# 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

---

## 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

---

## 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/ |