NICHOLAS MUSKOPF-STONE

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PROFESSIONAL SUMMARY

Security-conscious software engineer with 7+ years of combined academic and professional experience in computer engineering, high-availability infrastructure, and cybersecurity. Holds dual degrees in Computer Engineering and Engineering Physics, backed by Microsoft Azure and CompTIA Security+ certifications. Proven success in architecting secure Azure environments, implementing RBAC policies, automating CI/CD pipelines across global systems, and leading vulnerability remediation efforts that cut risk by 80%. Passionate about mentoring, cross-functional collaboration, and delivering valuable, secure solutions in enterprise environments.

EDUCATION

Bachelor of Science in Computer Engineering Dec. 2023
University of Illinois at Urbana-Champaign GPA: 3.76/4.0
Relevant coursework: Computer Security I, Computer Systems Engineering, Digital Systems Laboratory

Bachelor of Arts in Engineering Physics May 2022
Augustana College, Rock Island, Illinois GPA: 3.89/4.0
Minors: Mathematics, Computer Science
Dean's List, Fall 2018 - Spring 2021
Relevant coursework: Algorithms and Computational Theory, Principles of Computer Systems

CERTIFICATION

Microsoft Certified: Azure Fundamentals (AZ-900) Microsoft Corporation, Jul. 2024
CompTIA Security+ (SY0-701) CompTIA, Jul. 2025

TECHNICAL SKILLS

- Cloud Technologies: Azure (IAM, RBAC), Azure CLI, PowerShell, CI/CD
- Programming Languages: C, C++, Java, Python, Rust, SQL
- DevOps & Automation: GitHub Actions, Jenkins, Docker, Git, Infrastructure as Code (IaC)
- Testing & Monitoring: JMeter, Pytest, New Relic, Grafana, GDB
- Embedded Systems: CAN, I2C, SPI, TCP/UDP, Microcontroller Programming

WORK EXPERIENCE

John Deere, Moline, Illinois
IT Development Program – Software Engineer I Jan. 2025 - Present

- Developing a CI/CD pipeline using GitHub Actions to automate schema synchronization, resulting in easier migration and more reliable support for 50+ global factory systems
- Leading security remediation efforts, reducing vulnerabilities by 80% in edge computing environments
- Introducing documentation standards and practices to maintain code and database quality, aiding in team knowledge and saving 200+ hours of rework
- Migrating legacy CentOS infrastructure to Container-as-a-Service (CaaS) solutions, improving reliability for 20+ factory systems
- Building New Relic dashboards to visualize API performance, enabling the team to make data-driven decisions on resource allocation

IT Development Program – Infrastructure Engineer I Feb. 2024 - Dec. 2024

- Developed and launched Tenant Management as a Service (TMaaS), providing Microsoft Azure architecture and support services to a network of over 200 John Deere dealerships
- Acted as a primary escalation point for on-premises and hosted domain infrastructure, leading to over 600 incidents closing within an 8-month period
- Implemented Azure Key Vault for secrets management and Azure Bastion for just-in-time VM access, reducing exposure to attacks and improving auditability across dealership tenants
- Engineered automated deployment scripts using PowerShell and Azure CLI to reduce manual setup time by 70%
- Implemented role-based access control (RBAC) policies to enforce least privilege, improve tenant security posture

Intern – Software Engineer, IT Apps May 2023 – Aug. 2023, May 2022 – Aug. 2022
Palo Alto Networks, Santa Clara, California

- Developed a bidirectional incident monitoring system integrating Salesforce and ServiceNow, improving sales representative efficiency by 40%
- Enhanced and refactored an existing component, improving representative response time by 25%
- Designed and implemented test suites for Apex classes with >90% code coverage

RELEVANT PROJECTS

Secure Boot Suite Jul. 2025 – Aug. 2025
Personal Project

- Designed and implemented a secure boot process across ESP32, Arduino Uno, and BeagleBone Black development boards to aid my understanding of RSA/ECDSA signature verification and SHA-256 hashing
- Developed a custom bootloader to verify firmware integrity and authenticity before execution
- Created tooling for firmware signing and automated flashing using Python and OpenSSL to aid in deployment

Tenant Management as a Service (TMaaS) Oct. 2024 – Dec. 2024
IT Development Program – Infrastructure Engineer I, John Deere

- Coordinated with 5 large-scale Deere dealerships to onboard a Microsoft Azure tenant management service
- Delivered premium incident response over a 3-month pilot period, preventing 20+ attacks from reaching tenants
- Led weekly check-ins with dealership management, resulting in 100% user satisfaction
- Utilized Grafana dashboards to quickly detect malicious activity, and Power BI reports to highlight cost savings

COMMUNITY INVOLVEMENT

Committee Lead, Quad City Development Program Networking Committee Jan. 2025 - Present

- Hosting community outings to promote networking with an audience of 275+ John Deere employees in the area
- Coordinating events in consultation with Development Program employees across the John Deere enterprise

Programming Mentor, FRC Team #648 QC ELITE Flaming Squirrels Sep. 2024 - Present

- Mentoring high school students in embedded systems programming for *FIRST* Robotics Competition
- Serving as a liaison between local *FIRST* alumni to foster community outreach and involvement