

# Iman Rahmati

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🌐 Web page: imanrht.github.io

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

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**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. [!\[\]\(467d80e979964f7f8c752fb22248b5b7\_img.jpg\)](#) [!\[\]\(b71552d33dbf62adf5e5199a70ee02bf\_img.jpg\)](#)
- 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) [!\[\]\(815df092dd722ee9268ef8e6d0193e3a\_img.jpg\)](#)  
Supervisor: Prof. Ali Movaghar and Dr. Hamed Shah-Mansouri [!\[\]\(c72edb9626cad660f3a9f5fb0f22a68c\_img.jpg\)](#)
- **Design Mobile Edge Computing Environment** SUT, 2021  
Modeling and Simulation of Mobile Edge Computing under Resource Constraints for Delay and Energy Optimization [!\[\]\(0c564128c6342bd2f601e97f4518828a\_img.jpg\)](#)  
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 [!\[\]\(5cb79a1c9acdf5d94bce345803852578\_img.jpg\)](#)  
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) [!\[\]\(cc23775bf31a648cde5902baa397f9aa\_img.jpg\)](#)  
Supervisor: Prof. Ali Movaghar
- **Distributed Systems** SUT, 2019  
A Survey on ‘Verification of Paxos and Raft Protocols in Distributed Consensus’  
Supervisor: Dr. Mohammad Izadi [!\[\]\(0f607256894bb1ede5f4e367e10faa26\_img.jpg\)](#)
- **Project Management and Control** KNTU, 2017  
Scheduling, Time management and Resource Allocation in a Construction Project  
Supervisor: Dr. Amir Abbas Najafi [!\[\]\(b5a96c12e7c148f5f0a1e79e6e3ae06f\_img.jpg\)](#)

## 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: The score will be determined by the 10<sup>th</sup> of January.

## 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

**Prof. Ali Mohammad Afshin Hemmatyar**  hemmatyar@sharif.edu  
Professor of Computer Science and Engineering Department, SUT

**Dr. Mahdi Dolati**  mahdidolati@ut.ac.ir  
Postdoctoral of Institute For Research In Fundamental Sciences Researcher (IPM)

**Dr. Mohammad Hosseini**  hosseini@ipm.ir  
Postdoctoral of Institute For Research In Fundamental Sciences Researcher (IPM)