Negar Hassanpour, PhD

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Education:

09/2015-09/2022
- **PhD** in Computer Science, University of Alberta, Canada.
  Supervisor: Professor Russell Greiner.
  Thesis: *Counterfactual Reasoning in Observational Studies.*

09/2012-08/2015
- **M.Sc.** in Computer Science, University of Northern British Columbia, Canada. *1st class standing.*
  Supervisor: Professor Liang Chen.
  Thesis: *Noise Reduction for Face Identification in Videos.*

09/2007-07/2012
- **B.Sc.** in Electrical Engineering, University of Tehran, Iran.
  Supervisor: Professor Babak Nadjar Araabi.
  Thesis: *Analysis and Fault Detection of Transaction Data in C.O.R.E.[1] Banking Systems.*

Research Experience:

08/2022-present
- **Artificial Intelligence Researcher** in **Huawei Ottawa IC Lab Canada.** Edmonton, AB, Canada.
  Supervisor: Dr. Mohammad Salameh

09/2015-09/2022
- **Research Assistant** in **Alberta Machine Intelligence Institute (Amii)**, Department of Computing Science, University of Alberta, Edmonton, AB, Canada.
  Supervisor: Professor Russell Greiner.

05/2021-04/2022
- **Associate Researcher** in **Huawei Noah's Ark Lab Canada.** Edmonton, AB, Canada.
  Supervisor: Dr. Jun Luo.

09/2012-08/2015
- **Research Assistant** in **Computational Intelligence Laboratory**, School of Computer Science, University of Northern British Columbia, Prince George, BC, Canada.
  Supervisor: Professor Liang Chen.

90/2010-07/2012
- **Research Assistant** in **Control and Intelligent Processing Centre of Excellence**, School of Electrical and Computer Engineering, University of Tehran, Iran.
  Supervisor: Professor Alireza Fereidunian.

Refereed Papers:

- **Hassanpour, N.**; Greiner, R.; , "Learning Disentangled Representations for CounterFactual Regression," *International Conference on Learning Representations (ICLR)*, April 27-30, **2020**.
- **Hassanpour, N.**; Greiner, R.; , "CounterFactual Regression with Importance Sampling Weights". *The 28th International Joint Conference on Artificial Intelligence (IJCAI),* August 10-16, **2019**, Macao, China.
- **Hassanpour, N.**; , "Counterfactual Reasoning in Observational Studies", *The 24th AAAI/SIGAI Doctoral Consortium*, January 27 - February 1, **2019**, Honolulu, Hawaii, USA.
- **Hassanpour, N.**; Greiner, R.; , "A Novel Evaluation Methodology for Assessing Off-Policy Learning Methods in Contextual Bandits," *The 31st Canadian Conference on Artificial Intelligence*, May 8-11, **2018**, Toronto, Canada, pp. 31-44.
- Chen, L.; **Hassanpour, N.**; , Survey: How good are the current advances in image set based face identification?–Experiments on three popular benchmarks with a naïve approach," *Journal of Computer Vision and Image Understanding,* Volume 160, July **2017**, pp. 1–23.
- **Hassanpour, N.**; Chen, L.; , "A Quantum Probability Inspired Framework for Image-Set Based Face Identification," *The 12th IEEE International Conference on Automatic Face & Gesture Recognition*, May 30-June 3, **2017**, Washington DC, USA, pp. 551-557.
- **Hassanpour, N.**; Chen, L.; , "A Hierarchical Training and Identification Method using Gaussian Process Models for Face Recognition in Videos," *The 11th IEEE International Conference on Automatic Face & Gesture Recognition*, May 4-8, **2015**, Ljubljana, Slovenia.

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[1] Centralized On-line Real-time Exchange

- Fereidunian, A.; Lesani, H.; Zamani, M.A.; Sharifi K.; **Hassanpour, N.**; Mansouri, S.S.; , "A Complex Adaptive System of Systems Approach to Human-Automation Interaction in Smart Grids," *In M. Zhou (Ed.) "Contemporary Issues in Systems Science and Engineering"*, IEEE-Wiley Press, **2015**.
- **Hassanpour, N.**; Komijani, M.; Araabi, B.; , "Calculating User Perceived Availability Based on the Reconstruction of Transactions Demand Pattern," *The 2nd International Conference on Electronic Banking and Payment Systems*, Jan. 15-16, **2013**, Tehran, Iran.
- Mansouri, S.S.; **Hassanpour, N.**; Fereidunian, A.; Ghafouri, A.; Bathaee, S.M.T.; Lesani, H.; Moshiri, B.; , "An SVM-T3SD policy driven method for IT infrastructure selection in Smart Grid," *The 2nd Iranian Conference on Smart Grids (ICSG)*, 24-25 May **2012**, Tehran, Iran.
- **Hassanpour, N.**; Zamani, M.A.; Fereidunian, A.; and Lesani, H.; , "AASVMES: An Intelligent Expert System for Realization of Adaptive Autonomy Using Support Vector Machine," *The 2nd International Conference on Control, Instrumentation, and Automation*, 27-29 Dec. **2011**, Shiraz, Iran.

Non-refereed Papers:
- Haigh, C.; Zhang, Z.; **Hassanpour, N.**; Javed, K.; Fu, Y.; Shahramian, S.; Zhang, S.; Luo, J.; , "Drawing Inductor Layout with a Reinforcement Learning Agent: Method and Application for VCO Inductors," *arXiv preprint arXiv:2202.*11798, **2022**.
- **Hassanpour, N.;** Greiner, R.; , "Variational Auto-Encoder Architectures that Excel at Causal Inference," *NeurIPS Workshop on Causal Discovery & Causality-Inspired Machine Learning*, December 11, **2020**.
- Zhang, Z.; Lan, Q.; Ding, L.; Wang, Y.; **Hassanpour, N.**; Greiner, R.; , "Reducing Selection Bias in Counterfactual Reasoning for Individual Treatment Effects Estimation," *NeurIPS Workshop "Do the Right Thing": Machine Learning and Causal Inference for Improved Decision Making*, Dec. 14, **2019**, Vancouver, Canada.
- Wen, J.; **Hassanpour, N.**; Greiner, R.; , "Weighted Gaussian Process for Estimating Treatment Effect," *NeurIPS Workshop: What If? Inference and Learning of Hypothetical and Counterfactual Interventions in Complex Systems*, December 10th, **2016**, Barcelona, Spain.

Patent:
- Haigh, C.; Zhang, Z.; **Hassanpour, N.**; Javed, K.; Fu, Y.; Shahramian, S.; Zhang, S.; Luo, J.; , "System and Method for Computer-Assisted Design of Inductor for Voltage-Controlled Oscillator," Patent Application Number: 17478458, filed in **2021**.

Academic Honours and Awards:

2022
- Nominated for best PhD dissertation, Department of Computing Science, University of Alberta

2019
- Neural Information Processing Systems (NeurIPS) Conference Travel Grant
- International Joint Conference on Artificial Intelligence (IJCAI) Travel Grant and Volunteer Award
- Association for the Advancement of Artificial Intelligence (AAAI) Doctoral Consortium Award

2018
- Neural Information Processing Systems (NeurIPS) Volunteer Award

2016
- Natural Sciences and Engineering Research Council of Canada Postgraduate Scholarships-Doctoral Program (NSERC-PGSD) → 3 years
- University of Alberta President's Doctoral Prize of Distinction → 3 years
- University of Alberta Science Graduate Scholarship
- Governor General's Academic Gold Medal, University of Northern British Columbia
- University of Northern British Columbia Best Graduate Thesis Award

2015
- University of Alberta PhD Recruitment Award
- IEEE Conference on Face and Gesture Recognition Doctoral Consortium Award
- University of Northern British Columbia Graduate Travel Award

Before 2015
- University of Northern British Columbia Graduate Scholarship, 2014.
- Faculty of Engineering Distinguished Student Award, 2007, 2008, and 2010.
- Recognized as Distinguished Student, National Organization for Educational Testing, 2007.

Professional Services:

Reviewer	FG 2015; NeurIPS 2016, 2020, 2022; ICLR 2020, 2021, 2022; JMLR; TMLR
Assisting Reviewer	NeurIPS 2018, 2019; AAAI 2018, 2023

Teaching Experience:

- **University of Alberta – Course Project Co-coach**
  - Probabilistic Graphical Models (CMPUT 563); winter 2017; fall 2018, 2019, 2020.
  - Introduction to Machine Learning (CMPUT 566); fall 2016; winter 2019.
- **University of Alberta - Graduate Teaching Assistant**
  - Introduction to Tangible Computing I (CMPUT 274); fall 2018.
  - Introduction to Machine Leaning (CMPUT 466/551); fall 2015.
- **University of Northern British Columbia - Graduate Teaching Assistant**
  - Theory of Computation, fall 2014.
  - Data Structures II, fall 2014.
  - Knowledge Based Systems, spring 2014.
  - Mathematical Topics for Computer Science, spring 2014.
  - Physics Laboratory, fall 2012, fall 2013, spring & fall 2014.
- **University of Tehran - Teaching Assistant**
  - Industrial Control, fall 2011.
  - Electronics I and II Laboratory, fall 2010, spring & fall 2011.
  - Microprocessors, fall 2010.
  - Linear Control Systems, fall 2010.

Selected Courses:

- **University of Alberta**
  - Introduction to Deep Learning, fall 2016, **audited** the course; Professor Dale Schuurmans.
  - Probabilistic Graphical Models, winter 2016, Grade: **A+**; Professor Russell Greiner.
  - Survival Analysis, winter 2015, Grade: **A-**; Professor Giseon Heo.
  - Reinforcement Learning, fall 2015, Grade: **A+**; Professor Richard Sutton.
- **University of Northern British Columbia**
  - Advanced Topics in Computer Science Research (Theory of Computation), fall 2014, Grade: **A+**; Professor Liang Chen
  - Digital Image Processing, fall 2012, Grade: **A+**; Professor Saif alZahir
  - Data Analysis, fall 2012, Grade: **A+**; Professor Youmin Tang
- **University of British Columbia**
  - Machine Learning, spring 2013, Grade: **A+**; Professor Nando de Freitas
- **Simon Fraser University**
  - Directed Reading (Medical Image Analysis), spring 2013, Grade: **A**; Professor Hamarneh
- **University of Tehran**
  - Pattern Recognition, fall 2011, Grade: **18.5/20**; Professor Babak Nadjar Araabi
  - Fuzzy Logic, spring 2010, **audited** the course; Professor Caro Lucas