




Parsa Poorsistani

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EDUCATION

• **Amirkabir University of Technology**, Tehran, Iran
BSc in Computer Science

2020 — 2025

RESEARCH INTERESTS

- Operating Systems
- Networked Systems
- Distributed Systems
- Cloud Computing

PUBLICATIONS

- MA. Mirzaei, P. Poorsistani, SA. Javadi (2024). **LEAD: Latency-Efficient Application Deployment for Microservices Architecture**. *29th International Conference on Automation and Computing (ICAC '24)*

RESEARCH EXPERIENCE

University of Michigan

Research Assistant Under Prof. Ang Chen

Remote

7/2024 — Present

- Contributed to SpotProxy, a censorship circumvention project featured at USENIX Security '24.
- Architected and implemented system expansion from TCP-only to full OSI Layer 4 protocol support through WireGuard integration.
- Developed a custom packet encapsulation protocol and concurrent architecture in Go, significantly improving system scalability.
- Independently proposed and implemented critical system improvements through regular collaboration with the research team.

University of Melbourne

Research Assistant Under Prof. Adel N. Toosi

Remote

4/2024 — Present

- Contributed to the development of GraphZero, a novel serverless graph processing framework that achieves up to 40X performance improvement over existing solutions.
- Collaborated on the design and implementation of a dual-mode execution system that enables efficient handling of varying workload sizes, demonstrating 93-98% cost savings compared to existing frameworks.
- Helped implement core system optimizations including selective write-back mechanisms, custom serialization with compression, and message batching to enhance serverless computing performance.
- Participated in the development and evaluation of a Kubernetes-based infrastructure using Knative, ensuring seamless portability to commercial platforms while maintaining high performance.

Amirkabir University of Technology

Research Assistant Under Prof. Seyyed Ahmad Javadi

Tehran, Iran

9/2023 — 9/2024

- Led development of LEAD, a latency-aware application scheduling system for Kubernetes, resulting in a published paper, served as the co-first author.
- Designed and implemented a production-grade multi-node Kubernetes cluster for experimental validation, demonstrating strong systems engineering capabilities.
- Developed a custom plugin integrating with Prometheus for real-time rescheduling, showcasing ability to identify and implement practical, scalable solutions.
- Mentored undergraduate students and collaborated with graduate researchers, contributing to lab culture and knowledge transfer.

INDUSTRY EXPERIENCE

Cafe Bazaar

Senior Software Engineer

Tehran, Iran

10/2024 — Present

- Cafe Bazaar is Iran's leading app store platform for Android with over 5 million daily active users. I am part of the Platform team, currently working on building the video-streaming platform. I am working on a Data Abstraction Layer (DAL) solution in Rust.

Hamkaran System
Software Engineer

Tehran, Iran
3/2023 — 12/2023

- Hamkaran System is Iran's leading ERP company. As an integral member of the Manufacturing Team, spearheaded the development of new features, focusing on building new features and system efficiency.

Rahnema College
Software Engineer Intern

Tehran, Iran
7/2022 — 10/2022

- Among the elite group of 24 participants selected from over 3000 applicants based on a competitive programming contest and interviews, reflecting strong analytical and problem-solving skills.
- Completed comprehensive full-stack training covering back-end, front-end, Android development, and DevOps practices.

Sefr Educational Solutions
Back-end Developer

Tehran, Iran
7/2021 — 1/2022

- I was working on microservice APIs mostly based on Django-rest for an educational consulting product that acts as a task manager for students.

TEACHING EXPERIENCE

Amirkabir University of Technology
Teaching Assistant

Tehran, Iran

- Data Structure and Algorithms *Fall 2023, Spring 2023*
- Design of Algorithms *Spring 2023*
- Advanced Programming *Spring 2023*
- Compiler Design *Fall 2023*
- Operating Systems *Spring 2024*
- Computer Networks *Spring 2024*

SKILLS

- **Programming:** golang, Rust, Python, C/C++, C#, Java, node.js, BASH
- **Frameworks, Tools:** Docker, Kubernetes, git, django, PostgreSQL, gRPC, mongodb, .NET, Unix-ish Operating Systems, SQL-Server, RabbitMQ, Redis
- **General:** Deep Systems Knowledge, Data Structures and Algorithms, Problem Solving, Software Architecture, OOP

Selected Projects

- SpotProxy: Cloud-hosted proxies with minimal cost and maximum circumvention utility
- Paxos/Multi-Paxos: Implemented Paxos consensus algorithm in Go
- rtcp: implemented L3/L4 network stack from scratch in rust
- rusty-maelstorm: maelstorm distributed system challenge in rust
- Rahnema-FPL: backend of our project in Rahnema college written in node.js and typescript, redis and mongodb.