

Mohammad Sadegh Sirjani

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Education

Ph.D. in Computer Science, [University of Texas at San Antonio](#)

Jan. 2025 - Present

GPA: (4.0/4.0)

B.Sc. in Computer Engineering, [Ferdowsi University of Mashhad](#)

Sep. 2018 - Feb. 2024

Cumulative GPA: 16.52 / 20 – 3.01 / 4

Last 60 Credits GPA: 19.16 / 20 – 3.89 / 4

Research Interests

- Internet of Things
- Embedded Systems
- Tiny AI
- Energy Harvesting
- Edge AI
- Deep Learning

Research Experience

Research Assistant

Jan 2025 - Present

ASIC Laboratory, USA

Research Assistant

Aug. 2022 - Jan. 2024

[Software Quality Laboratory](#), Iran

- Studied methods for software analysis and enhancement.
- Obtained execution traces from Java applications using XRebel and JRebel.
- Created techniques to identify code connections (Classes, Interfaces, and Enums) by analyzing the source code.
- Developed a tool to recommend codebase contexts for transitioning monolithic applications to microservices.

Research Assistant

Dec. 2023 – Aug. 2024

[Web Technology Laboratory](#), Iran

- Created and developed a database structure for an application to collect psychological data via surveys.
- Created a web-based API application with a user interface and set up a server to host the application for gathering customer feedback on personal attributes assessments.
- Employed the gathered data and advanced language models (LLMs) to produce improved client reports.
- The application was successfully released and deployed after undergoing iterative upgrades, which involved prompting engineers to achieve better results.

Teaching Experience

Fundamentals of Operating Systems	Fall 2025
Data Science	Summer 2025
Computer Organization	Summer 2025
Fundamentals of Operating Systems	Spring 2025
Fundamentals of Cloud Computing	Spring 2024
Principles of Compiler Design	Fall 2023
Fundamentals of Data Mining	Fall 2023
Fundamentals of Cloud Computing	Fall 2023
Principles of Compiler Design	Spring 2023
Principles of Web Development	Spring 2023
Principles of Web Development	Fall 2022

Work Experience

Software Engineer Mar. 2024 – Sep. 2024

[Taw Intelligent Management Software Company](#), Iran

- Develop web services by industry standards and best practices.
- Optimize NGINX web servers for peak performance.
- Create CI/CD pipelines with GitHub Actions to ensure smooth integration, testing, and deployment.

Software Engineer Sep. 2019 – Mar. 2024

[Andishe Novin Rayvarz Software Company](#), Iran

- Administer databases such as SQL Server and PostgreSQL.
- Utilize Redis for caching solutions.
- Set up web servers using NGINX.
- Enhance RESTful APIs and transfer programs to updated .NET frameworks
- Manage git workflows, CI/CD pipelines, Docker containerization, Kubernetes cluster orchestration, and set up monitoring using Prometheus and Grafana.

Award & Honors

- Winner of 2-Minute Video Presentation Contest at DAC 2025
- Selected as a DAC Young Fellow – 62nd Design Automation Conference (DAC), 2025
- The squad ranked 9th of more than 75 other teams in the 6th Sharif University Programming League.
- Recipient of a scholarship covering full tuition fees in recognition of academic excellence.
- Ranked in the top 1% out of 144,000 competitors in the Nationwide Entrance exam for Iranian universities.

Publication

Journals:

1. Ghaffari, A., Firuzi, V., Maleki, A., **Sirjani, M. S.**, & Abedini Bagha, M. (2024). "QTE-IoT: Q-Learning-Based Task Scheduling Scheme to Enhance Energy Consumption and QoS in IoT Environments". In Proceedings of the *Sustainable Computing: Informatics and Systems Journal* (under revision).
2. **Sirjani, M. S.**, Maleki, A., Pakmehr, A., Abedini Bagha, M., Ghaffari, A., & Pour Haji Kazem, A. A. (2025). "Controller placement in software-defined networks using reinforcement learning and metaheuristics". *Cluster Computing*, 28(10), 660, <https://doi.org/10.1007/s10586-025-05331-y>.

Conferences:

1. Sirjani, M. S., & Sobati-Moghadam, S. (2025). "Optimizing task scheduling in fog computing with deadline awareness". In Proceedings of the *International Journal of Industrial Electronics, Control and Optimization* (under review).
2. **Sirjani, M. S.**, Mousavi, S. A., & Sadeghi, M. (2024), "Data mining and cloud computing for customer pattern analysis and value maximization". In Proceedings of the *QICAR Conference* (pp. 339-344). Institute of Electrical and Electronics Engineers (IEEE). <https://doi.org/10.1109/QICAR61538.2024.10496623>
3. Mousavi, S. A., **Sirjani, M. S.**, Bozorg Zadeh Razavi, S. J., & Nikooghadam, M. (2023), "SecVanet: Provably secure authentication protocol for sending emergency events in VANET". In Proceedings of the *IKT Conference* (pp. 86-91). Institute of Electrical and Electronics Engineers (IEEE). <https://doi.org/10.1109/IKT62039.2023.10433027>
4. Mousavi, S. A., Sadeghi, M., & **Sirjani, M. S.** (2023). "A comparative evaluation of machine learning algorithms for IDS in IoT networks". In Proceedings of the *IKT Conference* (pp. 168-174). Institute of Electrical and Electronics Engineers (IEEE). <https://doi.org/10.1109/IKT62039.2023.10433047>

Language Proficiency

TOEFL iBT (Academic): 89 /120 (Sep. 23rd 2023)

R: 20, L: 20, S: 24, W: 25

Technical Skills

- Proficient in .NET (C#), Python (Flask, Django), Java (Spring Boot), C, and C++ for diverse application development.
- Skilled in SQL (SQL Server, PostgreSQL) for effective data handling
- Proficient in RabbitMQ, Kafka, ELTK, Docker, Kubernetes, and Grafana
- Skilled in markup languages such as LATEX, HTML, and XML to guarantee precise document organization and web content display.
- Proficient at utilizing TensorFlow and Py-Torch to create and implement machine learning models.

Hobbies

Reading classic literature, Learning new languages, Gardening, and horticulture