

# Iman Rahmati

updated: 16 Jan 2024

✉ Email: iman.rahmati@sharif.edu imanrht@gmail.com

🌐 Web page: imanrht.github.io

🐙 Github: <https://github.com/ImanRHT>

in LinkedIn: [linkedin.com/in/iman-rahmati](https://www.linkedin.com/in/iman-rahmati)

**Research Interests:** Distributed Systems, Mobile Edge Computing, Deep Reinforcement Learning, Federated Learning, Distributed Machine Learning, Software Defined Networking, Performance Evaluation

## EDUCATION

**MSc. Computer Software Engineering** Sharif University of Technology (SUT)

Graduated Sep 2022, 17.36/20 GPA (23 units)

**Thesis Title:** A Novel Resource Allocation Algorithm in Edge Computing with Deep Reinforcement Learning

**Supervisor:** Prof. Ali Movaghar [↗](#)

**BSc. Industrial Engineering** Khajeh Nasir Toosi University of Technology (KNTU)

Graduated Sep 2019

## ACADEMIC EXPERIENCE

### Research Assistant

- **Research Assistant at Performance and Dependability Laboratory (PDL)** [↗](#)  
Supervisor: Prof. Ali Movaghar SUT, 2020-present  
**Research Theme:** Designed and implemented an algorithm leveraging deep reinforcement learning to optimize computation offloading decisions in mobile edge computing, with a primary focus on enhancing the Quality of Experience (QoE) for end-users of mobile applications.

### Teaching Assistant

- **Performance Evaluation of Computer Systems (Head TA)** SUT, 2020-present  
Prof. Ali Movaghar and Dr. Mahdi Dolati [↗](#)
- **Software Defined Networking (Head TA)** SUT, 2022  
Prof. Ali Movaghar and Dr. Mohammad Hosseini [↗](#)
- **Verification of Reactive Systems** SUT, 2021  
Prof. Ali Movaghar
- **Theory of Machines and Languages** SUT, 2021  
Prof. Ali Movaghar


**Sub-Reviewer at 27th International Computer Conference** CSICC, 2022

Computer Society of Iran (CSICC) [↗](#)

IEEE website published papers from this conference. [↗](#)

## PUBLICATION

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- I. Rahmati, H. Shah-Mansouri, A. Movaghar, “QOCO: A QoE-Oriented Computation Offloading Algorithm based on Deep Reinforcement Learning for Mobile Edge Computing”, submitted to IEEE Internet of Things Journal 2023. [↗](#) 
- I. Rahmati, H. Shah-Mansouri, A. Movaghar, ”Federated Deep Reinforcement Learning for Dependent Task Offloading in Mobile Edge Computing”, work in progress.





## HONORS

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- ❖ Ranked Top 10% in the Department of Computer Engineering among M.Sc. Students, SUT, Class 2019 Jul 2022
- ❖ Ranked 55<sup>th</sup> among 30,000 Participants in the Nationwide University Entrance Exam of Computer Engineering for M.Sc. in the Field of Software Engineering Aug 2019
- ❖ Ranked Top 1% among 180,000 Participants in the Nationwide University Entrance Exam for B.Sc. in the Field of Mathematics and Physics Jul 2014
- ❖ Achieving the 3<sup>th</sup> position in the RoboCup Competition (IranOpen) Mar 2012

## ACADEMIC PROJECTS

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- **QoE Maximization in Mobile Edge Computing** SUT, 2022  
Optimizing Decision-Making for Computation Offloading in Mobile Edge Computing using Deep Reinforcement Learning (Dueling Deep Q-Networks)   
Supervisor: Prof. Ali Movaghar and Dr. Hamed Shah-Mansouri [↗](#)
- **Design Mobile Edge Computing Environment** SUT, 2021  
Modeling and Simulation of Mobile Edge Computing under Resource Constraints for Delay and Energy Optimization   
Supervisor: Prof. Ali Movaghar
- **Time Series Analysis** SUT, 2021  
Design a Model for forecasting Edge Server Workload using Recurrent Neural Networks such as Long Short Term Memory   
Supervisor: Prof. Ali Movaghar
- **Computer Performance Evaluation** SUT, 2020  
Simulation and Performance Analysis of M/M/1/K Queue Model with Varied Service Orders (FCFS, Processor Sharing, Discriminatory Processor Sharing)   
Supervisor: Prof. Ali Movaghar
- **Distributed Systems** SUT, 2019  
A Survey on ‘Verification of Paxos and Raft Protocols in Distributed Consensus’  
Supervisor: Dr. Mohammad Izadi [↗](#)
- **Production Planning Optimization** KNTU, 2017  
Maximize profit by deciding how many units of each product to produce, considering production costs and demand.  
Supervisor: Dr. Amir Abbas Najafi [↗](#)

## SELECTED COURSES

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- Theory of Distributed Systems	4/4	- Wireless Networking	4/4
- Computer Performance Evaluation	4/4	- Computer Network	4/4
- Verification of Reactive Systems	4/4	- IT Enterprise architecture	4/4
- Advanced Network Security	4/4	- Computer Network Management	3.9/4

## SKILLS

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- **General:** Networking, Mobile Edge Computing, Deep Reinforcement Learning
- **Programming Languages:** Python, R, Bash, C++
- **Machine Learning:** TensorFlow, PyTorch, Scikit-learn
- **Data Analysis:** Pandas, NumPy, Matplotlib
- **Frameworks & Tools:** Linux, Mininet, Ns-3, Git, L<sup>A</sup>T<sub>E</sub>X, Vim, Flask, Visio
- **Language Proficiency:** Farsi (Native), English (Working proficiency)
  - TOEFL (IBT) Score: 108/120 (R: 30, L: 28, S: 22, W: 28)

## CERTIFICATION

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**Interactive Learning** Tehran Institute for Advanced Studies (TeIAS), 2021  
Certification of Completion in Deep Reinforcement Learning Course, Inst: Prof. Majid Nili Ahmadabadi [↗](#)

**Machine Learning and Deep Learning in Python** Start-Tech Academy, 2020  
Certification of Completion in Udemy Online Course

**Data Science** Tose'e Higher Education Institute, 2019  
Certification of Completion in Data Science Course, Inst: Dr. Yaser Zerehsaz [↗](#)

**Advanced Python Topics** Remis Arjang Institute, 2018  
Certification of Completion in Advanced Python Course, Inst: Dr. Peyman Hooshmandi

**LPIC1** Anisa Iran Linux House, 2017  
Certification of Completion in Linux Administrator Course, Inst: Dr. Mohammad Shakeri

## REFERENCES

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**Prof. Ali Movaghar** [↗](#) movaghar@sharif.edu  
Professor of Computer Science and Engineering Department, SUT

Visiting Professor of Computer Science Department, University of Michigan  
**Dr. Hamed Shah-Mansouri** [↗](#) hamedsh@sharif.edu

Assistant Professor of Electrical Engineering Department, SUT  
**Dr. Mohammad Hosseini** [↗](#) hosseini@ipm.ir

Postdoctoral of Institute For Research In Fundamental Sciences Researcher (IPM)