

Shirley (Shaghayegh) Shajarian

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RESEARCH VISION

I research autonomous network operations using large language models and agentic AI to embed autonomy and intelligence into network traffic analysis and operational decision-making for faster threat detection, more efficient automation, and reliable network security.

EDUCATION

North Carolina Agricultural and Technical State University

Ph.D. in Computer Science; GPA: 3.93/4.0.

Jan 2023 – Present

Greensboro, NC

- Advised By: Dr. Sajad Khorsandroo and Dr. Mahmoud Abdelsalam

Science and Research Branch of Azad University

Master of Computer Software Engineering; GPA: 4.0/4.0

Aug 2019

Tehran, Iran

- Advised By: Dr. Ali Movaghar and Dr. Ali Rezaee

University of Mazandaran

Bachelor of Computer Software Engineering

Feb 2016

Babolsar, Iran

PUBLICATIONS AND PREPRINTS

- **Shaghayegh Shajarian**, Kennedy Marsh, James Benson, Sajad Khorsandroo, Mahmoud Abdelsalam.
“ReGAIN: Retrieval-Grounded AI Framework for Network Traffic Analysis”
IEEE International Conference on Computing, Networking and Communications ([IEEE ICNC'26](#))
- **Shaghayegh Shajarian**.
“Towards Autonomous Network Management: AI-Driven Framework for Intelligent Log Analysis, Troubleshooting and Documentation.”
The 39th Annual AAAI Conference on Artificial Intelligence ([AAAI 2025](#))
- **Shaghayegh Shajarian**, Sajad Khorsandroo, Mahmoud Abdelsalam.
“Self-Running Networks: A Comprehensive Survey of Foundations, Applications, and Challenges”
([Preprint Paper](#) 2025, submitted to IEEE Communications Surveys and Tutorials)
- Harikha Manthena*, **Shaghayegh Shajarian***, Jeffrey Kimmel, Mahmoud Abdelsalam, Maanak Gupta, Sajad Khorsandroo.
“Explainable Artificial Intelligence (XAI) for Malware Analysis: A Survey of Techniques, Applications, and Open Challenges”
IEEE Access, 2025 ([Journal Paper](#))
- **Shaghayegh Shajarian**, Sajad Khorsandroo, Mahmoud Abdelsalam.
“Intelligent Network Management: RAG-Enhanced LLMs for Log Analysis, Troubleshooting, and Documentation”
The 20th International Conference on emerging Networking EXperiments and Technologies ([ACM CoNEXT' 24](#))
- Fikirt Demmese, **Shaghayegh Shajarian**, and Sajad Khorsandroo.
“Transfer learning with ResNet50 for malicious domain classification using image visualization”
Discover Artificial Intelligence Journal, 2024 ([Journal Paper](#))

* *Equal Contribution*

PROFESSIONAL EXPERIENCE

Graduate Research Assistant, North Carolina A&T State University, Greensboro, NC

Autonomous Cybersecurity and Resilience Lab, Self-Running Networks Group

Jan 2023 – Present

Graduate Research Assistant, Science and Research Branch of Azad University, Iran

Distributed System Lab, Internet of Things and Resource Management Group

Dec 2017 – Sep 2019

Full Stack Web Developer, Freelance

May 2014 – March 2015

Undergraduate Internship, Hashemi Health Center, Iran

Data Analytics Team

Jun 2014 – Sep 2014

TEACHING EXPERIENCES

Graduate Teaching Assistant , <i>North Carolina A&T State University</i> , Security of Emergent Networks (COMP 826)	Spring 2026
Graduate Teaching Assistant , <i>North Carolina A&T State University</i> , Artificial Intelligence and Machine Learning (COMP 365)	Fall 2025
Instructor , <i>North Carolina A&T State University</i> Artificial Intelligence and Machine Learning (COMP 365) ▪ Teaching a class of 55 students, focusing on the theory and applications of artificial intelligence and machine learning.	Spring 2025
Graduate Teaching Assistant , <i>North Carolina A&T State University</i> Artificial Intelligence and Machine Learning (COMP 365)	Fall 2023, Spring 2024, Fall 2024
Graduate Teaching Assistant , <i>North Carolina A&T State University</i> Security of Emergent Networks (COMP 826)	Spring 2023

STUDENT MENTORING

- Kennedy Marsh (CS Master Student, North Carolina A&T State University, Fall 2024 to Fall 2025)

INVITED TALKS

- The 20th International Conference on emerging Networking EXperiments and Technologies (CoNEXT'24)
- Atlanta University Center Consortium: Intelligent Network Management, RAG enhanced LLMs for log analysis, troubleshooting, and documentation.

HONORS AND AWARDS

2025	AAAI 2025 Student Travel Grant
2024	CoNEXT 2024 NSF Student Travel Grant
2019	Winner of Three Minute Thesis (3MT) Competition
2019	Ranked 2nd in Cumulative GPA among all the Computer Engineering Students

MEDIA COVERAGE

- “Applying generative AI to computer networks”, Interviewed by the [AI hub](#) sponsored by AAAI

PROFESSIONAL SERVICE

Reviewer

IEEE Transactions on Dependable and Secure Computing	Dec 2025
PeerJ	July, Dec 2025
Artificial Intelligence Review	Sep 2025
SPRINGER Computing	July, Sep 2025
Peer-to-Peer Networking and Applications	July, Aug, Sep 2025
Journal of Intelligent Information Systems	July, Aug 2025
Knowledge and Information Systems	June, Aug 2025
Scientific Reports	July 2025
Grace Hopper Conference (+30 workshops, panels, and presentations reviews)	June, July 2025
Cluster Computing	June 2025
IEEE Access	Feb, April 2025

Student Volunteer

- HotNets'25, University of Maryland **Nov 2025**

Judge/Panelist

- Judge in the AI Impact-A-Thon Competition, National Society of Black Engineers (NSBE'25) **Nov 2025**
- Judge in the Academic Technical Bowl, National Society of Black Engineers (NSBE'25) **Oct 2025**

TECHNICAL STRENGTHS

Skills	Machine Learning, Large Language Models, Natural Language Processing, Deep Learning, Data Mining, Generative AI
Languages	Python, C++, R, HTML, CSS, PHP, Java, SQL, MATLAB
Machine Learning Libraries & Packages	Keras, PyTorch, Tensorflow, PySpark, Matplotlib, Scikit-learn, HuggingFace Transformers
Tools	GIT, MySQL, LangChain, LlamaIndex, Bootstrap, LaTeX
Networking & SDN Technologies	RYU Controller Framework, P4, Cisco Packet Tracer, OpenvSwitch, GNS3, Mininet, Scapy