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POURIA AREFIJAMAL M.Sc. Student

ABOUT ME

I am Pouria Arefijamal, an M.Sc. student in Computer Networks at Sharif University of Technology, Tehran, Iran, where I also earned my B.Sc. in Computer Engineering. My research spans cybersecurity, IoT/CPS systems, fog/cloud computing, and HPC task scheduling. I have conducted research internships at the University of Hong Kong (HKU) and Karlsruhe Institute of Technology (KIT), and I am currently engaged in projects on secure IoT systems and HPC scheduling.

RESEARCH INTERESTS

Cybersecurity in Networked and Distributed Systems

Fog/Cloud Computing Architectures and Resource Scheduling

Privacy-Preserving Machine Learning and Federated Learning

Internet of Things (IoT) and Cyber-Physical Systems

High-Performance Computing (HPC) Task Scheduling and Optimization

EDUCATION

Sharif University of Technology, Department of Computer Science Tehran, Iran
M.Sc. in Computer Networks 2024 – Present
- GPA: 4.00/4.00

Sharif University of Technology, Department of Computer Engineering Tehran, Iran
B.Sc. in Computer Engineering 2018 – 2022
- GPA: 3.95/4.00

High School, Physics and Mathematics Diploma Iran
High School Diploma Graduated: 2018
- Grade: 19.93/20 (GPA: 4.00)

INTERNSHIPS

Karlsruhe Institute of Technology (KIT) | Remote Jul 2023 – Jun 2024
- Worked on FUSE and Kubernetes; resolved concurrency issues in multi-user environments.

The University of Hong Kong | Hong Kong Jul 2025 – Sep 2025 (Expected)
- Upcoming research in federated learning and network-aware computing.

PUBLICATIONS

- **Priority-Aware SDN Orchestration for Surgical IoMT: A Joint Optimization of Hit Ratio and Latency with Dynamic Resource Reallocation.** *IEEE Access*, 2025.

- **Spotting and Mitigating DDoS Attacks Using Deep Learning for Online Traffic Analysis.** *iSecure Journal*, 2024. https://www.isecure-journal.com/article_217461_0e9ee6fbfa91d9074e89bd661f0d21cf.pdf

UNDER REVIEW

1. **TETRIS: Topology and Energy-aware Joint Task Routing and Offloading for Software-defined Fog Networks.** Submitted to *IEEE IoT Journal*.

2. **I/O-ETEM: A Lightweight I/O-Based Execution Time Estimation Framework for ML Training Jobs.**

RESEARCH EXPERIENCE

SDN Network Researcher, Dr. Safaei's Group   2022 – Present
  - Focused on task offloading using Software Defined Networking (SDN) architectures.

HPC Scheduling Researcher, Prof. Asadi's Group   2024 – Present
  - Research on job scheduling strategies for High Performance Computing (HPC) systems.

Federated Learning Researcher, Dr. Ejlali's Group   2023 – 2024
  - Investigated federated learning frameworks and implementation techniques.

THESIS

Mobility-Aware SDN-Assisted Client Selection in Federated Learning
M.Sc. Thesis, Sharif University of Technology   2024 – Present

Execution Time Modeling of Data-Intensive Applications
B.Sc. Thesis, Sharif University of Technology   2022

TEACHING ASSISTANCE

Computer Networks — Sharif University of Technology, Fall 2024
Probability and Statistics — Sharif University of Technology, Fall 2024
Operating Systems — Sharif University of Technology, Spring 2024
Signals and Systems — Sharif University of Technology, Fall 2023
Linear Algebra — Sharif University of Technology, Fall 2023
Basic Programming— Sharif University of Technology, Spring 2022

AWARDS AND HONORS

- **Offered Direct Admission to M.Sc. Program**   2024
- **Third Place**, Sharif Hardware Event   2023
- **Ranked 80th**, National University Entrance Exam (Konkur), Iran   2018

SKILLS

Languages: Persian (native), English (fluent), French (Basic)
Programming: `Python` (4+ years), `C++` (4+ years), `JavaScript` (2+ years)
Tools: Docker, Kubernetes, TensorFlow, PyTorch, Git
Technologies: SDN, IoT, Federated Learning, HPC

COURSES AND WORKSHOPS

Quantum Computing Workshop (IBM)
CS 188: Introduction to Artificial Intelligence (Berkeley, 2022)
STAT 110: Probability (Harvard, 2021)
Design and Analysis of Algorithms (MIT, 2022)
CSE 461: Computer Communication Networks (Washington, 2022)
Machine Learning A-Z™ (Udemy, 2022)
IoT (Internet of Things) Specialization