

Reza Kahidi

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Tehran, Iran

EDUCATION

- School of Electrical and Computer Engineering, University of Tehran** Tehran, Iran
M.Sc. in Communication Networks 2022 - 2025
 - Thesis Title: Service Function Chain Offloading in Mixed-Critical Scenarios
 - Supervisor: Prof. Mehdi Kargahi
 - GPA: 19.05/20 (4/4)
- Electrical and Computer Engineering Department, Jundi Shapur University of Technology** Dezful, Iran
B.Sc. in Electrical Engineering 2017 - 2021
 - Thesis Title: Design and Implementation of a Real-Time Controller for Capturing Images and Writing Data to SRAM Memory in FPGA
 - Supervisor: Dr. Mohsen Shakiba
 - GPA: 17.28/20 (3.53/4)
 - Last Two Years GPA: 18.53/20 (3.96/4)

RESEARCH INTERESTS

- Computer Networks
- Distributed Systems
- Programmable Networks
- Cloud/Edge Computing
- Machine Learning Systems

SKILLS

- Programming Languages:** Python (NumPy, Pandas, Scikit, CVXPY, Matplotlib, Seaborn, PyTorch, Scapy, Networkx), Java, C, MATLAB, R, VHDL, Bash, LaTeX, P4
- Tools & Technologies:** Xilinx ISE, Docker(Swarm), Virtualization (VMware), Proteus, PSpice, HSpice, Arduino IDE, Mininet
- Languages:** Persian (native), English (TOEFL Score 99/120 [R:26/30, L:30/30, S:21/30, W:22/30])

ACADEMIC EXPERIENCE

- University of Tehran** Sep 2023 - Sep 2025
Research Assistant - Prof. Mehdi Kargahi
 - Activities: 1- Developed a novel placement algorithm for deploying Service Function Chains (SFC) across a data center topology. 2- Implemented a fault-tolerant state replication protocol for stateful Network Functions on programmable switches. 3- Designed and implemented both slack-based and criticality-based, real-time scheduling mechanisms directly in the data plane to provide guarantees for flows and SFCs. 4- Built and utilized a complete emulation environment with Mininet to test and verify the system's fault tolerance, scheduling accuracy, and overall performance.
 - Skills: P4, Python, Mininet
- University of Tehran** Feb 2025 - Sep 2025
Teaching Assistant - Prof. Naser Yazdani - Advanced Operating Systems
- University of Tehran** Oct 2024 - Feb 2025
Teaching Assistant - Prof. Naser Yazdani - Advanced Computer Mathematics
- Jundi Shapur University of Technology** Oct 2020 - Oct 2021
Research Assistant - Dr. Mohsen Shakiba
 - Activities: 1- Designed a controller to capture images from an OV7670 camera module and store them in SRAM. 2- Implemented I2C communication protocol between the camera and FPGA. 3- Utilized Xilinx Spartan 6 FPGA for real-time image processing.
 - Skills: VHDL, Xilinx ISE

HONORS AND AWARDS

- **Awarded an Excellent Grade for the MSc Thesis Defense**
University of Tehran

Oct 2025
- **University of Tehran Support Foundation Grant for Outstanding Academic Performance**
University of Tehran

Oct 2023
- **Ranked 85th Among Approximately 20,000 Participants in MSc Entrance Exam**

Sep 2022
- **Offered Admission to MSc Program Without Entrance Exam as an Talented Student**
Jundi Shapur University of Technology

Oct 2021
- **Ranked in the Top 10 Among All Bachelors Electrical Engineering Students**
Jundi Shapur University of Technology

Oct 2021
- **Ranked 2nd Among All Bachelors Electronics Students**
Jundi Shapur University of Technology

Oct 2021

SELECTED PROJECTS

- **Network Monitoring and Analysis**
Tools: ELK(Elasticsearch, Logstash, Kibana)

Jun 2023 - Jul 2023

◦ Implemented a full-stack network monitoring and analysis solution by integrating an Intrusion Detection System (IDS) with the ELK stack for real-time threat detection.
- **Operating System**
Tools: Xv6, C

Jun 2024

◦ Developed shell scripts, multi-threaded C programs, and kernel-level features for xv6, including custom system calls and a IPC mechanism.
- **Convex Optimization**
Tools: Python, Jupyter Notebook

Feb 2024 - Jun 2024

◦ Applied convex optimization techniques to solve diverse real-world problems.
- **Java Simulation Toolkit for Queuing Networks**
Tools: Java

Jun 2023 - Jul 2023

◦ Developed utilities including a statistic collector, an event list, and an event handler to streamline the simulation of queuing networks.
- **Music Mode and Instrument Recognition using Machine Learning**
Tools: Python

Jan 2023 - Mar 2023

◦ Developed machine learning models to classify the Dastgah (musical mode) of traditional Iranian music.

SELECTED COURSES (Graduate courses are indicated by [†])

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|---|---------|---|---------|
| • Cellular Networks [†] | 19.5/20 | • Fundamentals of Communications Systems | 19/20 |
| • Performance Evaluation of Computer Systems [†] | 20/20 | • Hardware Description Language Programming | 19.4/20 |
| • Internet Measurement [†] | 20/20 | • Digital Signal Processing | 19/20 |
| • Advanced Computer Mathematics [†] | 18.9/20 | • Microcontrollers | 19/20 |
| • Advanced Operating Systems [†] | 19.4/20 | • Digital Logic Circuits | 20/20 |
| • Machine Learning [†] | 20/20 | • Electronics II | 19/20 |
| • Convex Optimization [†] | 18/20 | • Electronics III | 20/20 |