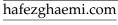


Hafez Ghaemi 🕩

hafez.ghaemi@studenti.polito.it





Last updated: August 1, 2022

Areas of interest: Multi-agent learning - brain-inspired learning - reinforcement learning - game theory - computational neuroscience

EDUCATION

M.Sc. | Computer Engineering, AI and Robotics

Sep. 2020 - July 2023

University of Tehran,

Current GPA: 18.5/20.0, North American: 3.75/4.0

Tehran, Iran

M.Sc. | Data Science and Engineering (Program taught in English)

Sep. 2020 – July 2022

Politecnico di Torino,

GPA: 26.3/30.0 (103/110), North American: 3.7/4.0

Turin, Italy

• Thesis: Decentralized Value-Based Reinforcement Learning in Stochastic Potential Games (<u>link</u>) Advisors: Fabio Fagnani, Ph.D., Giacomo Como, , Ph.D

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

Sep. 2016 - Sep. 2020

University of Tehran,

Overall GPA: 16.24/20.0 (3.35/4.0), Major: 16.24 (3.3), Minor: 16.26 (3.4)

Tehran, Iran

• Thesis: Design and Implementation of a Smart Camera Slider Controller Using Deep Reinforcement Learning (code)

Advisor: Masoud Shariat Panahi, Ph.D

UNDER REVIEW

- Ghaemi H, Mirzaei E, Nouri M, Kheradpisheh SR. BioLCNet: Reward-modulated Locally Connected Spiking Neural Networks, arXiv preprint (code)
- Nouri M, Moradi F, Ghaemi H, Nasrabadi AM. Towards Real-World BCI: CCSPNet, A Compact Subject-Independent Motor Imagery Framework, arXiv preprint (code)

EXPERIENCE

Undergraduate Research Assistant

November 2019 – August 2020

Artificial Intelligence in Mechanical Engineering Lab, University of Tehran

Tehran, Iran

- Member of the project team developing a mobile application that monitors human neck posture using front camera input and head pose estimation.
- Principal investigator: Masoud Shariat Panahi, Ph.D.

Summer Intern July 2019 – September 2019

Biorobotics Lab, School of Mechanical Engineering, University of Tehran

Tehran, Iran

• Programming educational robots, design of dynamic mechanisms using CAD

Undergraduate Teaching Assistant

September 2019 – January 2020

Materials Science Course, School of Mechanical Engineering, University of Tehran

Tehran, Iran

- Lecturing, solving extra problems, grading homework
- Instructor: Ghader Faraji, Ph.D

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

Programming (ordered by decreasing proficiency): Python, MATLAB, C/C++, SQL, MongoDB, Julia, R, Java Machine learning frameworks (ordered by decreasing proficiency): PyTorch, Scikit-Learn, Keras, Tensorflow Other soft and hard skills: Linux, Git, Raspberry Pie, Arduino, Simulink, SolidWorks

CERTIFICATES

RELEVANT COURSES

Reinforcement Learning Specialization (<u>link</u>) Coursera, University of Alberta & Alberta Machine Intelligence Institute	October 2021
Deep Learning Specialization (link) Coursera	May 2021
Graduate Record Examinations (GRE): Q: 170, V: 162, W: 4.00 (<u>link</u>) Educational Testing Service (ETS)	November 2019
IELTS Academic: R: 9.0, L: 8.0, W: 7.0, S: 7.0 (<u>link</u>) International English Language Testing System	October 2021
SELECTED ACADEMIC PROJECTS	
Auditory Attention Task EEG Signal Classifier (code) Python Fifth BCI Competition of Iranian National Brain Mapping Laboratory (NBML)	Spring 2022
Fine-tuning BERT for Multi-lingual Hate Speech Detection and Text Classification (code) Deep Natural Language Processing Course, Politecnico di Torino	Python Fall 2021
A Hybrid Rule-based/Q-learning Hanabi Agent (code) Python Computational Intelligence Course, Politecnico di Torino	Fall 2021
Problems on Flow Optimization, Markov Chains, and Epidemic Models (code) <i>Python</i> Network Dynamics and Learning Course, Politecnico di Torino	Fall 2021
Music Genre Classification using CRNN and Transfer Learning (code) <i>PyTorch</i> Machine Learning and Deep Learning Course, Politecnico di Torino	Spring 2021
Comparison of ML methods for Facial and Emotional Recognition on JAFFE dataset (code) Mathematics in Machine Learning Course, Politecnico di Torino	Python Spring 2021
Stock Portfolio Management Using Deep Q-Learning (code) PyTorch Interactive Learning Course (Audit), University of Tehran	Spring 2020
Applications of Krylov methods, PCA, and SVD in real-world problems (code) Python Computational Linear Algebra Course, Politecnico di Torino	Fall 2021
Waterfilling Power Allocation and LZSS Lossless Compression (code) MATLAB Information Theory Course, Politecnico di Torino	Fall 2021
Object-oriented Design and Implementation of a Basic E-commerce Website (\underline{code}) $C++$ Advanced Programming Course, University of Tehran	Fall 2019
Awards	
Ranked 10 in the 25th Iranian Scientific Olympiad for University Students in Computer Ernews	ngineering 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
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- Machine Learning and Deep Learning (Graduate):
 4/4
- Mathematics in Machine Learning (Graduate): 4/4
- Network Dynamics and Learning (Graduate): 4/4
- Interactive (Reinforcement) Learning (Graduate): 4/4
- Introduction to Cognitive Science (Graduate): 4/4
- Deep Natural Language Processing (Graduate): 4/4
- Big Data (Graduate): 4/4
- Computational Linear Algebra (Graduate): 4/4

- Game Theory (Graduate): 4/4
- Information Theory (Graduate): 3/4
- Artificial Intelligence (Undergraduate): 4/4
- Advance Programming (Undergraduate): 4/4
- Optimization of Mechanical Systems (Undergraduate): 4/4
- Numerical Computation (Undergraduate): 4/4
- Engineering Mathematics (Undergraduate): 4/4
- Computational Neuroscience (Graduate): Audit

PERSONAL INTERESTS

Podcasts, classic novels, psychological thrillers and hard sci-fis, philosophy, chess, travelling