# Mohammad Sadegh Sirjani

San Antonio, USA
+1 (210) 591-3424
mohammadsadegh.sirjani@utsa.edu

## 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
- Tiny AI
- Edge AI
- Embedded Systems
- Energy Harvesting
- Intermittent Computing

## Research Experience

Research Assistant — Jan 2025 - Now
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

| | |
|---|---|
| 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

- 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, under revision). 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](#)

2. **Sirjani, M. S.**, Ghaffari, A., & Abedini Bagha, M. (Accepted). Optimizing Controller Placement in SDNs Using Enhanced Cellular Learning Automata and Metaheuristic Algorithm. In Proceedings of the [International Journal of Industrial Electronics, Control and Optimization](#)

Conferences:

1. **Sirjani, M. S.**, & Sobati-Moghadam, S. (2024 under review). Optimizing task scheduling in fog computing with deadline awareness. In Proceedings of the [International Journal of Industrial Electronics, Control and Optimization](#)

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](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](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](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