reid McIlroy-Young, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
International Conference on Computational Social Science

Bridging the Gap Between Human and Artificial Intelligence in Chess — 2019
Reid McIlroy-Young, Siddhartha Sen, Jon Kleinberg & Ashton Anderson
Evolution of Deep Learning Symposium

Generating and Analyzing Scientific Networks with Metaknowledge — 2017
John McLevey & **Reid McIlroy-Young**
1st North American Social Networks (NASN) Conference

metaknowledge: open source sofware for networks research on science — 2017
John McLevey & **Reid McIlroy-Young**
International Network for Social Network Analysis (INSNA)

How Knowledge Travels: An Analysis of the Diffusion of Philosophy of Science Over 60 Years — 2016
John McLevey, Katie Plaisance & **Reid McIlroy-Young**
Sunbelt XXXVI (Annual meetings of the International Network for Social Network Analysis)

Invited Lectures

Reproductive Health Surveillance — 2026
Brown University, CSCI 1953

Reproductive Health Surveillance 2025
Brown University, CSCI 1953

Reproductive Health Surveillance 2024
Brown University, CSCI 1953

Chess Community Impact

Maia Chess 2020-
Chess bots I created/run with over 3 million human games
"Yes, it's much more enjoyable to play against machines when they lose!" — Garry Kasparov
Commercial Product: Certabo
Chapter in: *Neural Networks For Chess* Textbook
Press: *WIRED,TNW, Engadget, Science, UofT News*

Lab and Research Experience

Postdoc 2023-2025
Harvard SEAS
PI: Cynthia Dwork

Computational Social Science Lab 2018-2023
University of Toronto
PI: Ashton Anderson

Internship 2022, Summer
Meta FAIR
PI: David Wu

Knowledge Lab 2016-2018
University of Chicago
PI: James Evans

Knowledge Networks Lab 2014-2016
University of Waterloo
PI: John McLevey

Hill Physics Group 2013-2015
University of Waterloo
PI: Robert Hill

Teaching Assistantships

Social and Information Networks Winter, 2020
University of Toronto

Probabilistic Learning and Reasoning Winter, 2019
University of Toronto

Computers and Society Fall, 2018
University of Toronto

Augmented Intelligence
Booth School of Business *2017, 2018, Fall*

Computational Content Analysis
University of Chicago *2017, 2018, Winter*

Additional Affiliations

Graduate Fellow
Schwartz Reisman Institute for Technology and Society *2020-2022*

Knowledge Lab, University of Chicago
Senior Data Scientist *2016-2018*

Waterloo Institute for Complexity and Innovation, University of Waterloo
Member *2014-2016*

Awards

OpenAI Researcher Access Program *2024-2025*

Harvard Data Science Initiative Azure Credits Program *2023-2024*

Platform Computing Graduate Fellowship in Computer Science *2022*

Schwartz Reisman Institute for Technology and Society Graduate Fellow *2021-2021*

Schwartz Reisman Institute Graduate Fellowship Award *2020-2021*

Departmental Entrance Scholarship *2018-2019*

Social Sciences Tuition Scholarship *2016-2018*

Community Contributions

AAAI
Program Committee *2024*

ICWSM
Reviewer *2020-2024*

NeurIPS
Reviewer *2023-2026*

ICLR
Reviewer *2024-2026*

ICML
Reviewer *2024-2026*

Workshop GenAI4DM
Reviewer *2024*

AISTATS
Reviewer *2025*

Supervision

Sarah Radway
Position: Researcher, PhD Student *Hire Aspirations* *2024-225*
Supervision Ongoing

Gabriela Becher
Position: Researcher, *SWRL Lab* *2024-2025*
Supervision Ongoing

Rhea Acharya
Position: Researcher, *Hire Aspirations* *2024-*
Supervision Ongoing

Katrina Brown
Position: Undergrad Thesis, *Harvard* *2023-2025*
Supervision Ongoing

Conlan Olson
Position: Researcher, *Hire Aspirations* *2023-2024*
Post-Supervision: PhD, *Columbia University*

Karim Hamadeh
Position: Researcher, Masters Student *CSSLab* *2021-2024*
Post-Supervision: Quant, *IMC Trading*

Russell Wang
Position: Researcher, *CSSLab* *2020-2022*
Post-Supervision: Masters, *Berkeley*