

HAFEZ GHAEMI

hafez.ghaemi@umontreal.ca

hafezgh.github.io

mila.quebec/en/person/hafez-ghaemi/



Last updated: July 15, 2024

EDUCATION

Ph.D. | *Computer Science*

Aug. 2023 – Present

Mila - University of Montreal; **GPA:** 4.13/4.0

Montreal, QC, Canada

- **Advisors:** [Eilif Muller](#), [Shahab Bakhtiari](#); **Doctoral Committee:** [Aaron Courville](#), [Pascal Vincent](#)

M.Sc. | *Computer Engineering, AI and Robotics*

Sep. 2020 – Aug. 2023

University of Tehran; **GPA:** 18.0/20.0, North American: 3.72/4.0

Tehran, Iran

- **Advisors:** [Hamed Kebriaei](#), [Majid Nili](#); **Thesis:** Cumulative Prospect Theory in Multi-Agent Reinforcement Learning and Markov Games ([paper](#)) ([code](#))

M.Sc. | *Data Science and Engineering*

Sep. 2020 – July 2022

Politecnico di Torino; **GPA:** 26.3/30.0 (103/110), North American: 3.7/4.0

Turin, Italy

- **Advisors:** [Fabio Fagnani](#), [Giacomo Como](#); **Thesis:** Decentralized Value-Based Reinforcement Learning in Stochastic Potential Games ([link](#)) ([code](#))

B.Sc. | *Major: Mechanical Engineering, Minor: Computer Engineering*

Sep. 2016 – Sep. 2020

University of Tehran; **GPA:** 16.24/20.0, North American: 3.35/4.0

Tehran, Iran

- **Advisor:** [Masoud Shariat Panahi](#); **Thesis:** Design and Implementation of A Smart Camera Slider Controller with Deep Reinforcement Learning ([code](#))

PUBLICATIONS

- **H. Ghaemi**, H. Kebriaei, A. R. Moghaddam, and M. Nili Ahmaddabadi. "Risk-Sensitive Multi-Agent Reinforcement Learning in Network Aggregative Markov Games", Proceedings of the 23rd International Conference on Autonomous Agents and Multiagent Systems, 2024. ([link](#)), ([preprint](#)), ([poster](#)) ([code](#))
- M. Nouri*, F. Moradi*, **H. Ghaemi***, A. M. Nasrabadi, "Towards real-world BCI: CCSPNet, a compact subject-independent motor imagery framework", Digital Signal Processing, 2023. *: equal contribution. ([link](#)), ([preprint](#)), ([code](#))
- **H. Ghaemi***, E. Mirzaei*, M. Nouri*, and S. R. Kheradpisheh "BioLCNet: Reward-modulated Locally Connected Spiking Neural Networks", International Conference on Machine Learning, Optimization, and Data Science, 2022. *: equal contribution. ([link](#)), ([preprint](#)) ([code](#))

PREPRINTS

- **H. Ghaemi**, S. Jamshidi, M. Mashregi, M. Nili Ahmadabadi, and H. Kebriaei, "Risk Sensitivity in Markov Games and Multi-Agent Reinforcement Learning: A Systematic Review", arXiv:2406.06041, 2024. ([link](#))
- A. Saibene, **H. Ghaemi**, and E. Dagdevir, "Deep Learning in Motor Imagery Eeg Signal Decoding: A Systematic Review", Available at SSRN 4592138, 2023. ([link](#))

ACADEMIC SERVICE

- **Reviewed for:** [\[NeurIPS\]](#) - [\[IEEE-TCYB\]](#)

EXPERIENCE

Research Assistant

Mila - University of Montreal

- Architectures of Biological Learning Lab ([ABL](#)); PI: [Eilif Muller](#)
- Systems Neuroscience and AI Lab ([SNAIL](#)); PI: [Shahab Bakhtiari](#)

Aug. 2023 – Present
Montreal, Canada

Teaching Assistant

NeuroAI and Computational Neuroscience Courses, [Neuromatch Academy](#)

Recurrent contracts since July 2023
Remote

Graduate Teaching Assistant

School of ECE, University of Tehran

- Neural Networks Course; instructor: [Ahmad Kalhor](#)
- Game Theory Course; instructor: [Hamed Kebriaei](#)

Feb. 2023 – July 2023
Tehran, Iran

Research Assistant

School of ECE, University of Tehran

- Smart Networks Lab; PI: [Hamed Kebriaei](#),
- Cognitive Systems Lab; PI: [Majid Nili](#)

Oct. 2022 – Aug. 2023
Tehran, Iran

Undergraduate Research Assistant

School of Mechanical Engineering, University of Tehran

- AI in Mechanical Engineering Lab; PI: [Masoud Shariat Panahi](#)

Nov. 2019 – Aug. 2020
Tehran, Iran

Summer Intern

Biorobotics Lab, School of Mechanical Engineering, University of Tehran

July 2019 – Sep. 2019
Tehran, Iran

Undergraduate Teaching Assistant

School of Mechanical Engineering, University of Tehran

- Materials Science Course; instructor: [Ghader Faraji](#)

Sep. 2019 – Jan. 2020
Tehran, Iran

SKILLS

Languages: English (fluent), Persian (native), French (intermediate), Italian (basic), Arabic (basic)

Programming (ordered by decreasing proficiency): Python, MATLAB, C/C++, Java, SQL, MongoDB, Julia, R

Deep learning frameworks (ordered by decreasing proficiency): PyTorch, Keras/TensorFlow, JAX

Miscellaneous: HPC, Git, microcontroller programming

AWARDS AND HONORS

Ranked 10 in the 25th Iranian Scientific Olympiad for University Students in Computer Engineering Feb. 2021

TOPoliTo Scholarship

Awarded to Politecnico di Torino's top international students

Oct. 2020 - Sep. 2022

Iran's National Elites Foundation Membership

Awarded for excellent performance in the Iranian University Entrance Exam

Sep. 2016