KASRA SIAVASHPOUR

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EDUCATION

Sharif University of Technology, Tehran, Iran
Bachelor of Science, Computer Science   2020–2025

Allameh Tabatabaei High School (selective, non-governmental), Tehran, Iran
High School Diploma, Mathematics and Physics   2016–2020
GPA: 19.6/20

RESEARCH INTERESTS

IoT networking; autonomous aerial/vehicular systems (FANET/VANET); cluster-based routing and optimization (SDN-/ML-assisted); low-latency & energy-aware network protocols; systems performance engineering (e.g., WebAssembly in networked workloads).

PUBLICATIONS

Prof. Arash Vaezi[†], Prof. Amir Daneshgar[†], **Kasra Siavashpour**, Arshia Dadras, *The Loop of the Rings: A Fully Decentralized Reliable Cooperative System.*
Manuscript in preparation for submission to the **IEEE Symposium on Foundations of Computer Science (FOCS) 2025**.
[†] Co-lead authors (equal contribution).

RESEARCH EXPERIENCE

Research Assistant, Sharif University of Technology, Tehran, Iran   2023/06–Present
Supervisor: Dr. Bardia Safaei

- Designed and evaluated nature-inspired routing for FANET/IoT; implemented cluster-based heuristics and benchmarked link stability/latency under mobility.
- Prototyped beaconing and neighbor discovery; analyzed energy–delivery trade-offs; produced internal reports/slides.
- Built reproducible pipelines (configs, seeds, scripts) for experiment reruns.

Research Assistant, Politecnico di Milano, Milan, Italy   2024/03–Present
Supervisor: Dr. Gianni Antichi

- Investigated WebAssembly for systems/runtime acceleration; profiled CPU/memory vs. native baselines on microbenchmarks.
- Developed measurement harnesses to quantify latency/throughput of WASM modules in network-adjacent tasks; presented findings to the group.

HONORS & AWARDS

Top 0.1% among 155,250 candidates, Iranian University Entrance Exam (B.Sc.)	2020
National Hovercraft Competition (two consecutive years) — design & control	2016–2017
First Place, Provincial Chess Competition (High School)	2016
Second Place, Provincial Table Tennis Competition (High School)	2015

NOTABLE PROJECTS

BitTorrent-style P2P Network (Python)   Spring 2023

- Implemented peer discovery and direct peer connections beyond a centralized tracker; validated piece exchange and failure handling with scripted tests.

- Delivered a CLI client and documented protocol flows.
  GitHub: github.com/kasra-sia/BitTorrent-network

Innovative Sort (Java) — Algorithm Study   Spring 2021

- Benchmarked classical sorting algorithms and prototyped a custom variant; in project tests, outperformed Java's default on large synthetic arrays.

- Instrumented runs and reported complexity and empirical results.
  GitHub: github.com/kasra-sia/MySuperSort

Golabi Social Media (Java, GUI)   Winter 2020–Summer 2020

- Developed core features (posts, messaging, media, follow graph) with basic MVC and code-style checks; integrated local persistence and user docs.
  GitHub: github.com/kasra-sia/Golabi_social_media-network

Early Java GUI Games   Spring–Winter 2020

- *Battleship* — Networked gameplay with added features; clean-code practices.
  GitHub: github.com/kasra-sia/Battleship-network-game

- *Snake & Ladder Master* — Enhanced classic game; GUI.
  GitHub: github.com/kasra-sia/Snake_And_Ladder-master

SELECTED TEACHING EXPERIENCE

Teaching Assistant, Sharif University of Technology   2023–2024

- **Computer Networks** — Dr. Kambiz Mizanian (Fall 2023): Led recitations; graded socket/P2P labs; held weekly office hours.

- **Operating Systems** — Dr. MohammadAli Mirzaei (Fall 2023): Guided projects (threads, scheduling, IPC); maintained Q&A; prepared grading rubrics.

- **Computer Networks** — Dr. Hossein Peyvandi (Winter 2024): Mentored teams on routing/congestion-control labs.

- **Operating Systems** — Dr. Arash Vaezi (Winter 2024): Coordinated labs and assessment; *Piazza course page (TA listed)*: piazza.com/sharif/winter2024/22861/info.

SKILLS

Programming Languages: Java, Python, C++, Go
Tools: Git, Docker, LaTeX, NS-3
Operating Systems: Ubuntu, Windows, macOS
Languages: Persian (Native), English (C1)