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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 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

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 on IEEE Internet of Things Journal 2023.

SKILLS

REFERENCES

Prof. Ali Movaghar

Professor of Computer Science and Engineering Department, SUT

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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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