Jonathan Prokos

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WORK HISTORY

Two Six Technologies **Arlington, VA**

Lead Security Research Engineer October 2025 - Present

- Responsible for program delivery across research domains including ML and binary VR/RE
- Win new work by proposing on internal/customer interests & facilitate new external partnerships

Senior Security Research Engineer Jan 2024 - September 2025

- Led HARDEN program as Principal Investigator since March 2024; secured continuation of work through downselection; recovered healthy profit margin from poor financial position
    - Developed automated & scalable vulnerability analysis pipeline integrated with external performer tooling targeting UEFI and Linux Kernel "weird machines"
- Led 3 direct reports on 5G wireless program, presented biweekly findings to team & customer
- Led technical direction of DARPA proposal focused on deriving demographic info from code
    - Led discussions with internal & external partners to develop finalized text & figures
- SME on red/blue AI program; platform developer and produced evaluations of performer defenses
- Interface directly with customers to interpret high level requirements and provide technical insight
- Responsible for handling urgent deadlines such as demo or write-up requests across programs

Staff Security Research Engineer July 2022 - Dec 2023

- Developed binary similarity analysis framework utilizing elasticsearch database for efficient search
    - Published blog post outlining development process to bolster company brand
- Developed novel attack modifications to successfully break SOA defenses across three modalities
- Managed summer intern; provided the necessary support for him to contribute meaningful work
    - Returned as intern the following two years; worked again as my direct report in 2025
- Wrote advanced dataflow analysis for COTS vulnerability detection platform using BinaryNinja
- Verified and documented source of randomness for first FIPS compliant javascript crypto library
- Built pipeline for final deliverable of audio-physical machine learning project

Matthew Green Lab - Johns Hopkins Information Security Institute **Baltimore, MD**

Research Assistant - First author and presenter for publication in USENIX '23 June 2020 – June 2022

- Performed security analysis of locality sensitive image hashing algorithms such as PhotoDNA and PDQ to determine resistance to a variety of privacy attacks using novel ML techniques
- Designed threat models to describe potential attack vectors within existing encryption schemes
- Developed ML pipeline for testing new hashing algorithms against these threat models

EDUCATION

Johns Hopkins University **Baltimore, MD**

Bachelor of Science in Computer Science, Applied Math & Statistics Minor May 2021

Master of Science in Security Informatics - Masson Fellowship May 2022

SKILLS

Languages: Python, C, C++, Java, Bash, HTML/CSS, JQuery, MatLab, R, Golang, x86, Rust

Other Skills: PyTorch, TensorFlow, Binary Ninja, Ghidra, IDA, Docker, Git, CI/CD, Android Studio, Slurm, Unix/CLI, Agile/Scrum, Kali, 5G/NR, ElasticSearch, QEMU, Proposal Writing

Interests/Experience: Privacy, Health-Based Security, Cryptology, Adversarial AI, Reverse Engineering, Full Stack Development, Bioinformatics, Data Science

Hobbies: Climbing, Golf, Baseball, Home Tech Projects, Gaming, Tutoring, Piano, Tundra & Tonka (cats)

Recommendations may be furnished upon request.