

Vahid Balazadeh

University of Toronto
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Vector Institute for Artificial Intelligence

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EDUCATION

- PhD Direct-Entry in Computer Science** Sep. 2021 – Nov. 2026 (Exp.)
University of Toronto. Supervised by: [Rahul G. Krishnan](#) Toronto, Canada
Thesis: Data-driven algorithms for partial observability in causal decision-making.
- B.Sc. in Computer Engineering and Mathematics (Double Major)** Sep. 2015 – Sep. 2020
Sharif University of Technology Tehran, Iran
Thesis: A library in **R** language for [multivariate analysis and visualization \(muvis\)](#).

PUBLICATIONS & PREPRINTS

1. “[Partial Identification of Treatment Effects with Implicit Generative Models](#)” (**Spotlight - NeurIPS 22**).
Vahid Balazadeh, Vasilis Syrgkanis, Rahul G. Krishnan.
2. “[Learning to Switch Among Agents in a Team via 2-Layer Markov Decision Processes](#)” (**TMLR 2022**).
Vahid Balazadeh, Abir De, Adish Singla, and Manuel Gomez Rodriguez.
3. “Order-based Structure Learning with Normalizing Flows”, *Under review at AISTATS 2024*.
Hamidreza Kamkari, **Vahid Balazadeh**, Vahid Zehtab, and Rahul G. Krishnan.
4. “Reinforcement learning under algorithmic triage”, *arXiv preprint arXiv:2109.11328*, 2021.
Eleni Straitouri, Adish Singla, **Vahid Balazadeh**, and Manuel Gomez Rodriguez,

PROFESSIONAL EXPERIENCE

University of Toronto & Vector Institute Sep. 2021 – Present
Graduate Student Researcher Toronto, Canada

- Partial identification of causal effects using generative models - Published at NeurIPS.
- Causal Structure Discovery using Generative Models - Submitted to AISTATS.
- In-context learning for causal effect estimation with unobserved confounding - Work in progress.
- Imitation learning from experts with privileged information - Work in progress.

Teaching Assistance

- Introduction to Machine Learning
- [Topics in Machine Learning: Introduction to Causality \(Head-TA\)](#)
- Artificial Intelligence

Causal Inference Lab at Vector Institute May 2023
Lecturer and Technical Facilitator Toronto, Canada

- Gave a lecture on the potential outcome framework, causal effect estimation, and causal graph discovery.
- Participants were data scientists from companies such as Air Canada, Bell, CIBC, Deloitte, RBC, Shopify, etc.

Cafe Bazaar Sep. 2020 – Aug. 2021
Data Scientist at Video Team Tehran, Iran

- Worked on optimizing video watch time by automating mid-roll ad breaks.
- Deployed a speech recognition model in **PyTorch**, resulting in $\sim 10\%$ increase in watch time.

Max Planck Institute for Software Systems

Jul. 2019 – Sep. 2020

Research Internship, supervised by: [Manuel Gomez Rodriguez](#)

Kaiserslautern, Germany

- Worked on finding optimal decision-making policies in teams of agents
- Proposed a theory of 2-layer MDPs for optimal switching policies between agents - Published at TMLR 2022.

Sharif University of Technology

Sep. 2018 – Jul. 2019

Teaching Assistance

Tehran, Iran

- Stochastic Processes
- Linear Algebra
- Probability Theory

Daal GPS Navigation Startup

Jan. 2018 – May 2018

Research and Development.

Tehran, Iran

- Implemented a real-time ETA estimation algorithm based on GPS data using Keras.

AWARDS

- Computer Science 50th Anniversary Graduate Scholarship, University of Toronto 2024
- NeurIPS 2022 Scholar Award 2022
- Vector Research Grant 2021, 2022
- Admission with full scholarship to MPI-SWS Summer Internship, Germany Summer 2019
- Ranked **3rd** among more than **180,000** participants in the Iranian University Entrance Exam (Konkour) 2015
- Recipient of the Grant for undergraduate studies from the Iranian National Elites Foundation 2015 –2020

TALKS

- Partial Identification of Treatment Effects, **Imperial College London**, Remote. 2023
- Causal Effect Estimation and Potential Outcomes, **Vector Institute**, Toronto, Canada. 2023
- Partial Identification of Treatment Effects, **NeurIPS**, Remote. 2022
- Learning to Switch Between Humans and Machines, **Georgia Tech**, Remote. 2021

SERVICES & SKILLS

- **Reviewer:** AAAI 2021, CHILL 2022, NeurIPS 2022/2023, ML4H 2022, ICLR 2024
- **Programming:** Python (pandas, PySpark), Mathematica, R, JavaScript, \LaTeX
- **ML/DL Frameworks:** PyTorch, JAX, Keras, scikit-learn
- **Languages:** English, Persian, Azerbaijani

HOBBIES AND INTERESTS

I spend my free time playing classical piano and practicing Shorinji Kan Jiu Jitsu. I also enjoy playing chess, board games, and video games.