



# HAFEZ GHAEMI

hafez.ghaemi@studenti.polito.it

hafezghaemi.com



---

Last updated: December 1, 2021

**Areas of interest:** bio-plausible and brain-inspired learning - neural networks and computational neuroscience - reinforcement learning and computational cognitive science

## EDUCATION

---

- M.Sc. | *Data Science and Engineering (Program taught in English)*** Sep. 2020 – July 2022  
Polytechnic University of Turin, Current GPA (64 of 110 ECTS): 25.3/30.0, 3.7/4.0 Turin, Italy
- B.Sc. | *Major: Mechanical Engineering, Minor: Computer Engineering*** Sep. 2016 – July 2020  
University of Tehran, Total GPA: 16.24/20.0 (3.35/4.0), Major: 16.24 (3.3), Minor: 16.26 (3.4) Tehran, Iran
- **Thesis:** Design and Physical Implementation of a Smart Camera Slider Using Deep Reinforcement Learning (code), **Advisor:** Dr. Masoud Shariat Panahi

## 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: Dr. Masoud Shariat Panahi
- 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: Dr. Ghader Faraji

## SKILLS

---

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

---

<b>Reinforcement Learning Specialization (<a href="#">link</a>)</b> Coursera, University of Alberta & Alberta Machine Intelligence Institute	October 2021
<b>Deep Learning Specialization (<a href="#">link</a>)</b> Coursera	May 2021
<b>Graduate Record Examinations (GRE): Q: 170, V: 162, W: 4.00 (<a href="#">link</a>)</b> Educational Testing Service (ETS)	November 2019
<b>IELTS Academic: R: 9.0, L: 8.0, W: 7.0, S: 7.0</b> International English Language Testing System	October 2021

## SELECTED ACADEMIC PROJECTS

---

<b>Music Genre Classification using CRNN and Transfer Learning (<a href="#">code</a>)   <i>PyTorch</i></b> Machine Learning and Deep Learning Course, Polytechnic University of Turin	Spring 2021
<b>Comparison of ML methods for Facial and Emotional Recognition on JAFFE dataset (<a href="#">code</a>)   <i>Python</i></b> Mathematics in Machine Learning Course, Polytechnic University of Turin	Spring 2021
<b>Stock Portfolio Management Using Deep Q-Learning (<a href="#">code</a>)   <i>PyTorch</i></b> Interactive Learning Course (Audit), University of Tehran	Spring 2020
<b>Applications of Krylov methods, PCA, and SVD in real-world problems (<a href="#">code</a>)   <i>Python</i></b> Computational Linear Algebra Course, Polytechnic University of Turin	Fall 2021
<b>Waterfilling Power Allocation and LZSS Lossless Compression (<a href="#">code</a>)   <i>MATLAB</i></b> Information Theory Course, Polytechnic University of Turin	Fall 2021
<b>Price estimation on a Persian Online Cellphone Shop Dataset Using NLP (<a href="#">code</a>)   <i>Python</i></b> Artificial Intelligence Course, University of Tehran	Spring 2020
<b>Object-oriented Design and Implementation of a Basic E-commerce Website (<a href="#">code</a>)   <i>C++</i></b> Advanced Programming Course, University of Tehran	Fall 2019

## AWARDS

---

<b>TOPolito Scholarship</b> Awarded to Polytechnic University of Turin top international students	Oct. 2020 - Sep. 2022
<b>Iran's National Elites Foundation Membership</b> Awarded for excellent performance in the Iranian University Entrance Exam	Sep. 2016

## RELEVANT COURSES

---

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• <b>Machine Learning and Deep Learning (Graduate):</b> 4/4</li><li>• <b>Mathematics in Machine Learning (Graduate):</b> 4/4</li><li>• <b>Big Data (Graduate):</b> 4/4</li><li>• <b>Computational Linear Algebra (Graduate):</b> 4/4</li><li>• <b>Game Theory (Graduate):</b> 4/4</li><li>• <b>Information Theory (Graduate):</b> 3/4</li><li>• <b>Artificial Intelligence (Undergraduate):</b> 4/4</li><li>• <b>Advance Programming (Undergraduate):</b> 4/4</li></ul> | <ul style="list-style-type: none"><li>• <b>Optimization of Mechanical Systems (Undergraduate):</b> 4/4</li><li>• <b>Numerical Computation (Undergraduate):</b> 4/4</li><li>• <b>Engineering Mathematics (Undergraduate):</b> 4/4</li><li>• <b>Interactive (Reinforcement) Learning (Graduate):</b> Audit</li><li>• <b>Introduction to Cognitive Science (Graduate):</b> Audit</li><li>• <b>Computational Neuroscience (Graduate):</b> Audit</li></ul> |
|---|---|

## PERSONAL INTERESTS

---

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