Iman Rahmati

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- ⚯ Web page: imanrht.github.io
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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

- 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

- ❖ Ranked Top 10% in the Department of Computer Engineering among M.Sc. Students, SUT, Class 2019   Jul 2022
- ❖ Ranked 55th 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 3th position in the RoboCup Competition (IranOpen)   Mar 2012

ACADEMIC PROJECTS

- **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 ☑

- **Project Management and Control**   KNTU, 2017
  Scheduling, Time management and Resource Allocation in a Construction Project
  Supervisor: Dr. Amir Abbas Najafi ☑

SELECTED COURSES

- 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

- **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, LaTeX, Vim, Flask, Visio
- **Language Proficiency:** Farsi (Native), English (Working proficiency)
  TOEFL (IBT) Score: The score will be determined by the 10th of December.

CERTIFICATION

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

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)