Sina Heidari

Curriculum Vitae

Personal Information

Email Address	sina1997heidari@gmail.com
Personal Page	https://s1naheidari.github.io
Github Page	https://github.com/S1naHeidari
Skype	ustoir

Education

University of Zanjan — Zanjan, Iran

Master's degree in Computer Software Engineering — *2021 – present*

GPA: 18.33 (out of 20); 4 (out of 4 using WES insturction)

Rank: 1st in class

Graduation: April 2023 (anticipated)

University of Kurdistan — Sanandaj, Iran

Bachelor degree in Computer Software Engineering — *2016 – 2021*

GPA (last two years): 3.57 (out of 4 using WES insturction)

Overall GPA: 15.79 (out of 20)

Research Interests

- Distributed Computing
- Cloud Computing
- Internet of Things
- High-performance Computing

Publications

Heterogeneity-aware Load Balancing in Serverless Computing Environments — 2023

Authors: Sina Heidari, Sadoon Azizi

Conference: The 7th International Conference on Internet of Things and Its Applications

Status: Accepted

Link: https://iot2023.ui.ac.ir/en/

Work in Progress

Deep Reinforcement Learning for Energy-efficient Resource Scheduling in Mulit-tenant and Heterogeneous Serverless Computing Environments

Research Experience

Graduate Research

Distributed Computing Systems Research Laboratory (DCS Lab) — *2020 – present*

Supervisors: Dr. Sadoon Azizi, Dr. Majid Meghdadi

Broad Research Area: Distributed Computing, Cloud/Edge Computing

Specific Research Focus: Autonomous resource management in serverless computing environments

Additional Research Areas: Heterogeneous computing in distributed and multi-tenant systems

Thesis Title: QoS-aware and Energy-efficient Resource Scheduling in Serverless Computing Environments

Thesis Approach: We employed Deep Reinforcement Learning (DRL) algorithms to develop autonomous agents capable of making resource scheduling decisions

Technical Skills: Kubernetes, Prometheus, Tensorflow, PyTorch

Undergraduate Research

Data Science Laboratory *2018 – 2020*

Supervisor: Dr. Parham Moradi

Broad Research Area: Data Science, Machine Learning

Specific Research Focus: Recommender Systems, Indoor Positioning Systems, Natural Language Processing (NLP)

Project: Data exploratory analysis (DEA) and solution for six Kaggle challenges.
(Recommender Systems, Tweet Sentiment Extraction, Toxic Comment Classification,
M5 Time Series Forcasting, Abstraction and Reasoning, Indoor Location and Navigation)

Technical Skills: Python, Pandas, Scikit-learn

Teaching Experience

University of Kurdistan

Teaching Assistant *Summer 2017 & Fall 2017*

Course Title: Fundamentals of Computer and Programming

Responsibilities: Holding classes weekly and marking assignments.

Professor: Dr. Sadoon Azizi

Teaching Assistant *Winter 2018*

Course title: Advanced Programming

Responsibilities: Holding classes weekly and marking assignments.

Professor: Dr. Rojiar Pir Mohammadiani

Test Scores

TOEFL	104: (R) 27 (L) 28 (S) 22 (W) 27	April, 2022
GRE	Registered to be taken in November 2023	

Technical Skills

- Programming Languages: Python, C/C++, Java, C#
- Operating Systems: GNU/Linux (Arch Linux, Manjaro, Ubuntu, Debian, CentOS)
- Virtualization/Cloud: Kubernetes, Xen, Docker, Virtualbox, Vagrant, Ansible, Prometheus
- Data Science & Machine Learning: Scikit-learn, Pandas, PyTorch, Tensorflow

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Awards and Honors

Master's program valedictorian, top 10 among entering engineering students	2023
Granted, National University Tuition Waiver (including partly necessary expenses)	2016

Academic Projects

Development of a Ticket Management System to streamline customer support and issue tracking (Course: Software Engineering)

Information Retrieval System Using Inverted Index and TF-IDF (Course: Information Retrieval)

Setting up production-ready Kubernetes clusters using Vagrant and Ansible as Infrastructure as Code (IaC) tools

Adaptation of DQN (Deep Q-Network) and its variants to address scheduling and resource allocation challenges in serverless computing environments

Development of custom Kubernetes schedulers and load-balancers for the purpose of evaluating the performance of various scheduling and load-balancing policies

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Related Courses

- Advanced Computer Networks: 19/20
- Advanced Operating Systems: 20/20
- Internet of Things: 19/20
- Programming Languages: 18.64/20
- Software Engineering: 18.65/20
- Artificial Intelligence: 17/20

References

Dr. Sadoon Azizi	s.azizi@uok.ac.ir	https://research.uok.ac.ir/~sazizi/en/
Dr. Parham Moradi	p.moradi@uok.ac.ir	https://research.uok.ac.ir/~pmoradi/en/
Dr. Majid Meghdadi	meghdadi@znu.ac.ir	https://www.znu.ac.ir/members/meghdadi-majid/en
Dr. Rojiar Pir mohammadiani	r.pirmohamadiani@uok.ac.ir	https://research.uok.ac.ir/~rpirmohammadiani/en/