

Arian Hashemzadeh Amirkhizi

PERSONAL DATA

DATE OF BIRTH: 5 August 2000
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RESEARCH INTERESTS

Graphical Models, Causal Inference, Canonical Correlation Analysis, Probabilistic Modeling

EDUCATION

Sep 2023 - Present	University of Toronto, Toronto, Canada Ph.D. in Statistics Advisors: Dr. Piotr Zwiernik and Dr. Elena Tuzhilina
Sep 2018 - July 2023	Sharif University of Technology, Tehran, Iran B.Sc in Applied Mathematics Cumulative GPA: 16.08/20 Last two years: 17.52/20
Sep 2014 – Jun 2018	Allame Helli High School, Affiliated with the National Organization for Development of Exceptional Talents (NODET), Tehran, Iran Diploma in Mathematics and Physics Discipline GPA: 18.8/20

RESEARCH EXPERIENCE

JUL 2024 – AUG 2024	Research Supervisor – University of Toronto Summer School Research Program (UTSSRP), Toronto, Canada Co-supervised a group of 4 undergraduate students with Dr. Elena Tuzhilina on the project " <i>Dimensionality reduction and clustering techniques for Hi-C genomic data analysis</i> ", culminating in a poster presentation.
MAY 2022 – DEC 2023	Research Assistant Visitor – Bayesian AI Lab, Queen Mary University of London Studied the effects of lockdowns on the spread of COVID-19 in the United Kingdom under the supervision of Dr. Anthony Constantinou .
JAN 2022 – DEC 2022	Undergraduate Researcher – ETH Zürich Worked under the supervision of Dr. Mona Azadkia on estimating total effect via covariate adjustment in causal structures.
JUL 2021 – JAN 2023	Undergraduate Researcher (B.Sc. Thesis) – University College London & Sharif University of Technology Supervised by Dr. Kayvan Sadeghi and Dr. Javad Ebrahimi ; developed a constraint-based structure learning algorithm based on the conditions of faithfulness.

PUBLICATIONS

Open problems in causal structure learning: A case study of COVID-19 in the UK
Authors: AC Constantinou, R Mbuvha, NK Kitson, K Chobtham, Y Liu, A Hashemzadeh, P Nanavati

Journal: Expert Systems with Applications 234, 121069

HONORS

- 2018 | Ranked top 0.5% (240 among 50,000 students) in district 3 of the National University Entrance Exam
- 2018 | Awarded Full Scholarship, Undergraduate Program at Sharif University
- 2021 | Ranked 35 among more than 2,000 participants in Graduate University Entrance Examination for mathematical sciences
- 2023 | Ranked 16 among more than 2,100 participants in Graduate University Entrance Examination for mathematical sciences

RELEVANT COURSEWORK

Regression Analysis	19.4/20
Stochastic Processes	18.1/20
Systems Dynamics (B.Sc./M.Sc. course)	18.3/20
Game Theory (M.Sc. course)	19.5/20
Information Theory (B.Sc./M.Sc. course)	17.3/20
Coding Theory (M.Sc. course)	16.5/20
Statistics	18.1/20
Probability	18.2/20
Algebra I	19.4/20
Linear Algebra	20/20
Math Writing	20/20

TEACHING ASSISTANT

- 2023 – 2026 | **University of Toronto**
- STA130: Introduction to Statistics (2 terms, [Dr. Nathalie Moon](#))
- STA221: The Practice of Statistics II ([Dr. Jessie Yeung](#))
- STA220: The Practice of Statistics I ([Dr. Jessie Yeung](#))
- STA238: Probability, Statistics and Data Analysis II (2 terms, [Michael Moon](#), [Fred Song](#))
- STA257: Probability and Statistics I ([Dr. Omidali A. Jazi](#))
- STA302: Methods of Data Analysis I ([Dr. Katherine Daignault](#))
- STA303: Methods of Data Analysis II ([George Stefan](#))
- STA314: Statistical Methods for Machine Learning I ([Junhao Zhu](#))
- STA437: Methods for Multivariate Data ([Dr. Elena Tuzhilina](#))
- STA447: Stochastic Processes (Instructor TBA)

- 2020 – 2022 | **Sharif University of Technology**
- Statistics and Probability for Engineering (2 terms, [Dr. Naeemeh Omidvar](#), [Dr. Sayyed Mohammad Karbasi](#), Head TA with [Dr. Mehri Oghbaie](#))
- Probability and Its Applications (2 terms, [Dr. Milad Barzegar](#), [Dr. Hamidreza Fanai](#))
- Statistics and Its Applications ([Dr. Javad Ebrahimi](#))
- Stochastic Processes ([Dr. Milad Barzegar](#))
- Graphical Models (graduate-level, [Dr. Mehdi Molkaraie](#) & [Dr. Arash Amini](#))

TEACHING EXPERIENCE

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| 2019 - 2021 | Private tutor of high school mathematics
preparing senior high school students for Persian National University Entrance Exam |
| 2021 - 2023 | Private tutor of junior high students
preparing them to take the Cambridge IGCSE Mathematics test |

COMPUTER SKILLS

PYTHON, JAVA, R, L^AT_EX

LANGUAGES

PERSIAN : Native
ENGLISH : TOEFL: 104/120
FRENCH : Conversational Level

OTHER ACTIVITIES

- Participated as a panelist (2024, 2025) providing guidance and best practices for first-year graduate students on how to effectively serve as teaching assistants (Department of Statistical Sciences, University of Toronto)
- Attended the [Sharif WSS](#) 2022 seminars on Advanced Topics in Computer Science and Engineering
- Volunteered as Executive Staff at [Sharif Data Days](#) 2021 event
- Attended the [Sharif WSS](#) 2021 seminars on Advanced Topics in Computer Science and Engineering
- Attended the CNCS 2020 seminars for Cognitive Neuroscience