# Iman Rahmati

updated: 5 Nov 2023

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**Research Interests:** Distributed Systems, Mobile Edge Computing, Deep Reinforcement Learning, Federated 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**: Optimizing Computational Task Offloading Problem in Energy-Constrained Mobile Edge Computing Systems 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 within 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

**Reviewer at 27th International Computer Conference** CSICC, 2022
Computer Society of Iran (CSICC)
IEEE website published papers from this conference.

## HONORS

- ❖ Ranked Top 25% in the Department of Computer Engineering among M.Sc. Students, SUT, Class 2019 Jul 2022
- ❖ Ranked $55^{th}$ 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

## PROJECTS

**Discrete Event Simulation**

- Modeling Task Offloading Problem in Mobile Edge Computing Systems
- Development of IoT environment for prediction of load level and energy consumption
- Simulation of Edge/Fog Computing Environment in Python
- Simulation of M/M/1/K Queue with Discriminatory Processor Sharing Service Order

**Machine learning**

- Decision Making Optimization for Task Offloading with Dueling Deep Q-Networks
- Performance Optimization of Mobile Edge Computing Systems with Q-Learning
- Solving the Vehicle Routing Problem with Deep Q-Networks
- Modeling and Prediction of Time-Series with Recurrent Neural Networks (RNN)and ForexData

## SELECTED COURSES

Theory of Distributed Systems
Verification of Reactive Systems
Advanced Computer Networks
Mobile Communications
Computer Performance Evaluation
Wireless Networking
Advanced Network Security
Computer Network Management

## PUBLICATION

I. Rahmati, H. Shahmansouri, 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.

## SKILLS

## REFERENCES

**Prof. Ali Movaghar** movaghar@sharif.edu
Professor of Computer Science and Engineering Department, SUT

Visiting Professor of Computer Science and Engineering Department, University of Michigan
**Prof. Ali Mohammad Afshin Hemmatyar** hemmatyar@sharif.edu
Professor of Computer Science and Engineering Department, SUT
**Dr. Hamed Shah-Mansouri** hamedsh@sharif.edu
Assistant Professor of Electrical 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
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