

Aleksandr Nahapetyan

✉ anahape@ncsu.edu
🌐 ale0x78.github.com

Research Interests

My research interests span the areas of systems security, reverse engineering, threat intelligence, phishing, network and web security. Currently, my research is related to malware deobfuscation, the security of CI/CD ecosystems, and SMS phishing.

Education

- 2020–2025 **Ph.D. in Computer Science**, *NC State*, Raleigh
Advisors: **Dr. Alexandros Kapravelos** and **Dr. Brad Reaves**
- 2017–2020 **B.S. in Computer Science**, *NC State*, Raleigh

Publications

- [1] A. Nahapetyan, S. Prasad, K. Childs, *et al.*, “On SMS Phishing Tactics and Infrastructure,” in *Proceedings of the IEEE Symposium on Security and Privacy*, May 2024.
- [2] S. Muralee, I. Koishybayev, A. Nahapetyan, *et al.*, “ARGUS: A Framework for Staged Static Taint Analysis of GitHub Workflows and Actions,” in *Proceedings of the USENIX Security Symposium*, Aug. 2023.
- [3] I. Koishybayev, A. Nahapetyan, R. Zachariah, *et al.*, “Characterizing the Security of Github CI Workflows,” in *Proceedings of the USENIX Security Symposium*, Aug. 2022.
- [4] A. Nahapetyan, K. Childs, S. Prasad, B. Reaves, and A. Kapravelos, “Poster: Looking at the landscape of sms phishing,” in *Network and Distributed System Security (NDSS)*, 2022.

Skills

- Expert** Python, Git, C/C++, Linux
- Advanced** Rust, JS, x86 Assembly, Java, MongoDB
- Intermediate** Lua, RPL, Regex, Go, MySQL
- Beginner** NimLang, ARM Assembly, GraphQL
- Classwork** Network Security, Computer Security, Cryptography, Software Engineering, Graph Theory

Work Experience

Research

- 2021–present **Research Assistant**, *WSPR Lab*
While being advised by **Dr. Alexandros Kapravelos** and **Dr. Brad Reaves** I am working on studying cellular security, web security and measurement, and supply chain vulnerabilities.

2019–2020 **Undergraduate Researcher**, *CSC Department*

Undergraduate researcher under Dr. Jennings studying theoretical and practical methods in transforming Regular Expressions in Parsing Expression Grammars. Specifically, we were working on transforming regular expressions in an AST representation for the Rosie Pattern Language (RPL).

Teaching

Spring 2023 **Mentored Teaching Fellow**, *CSC405: Computer Security*, NC State

Hosted Office hours to walk students through Reverse Engineering, Binary and Web Exploitation, and Shellcode Development. Created supplemental reading material for students.

Instructor: **Dr. Alexandros Kapravelos**

Spring 2021/2022 **Teaching Assistant**, *CSC405: Computer Security*, NC State

Hosted Office hours to walk students through Reverse Engineering, Binary and Web Exploitation, and Shellcode Development. Created supplemental reading material for students.

Instructor: **Dr. Alexandros Kapravelos**

Fall 2020 **Teaching Assistant**, *CSC474: Network Security*, NC State

Delivered a lecture on the basics of DNS and DNS Security. Responsible for grading major project assignments and going over the solutions with students.

Instructor: **Dr. William Enck**

Miscellaneous

Sprint 2017 **Participant**, *District-C*, Durham, NC

A unique experience where High schools nominate a few of their students as potential problem-solvers and leaders for a certain problem-solving experience. Participants who were selected by the management of the initiative (myself included), were put into small groups to research, design, develop, and pitch a solution to/for local business partners.

Spring 2018–
Fall 2018 **Student Mentor**, *New Student Programs*, Raleigh

Hired as one of the 25 Summer Start Mentors to be a student leader for NC State's New Student Program. During the Summer and Fall semesters, my responsibilities were engaging with incoming students to ensure a smooth transition to campus, event programming, event logistics, and upholding a proper representation of the University. Trained during Spring.

2018–2020 **Helpdesk Consultant**, *OIT*, Raleigh

Hired as a consultant for a general IT workgroup at NC State University. Daily responsibilities include customer service and technical troubleshooting for local staff, students, and visiting scholars.

Summer 2017 **Intern**, *Ocean XPrize Team*, Durham, NC

Summer internship at Duke University working on different drone fragments that would go on to participate in the Ocean Xprize project. Main project responsibilities included GPS and long-range radio.

Service

Sub-reviewer IEEE Symposium on Security and Privacy

2023

Press

Tuesday Talks go.ncsu.edu/x2oh3fv

On SMS Phishing Tactics and Infrastructure

Github's Blog go.ncsu.edu/q8r8sh9

ARGUS and workflow security

Research Mentorship

Undergraduate Research Kanv Khare: Javascript API usage in phishing *Fall-Spring 2023*

Undergraduate Research Kevin Schwarz: Javascript API usage in phishing *Fall-Spring 2023*

Languages

Armenian Fluent *1st language*

Russian Fluent

English Fluent