

Salvatore Skare

DevSecOps Engineer, Security Researcher

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About me

I am currently a DevSecOps Engineer with 8 years of professional experience in software development, and over 13 years of experience writing code. Throughout my academic career, my interest was in machine learning, with a particular interest in reinforcement learning and robotics. For the last 4 years, my focus has been on security, in both a research and DevOps capacity. I have a strong love for learning and creative problem solving.

Technologies I know

- **Programming languages:** Python, C/C++, C#, JavaScript/TypeScript, Java, Bash, PHP, Prolog, Scheme
- **AWS Services:** EC2, ECS, EKS, S3, CloudFormation, WAF, Security Hub, Lambda, Fargate
- **Linux:** Shell, Virtualization, Network and Server Administration, **Distros:** Red Hat, Debian, Ubuntu, Proxmox, Arch
- **Machine Learning:** TensorFlow, SciPy, Decision Trees, SVM, DNN, CNN, RNN, GAN models.
- **Tools:** Git, Docker, CI/CD (GitHub, GitLab, Azure DevOps), Metasploit, Kubernetes, Wireshark, SQL (MSSQL, sqlite, MariaDB, PostgreSQL)
- **Embedded:** ARM Linux, AVR Microcontrollers, ESP8266, Circuit Design and Fabrication, Robotics, FreeRTOS

Professional experience

Trane Technologies, DevSecOps Engineer

La Crosse, WI
Nov 2023 – Present

- Added automated SAST scans and code coverage to existing CI/CD pipelines, improving overall security and developer experience.
- In charge of finding and patching vulnerabilities in existing application code and infrastructure, as well as making recommendations to further drive the company's cybersecurity goals.
- Designed a serverless cloud compute environment using AWS services to run building energy usage simulations with vast parallelization.
- Assisted with gathering findings for cybersecurity audits, such as SOC2 and US Federal Self Attestation.

GrammaTech, Security Research Engineer

Ithica, NY
(Remote)
Jan 2022 – Sept 2023

- Helped develop the state-of-the-art [ARTCAT](#) application runtime monitoring and response tool, including adding new language features to the [Tiffin](#) policy language and compiler and new responses for the reasoning engine.
- Worked on the [DDISASM](#) disassembler and related tools for automated analysis and hardening of binaries and firmware images.
- Implemented a fast and robust machine learning solution for test-driven source code reduction at scale.
- Created CI/CD pipelines for automated testing of binary-rewriting algorithms.

University of Wisconsin - La Crosse, Full Stack Web Developer

La Crosse, WI
Sep 2016 – Dec 2021

- In charge of maintaining and adding features to [uwlax.edu](#), as well as internal web-based tools for faculty and students.
- Built a blogging plugin for Optimizely EpiServer with a JavaScript based templating engine.
- Designed and launched an interactive online graduation experience during COVID-19 in 2 months.
- Created a custom container-based system monitoring tool using a Flask API and an Angular front-end.

Education

BS University of Wisconsin - La Crosse, Computer Science

Sept 2016 – Dec 2019

- Minor in Physics with an emphasis in Astronomy.
- Awarded the Dean's Distinguished Fellow's grant in 201.8
- Presented research at the 2019 Midwest Instruction and Computer Symposium and the 2019 National Conference of Undergraduate Research.

PhD (incomplete) University of Wisconsin - Madison, Computer Science

Sept 2020 – May 2021

- Completed graduate coursework pertaining to machine learning and program synthesis/repair.
- TA'd the Computer Architecture introduction course with over 500 students.