

Kiana Kiashemshaki

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RESEARCH INTERESTS

Cybersecurity | Systems & Cloud Security | IoT & Edge Security | LLM/AI Security | Digital Forensics

EDUCATION

- Bowling Green State University** 2023–2025
Master of Science in Computer Science (Specialization: Cybersecurity) GPA: 3.8/4 Bowling Green, OH, USA
- Azad University** 2015–2019
Bachelor of Computer Engineering (Specialization: Software) GPA: 4/4 Tehran, Iran

RESEARCH EXPERIENCE

- University of Washington** July 2025 – Present
Cybersecurity Researcher Remote, WA, USA
 - Harden ICS/SCADA & microgrid systems, threat-model converters and support secure control designs.
 - Analyze OT/IT logs & traffic, run lab attack sims, craft detections/playbooks.
 - Research smart-grid intrusion detection (ML approaches) and deliver actionable recommendations.
 - Co-design security and fault-tolerance patterns for converters and hybrid microgrids, and evaluate them at system level.
- Bowling Green State University** Jan 2025 – Present
Graduate Research Assistant Bowling Green, OH, USA
 - Study system and cloud security with emphasis on secure OS behavior and runtime monitoring.
 - Reconstruct user activity from Windows artifacts (e.g., LNK/Jump Lists) to support incident timelines.
 - Build clean, repeatable workflows for evidence generation and validation across OS versions.
 - Translate findings into guidance for monitoring, incident response, and secure operations.

TEACHING EXPERIENCE

Bowling Green State University | Graduate Teaching Assistant

- CS 3080 — Operating Systems taught by Prof Hassan Rajaei Fall 2023
- CS 4170 — Introduction to Parallel Programming taught by Prof Hassan Rajaei Fall 2023
- CS 3080 — Operating Systems taught by Prof Hassan Rajaei Spring 2024
- CS 2190 — Computer Organization taught by Prof Hassan Rajaei Spring 2024
- CS 3080 — Operating Systems taught by Prof Hassan Rajaei Fall 2024
- CS 4390 — Network Architecture & Applications taught by Prof Hassan Rajaei Fall 2024
- CS 3080 — Operating Systems taught by Prof Hassan Rajaei Spring 2025
- CS 4390 — Network Architecture & Applications taught by Prof Hassan Rajaei Spring 2025
- CS 4330 — Network Security & Forensics taught by Dr Ruinian Li Spring 2025
- CS 4320 — Computer & Mobile Forensics taught by Dr Ruinian Li Spring 2025

Azad University | Teaching Assistant

- Operating Systems (Undergraduate core) Fall 2017, Spring 2018
- Computer Networks (Undergraduate core) Fall 2018, Spring 2019

VOLUNTEER EXPERIENCE

- The Secure Signals Project** Apr 2025 – Present
Web Application Penetration Tester Remote
 - Perform manual and automated testing on web applications to identify vulnerabilities (OWASP Top 10).
 - Use OWASP ZAP and Burp Suite to simulate attacks, analyze responses, and evaluate security posture.
 - Document findings and provide remediation strategies to improve application resilience.

INDUSTRIAL EXPERIENCE

- **RedApple Digital Health**

Information Security Analyst Intern

Oct 2025 – Present

Tustin, CA, U.S.

- Monitored security alerts using CloudWatch and SIEM tools to detect unusual activity.
- Reviewed user access and ensured roles and permissions followed least-privilege standards.
- Assisted with vulnerability scans using tools like Nessus, Snyk, and OWASP ZAP.
- Helped resolve security issues by updating packages and fixing minor misconfigurations.

- **Hamravesht**

Network Security Engineer

Sep 2021 – Jul 2022

Tehran, Iran

- Configure and monitor IDS/IPS, WAF, and Zero Trust network security controls.
- Modeled and tested traffic flows across proxies/load balancers to characterize tail latency and failure domains, informed HA patterns.
- Responded to network security incidents and performed packet analysis.

SELECTED PUBLICATIONS

- S. Joshi, K. Kiashemshaki, S. Roy. *Comparing LNK File and Jump List Artifacts on Windows 11 with those on Windows 10*. IEEE International Conference on Electro Information Technology (EIT), 2025.
- K. Kiashemshaki, M.J. Torkamani, N. Mahmoudi. *Secure Coding for Web Applications: Frameworks, Challenges, and the Role of LLMs*. arXiv preprint, 2025.
- K. Kiashemshaki, E.N. Chukwuani, M.J. Torkamani, N. Mahmoudi. *Secure and Scalable Blockchain Voting: A Comparative Framework and the Role of Large Language Models*. arXiv preprint, 2025.
- K. Kiashemshaki, M.J. Torkamani, N. Mahmoudi, M.S. Bilehsavar. *Simulating a Bias Mitigation Scenario in Large Language Models*. arXiv preprint, 2025.

MANUSCRIPTS IN PREPARATION

- S. Joshi, K. Kiashemshaki, S. Roy. *Extended Comparative Analysis of LNK File and Jump List Artifacts on Windows 10 and 11 for Advanced Forensic Investigations*. **Submitted to IEEE Transactions on Information Forensics and Security (TIFS)**.
- K. Kiashemshaki, et al. *Secure and Automated System Pipelines for Electrical Power Systems: A Distributed Security Framework*. Manuscript in preparation, 2025.
- K. Kiashemshaki, et al. *A Systematic Review of Cloud Security Monitoring Techniques: From Traditional SIEM to AI-driven Models*. Manuscript in preparation, 2025.

ACADEMIC PROJECTS

- **Developing Hands-On Modules on Digital Forensics**

Educational Project – BGSU

Spring 2025

Bowling Green, OH

- Designed lab modules for disk, memory, and Android forensics that teach beginners how artifacts are created and interpreted.
- Built step-by-step exercises and answer keys to make results reproducible and learning measurable.

- **SQL Injection Vulnerability Testing on DVWA**

Application and Cloud Security Project – BGSU

Fall 2024

Bowling Green, OH

- Evaluated a cloud-hosted web app by executing SQLi test cases (e.g., UNION-based) to expose data leakage risks.
- Mapped findings to OWASP Top 10 and proposed mitigations (parameterized queries, least-privilege DB roles).

- **Memory Forensics to Recover LUKS Encryption Keys**

System Security Project – BGSU

Fall 2024

Bowling Green, OH

- Analyzed OS memory snapshots to locate and validate LUKS key material under controlled lab conditions.
- Demonstrated when keys persist in RAM and discussed defenses (secure erase on lock/suspend, cold-boot resistance).

- **Deleted File Recovery**

System Forensics Project – BGSU

Spring 2023

Bowling Green, OH

- Recovered deleted files and metadata using hex-level inspection and standard forensic workflows.
- Assessed residual data risks (slack space, unallocated clusters) and implications for multi-tenant systems.

TECHNICAL SKILLS & RESEARCH TOOLS

- **Methods & Research:** Threat modeling, fault/attack injection, runtime monitoring, anomaly detection (time series/ML-lite), system-level evaluation, reproducible experiments, incident timelines & postmortems
- **Cybersecurity & Forensics:** Autopsy, Magnet AXIOM, FTK Imager, Eric Zimmerman tools, Wireshark, Snort/Suricata, OWASP ZAP, Burp Suite, incident response
- **Cloud Computing:** AWS, Docker, cloud security & forensics
- **Systems & OS:** Linux/Windows server administration, virtualization (VMware, Hyper-V), Active Directory, DNS, DHCP
- **Programming & Data:** Python (Pandas, NumPy, scikit-learn), SQL, Bash, PowerShell
- **Research Tools:** LaTeX, Git, academic writing & documentation
- **Languages:** English (TOEFL iBT: 107 - Advanced), Persian (Native), Spanish (Limited), Arabic (Limited)

HONORS & AWARDS

- **Full Tuition Waiver — Department of Computer Science** *Bowling Green, OH, USA*
Bowling Green State University Aug 2023 – May 2025
 - Awarded a full tuition waiver for the entire master's program based on academic excellence.
- **ACM Hackathon — 2nd Place** *Bowling Green, OH, USA*
Bowling Green State University Apr 2025
 - Built an emergency-alert app ([Piqniq](#)) in a 24-hour team challenge to support users during panic attacks.
- **Ohio Cyber Range Institute (OCRI) — Statewide CTF, Participant** *Remote*
Ohio Cyber Range Institute Apr 2025
 - Competed in a Capture-the-Flag cybersecurity event, solving real-world security problems in a collaborative team setting.
- **Outstanding Teaching Assistant Award** *Tehran, Iran*
Azad University May 2018
 - Recognized as Best Graduate Teaching Assistant for contributions to Computer Science courses.

SERVICE & PROFESSIONAL MEMBERSHIP

- Member, Women in CyberSecurity (WiCyS) – participated in workshops and community.
- Member, Association for Computing Machinery (ACM) – engaged in research seminars and technical events in computing systems.

GRADUATE COURSEWORK

- **Security/Forensics:** Computer Systems Security, Network Security & Forensics, Computer & Mobile Forensics, Law, Evidence & Procedure in Forensic Science
- **Methods & Data:** Research Methods in Computer Science, Data Science Programming, Data Visualization
- **Software/AI:** Secure Software Engineering, AI for Software Engineering
- **Theory:** Design & Analysis of Algorithms

REFERENCES

- Prof. Hassan Rajaei: Professor of Computer Science, Bowling Green State University (TA supervisor)
hrajayi@bgsu.edu | (419)-372-2002
- Dr. Sankardas Roy: Associate Professor of Computer Science, Bowling Green State University (RA supervisor)
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- Dr. Vahid Dargahi: Associate Professor, School of Engineering & Technology, University of Washington (RA supervisor)
vdargahi@uw.edu | (253)-692-5812
- Dr. Ruinian Li: Associate Professor of Computer Science, Bowling Green State University (TA supervisor & Instructor)
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