

# Seyed Roozbeh Razavi Rohani

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Email: razavii.roozbeh@gmail.com

Phone Number: (+98) 939 226 2950

Personal Website

## EDUCATION

- **M.Sc. in Computer Engineering-Artificial Intelligence and Robotics** Tehran, Iran  
• **Sharif University of Technology** Sept. 2019 - Jan. 2022  
GPA: 18.86/20 (4/4)  
Thesis Title: Brain-inspired meta reinforcement learning using brain-inspired networks  
Supervisor: Prof. Mahdiyeh Soleymani Baghshah
- **B.Sc. in Computer Engineering-Software Engineering** Shiraz, Iran  
• **Shiraz University** Sept. 2014 - May 2019  
GPA: 16.90/20 (3.33/4)  
The Last 60 Units GPA: 18.78/20 (3.95/4)  
Thesis Title: A big data approach to extract high-level information from Shiraz University database (20/20)  
Advisor: Prof. Hooman Tahayori

## RESEARCH INTEREST

- Deep Learning
- Reinforcement Learning
- Meta & Continual Learning
- Neuro-inspired AI & Computational Neuroscience
- Robotics & Optimal Control Theory
- Multi-agent systems & Algorithmic Game Theory

## PUBLICATIONS

1. Seyed Roozbeh Razavi Rohani, Saeed Hedayatian, and Mahdiyeh Soleymani Baghshah. BIMRL: Brain Inspired Meta Reinforcement Learning. In *2022 IEEE/RSJ international conference on intelligent robots and systems (IROS)*, Kyoto, Japan, October 2022. IEEE

## AWARDS & HONORS

- Ranked within top the 20% highest GPA among the graduating class in M.Sc. Computer Engineering program at Sharif University of Technology
- Selected as a qualified person at the first stage of Iranian National Olympiad in Informatics (university students competition)
- Ranked 3<sup>th</sup> among more than 20,000 participants in annual Iranian University Entrance Exam for masters degree in artificial intelligence and robotics
- Offered Straight Admission in Artificial Intelligence and Robotics M.Sc program at Shiraz University (declined)
- Ranked within top the 15% highest GPA among the graduating class in B.Sc. Computer Engineering program at Shiraz University
- Ranked within the top 1% among more than 300,000 participants in annual Iranian University Entrance Exam

## TEACHING EXPERIENCES

<b>Teacher Assistant (TA) for 'Advance Machine Learning'</b> Sharif University of Technology, Tehran, Iran Presented by: Prof. Mahdiyeh Soleymani Baghshah	Jan. 2022- July 2022
<b>Teacher Assistant (TA) for 'Deep Learning'</b> Sharif University of Technology, Tehran, Iran Presented by: Prof. Hamid Beigy	Sep. 2021 - Dec. 2021
<b>Teacher Assistant (TA) for 'Modern Information Retrieval'</b> Sharif University of Technology, Tehran, Iran Presented by: Prof. Mahdiyeh Soleymani Baghshah	Jan. 2021 - July 2021
<b>Teacher Assistant (TA) for 'Artificial Intelligence'</b> Shiraz University, Shiraz, Iran Presented by: Prof. Zohre Azimifar	Jan. 2020 - July 2020
<b>Teacher Assistant (TA) for 'Linear Control Theory'</b> Shiraz University, Shiraz, Iran Presented by: Prof. Mansoor Zolghadri Jahromi	Jan. 2020 - July 2020
<b>Teacher Assistant (TA) for 'Microprocessor'</b> Shiraz University, Shiraz, Iran Presented by: Prof. Mohsen Raji	Sep. 2018 - Jan. 2019

## RESEARCH & WORKING EXPERIENCES

<b>Research Assistant in Machine Learning Laboratory (MLL)</b> Sharif University of Technology, Tehran, Iran Supervised by Prof. Mahdieh Soleymani	Dec. 2019 - Jan. 2022
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## Senior Developer

ICT Center of Shiraz University

Extract high-level information using Apache Spark & Spring Boot

April 2017 - August 2017

## SKILLS

- **Programming Languages:** Python, Java, C, C++, C#, MATLAB, PHP, JavaScript, Assembly (x86),  $\text{\LaTeX}$
- **Deep Learning Frameworks:** PyTorch, Keras, TensorFlow, Caffe, MATLAB Deep Learning toolbox
- **Python Package & Library:** NumPy, Pandas, Scikit-learn, Matplotlib, Brian 2 (Spiking Neural Network)
- **Other Frameworks & tools:** Apache Spark, Spark Java, Spring Boot, Django, Laravel, Angular, Neo4j, MongoDB
- **Software:** SPSS, Proteus, CodeVisionAVR, Microsoft Office
- **Operating Systems:** Windows, Linux (Ubuntu)

## SELECTED COURSES

### Graduate

- *Deep Learning, Prof. Soleymani, 19.1/20*
- *Stochastic Processes, Prof. Rabee, 17.2/20*
- *Neuroscience: Learning and Memory, Prof. Karbalaee, 20/20*

### Undergraduate

- *Artificial Intelligence, Prof. Azimifar, 19.1/20*
- *Operational Research, Prof. Ziarati, 18/20*
- *Linear Control Theory, Prof. Zolghadr, 18.5/20*
- *Signals and Systems, Prof. Bostani, 20/20*

## SELECTED PROJECTS

- Implementation of Hopfield Network using spiking neural networks to retrieve and denoise patterns, as the final project for Neuroscience: Learning and Memory course, fall 2020
- Implementation of image captioning and caption comprehension through LSTM and Faster R-CNN networks, benchmarked on MS COCO dataset, as the final project for Deep Learning course, Spring 2020

- Implementation of Speech Recognition and character-based LVCSR with RNN Networks according to "End-to-end Attention-based Large Vocabulary Speech Recognition," paper, as the final project for Speech Processing course, Spring 2020
- Implementation of epileptic/normal classifier based on EEG signal, using wavelet coefficients as features and RBF networks as the learnable classifier, the final project for Digital Signal Processing course, fall 2019

## LANGUAGES

- **Persian:** Native
- **English:** Fluent
  - **TOEFL iBT:** 110 (R:30 L:30 S:23 W:27)

## ONLINE COURSES, CERTIFICATES & MEMBERSHIPS

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|---|--------------|
| • Game Theory, Prof. O. Jackson, Coursera   | 2021         |
| • Robotics: Aerial Robotics, Prof. Kumar, Coursera                                | 2021         |
| • Convex Optimization, Prof. Boyd, edX  | 2019         |
| • Neuronal Dynamics, Prof. Gerstner, edX  | 2019         |
| • Computational Neuroscience: Neuronal Dynamics of Cognition, Prof. Gerstner, edX | 2019         |
| • Mathematics for Machine Learning: Linear Algebra, Prof. Dye, Coursera           | 2018         |
| • Member of IEEE Robotics and Automation Society                                  | 2022-present |
| • Member of National Elite Foundation   | 2019-present |

## REFERENCES

1. Prof. Mahdiyeh Soleymani Baghshah: soleymani@sharif.edu
2. Prof. Hamid Beigy: beigy@sharif.edu
3. Prof. Reza Boostani: boostani@shirazu.ac.ir
4. Prof. Koorush Ziarati: ziarati@shirazu.ac.ir