

# Lorenzo C. Neil

Doctoral Candidate - Department of Computer Science - North Carolina State University

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Country of Citizenship: USA

## SUMMARY

Doctoral Candidate with 5 years of research experience in usable security, human factors in cybersecurity, and developer secret management practices. Interested in lead research roles related to cybersecurity, software development, or user-centered design.

## EXPERTISE AND SKILLS

<b>Programming</b>	C, C++, Python, PHP, HTML/CSS, JavaScript, R, LaTeX
<b>Operating Systems</b>	Windows, Fedora, Linux, macOS
<b>Research Methods</b>	Survey Design, Interview Design, Qualitative & Quantitative Analysis
<b>Tools</b>	Nvivo Coding, Virtual Machines, Microsoft Office, Qualtrics, MATLAB, MYSQL

## EDUCATION

North Carolina State University, Raleigh NC  
**Ph.D. (Doctor of Philosophy)** in Computer Science, **GPA: 3.67/4.00**  
Expected Graduation Date: Fall 2024  
NC State LSAMP Bridge to Doctorate Fellowship  
Graduate Fellowship for Stem Diversity  
**Relevant Coursework:** Computer and Network Security, Advanced Network Security, Human-Computer Interaction

University of Maryland, Baltimore County, Baltimore MD  
**Bachelor of Science in Computer Science, GPA: 3.25/4.00**  
Graduation Date: Spring 2019  
UMBC Meyerhoff Scholar

**Relevant Coursework:** Software Engineering, Statistics, Data Science, Privacy, Information Retrieval

## RESEARCH EXPERIENCE

**National Institute of Standards and Technology (NIST)**  
**GMSE Fellowship Program (Remote)** **Spring 2022 - Present**  
**100 Bureau Dr, Gaithersburg, MD**  
**Supervisor: Dr. Julie Haney, (301) 975-6772, may be contacted**  
**Hours: 10/week during academic year, 40/week during summer** **Salary: Fellowship Stipend**

INTERVIEWING NON-EXPERTS ABOUT CURRENT CYBERSECURITY DEFINITIONS **Summer 2023 - Present**

- Interviewing non-experts to evaluate appropriateness of current definitions for cybersecurity.
- Contributing to full study towards promoting better terminology for communicating cybersecurity.

SURVEY ANALYSIS ON PERCEPTIONS OF VISUAL PHISHING CUES WITHIN PHISHING EMAILS **Summer 2023 - Present**

- Surveying employees to investigate their perceptions for different types of visual phishing cues.
- Contributing to full study towards investigating people's ability to identify different types of phishing cues.

PRELIMINARY ANALYSIS OF CYBERSECURITY DEFINITIONS FOR NON-EXPERTS **Spring 2022 - Spring 2023**

- Evaluated terms and components frequently used in cybersecurity definitions that non-experts likely encounter.

PRELIMINARY ANALYSIS OF VISUAL PHISHING CUES WITHIN PHISHING EMAILS **Spring 2022 - Spring 2023**

- Applied NIST Phish Scale (NPS) to identify the prevalence and frequency of visual phishing cues within real-world phishing emails.

**North Carolina State University (NCSU)** **Fall 2019 - Present**

**Graduate Research Assistant, Wolfpack Security and Privacy Research Lab (WSPR)**  
**Advisor: Dr. Bradley Reaves, (919) 513-7835, may be contacted**

**Raleigh, NC 27695**  
**Salary: Graduate Stipend**

IDENTIFYING CHALLENGES WITH USING SECRET MANAGEMENT TOOL DOCUMENTATION Fall 2023 - Present

- Identifying challenges developers face while using tool documentation to learn secret management tools.
- Managing research goals and timeline, as well as developing research protocol.

INTERVIEWING AUTHORS TO UNDERSTAND HOW THEY PRODUCE SECURITY ADVICE Fall 2021 - Spring 2023

- Interviewed authors of security advice to learn the full advice creation process, key decision making, and challenges for security advice content creation.
- Trained team researchers in analyzing interview transcripts.

IDENTIFYING CHALLENGES DEVELOPERS FACE WITH CHECKED-IN SECRETS Spring 2022 - Fall 2022

- Analyzed developer's questions and related solutions about checked-in secrets.

CATEGORIZING BEST PRACTICES IN SECRET MANAGEMENT ADVICE FOR DEVELOPERS Fall 2021 - Spring 2022

- Reviewed online advice related to secret management to categorize best developer and organizational practices for managing secrets.

INVESTIGATING WEB SERVICE ACCOUNT REMEDIATION ADVICE Spring 2020 - Spring 2021

- Identified five key phases for online account compromise remediation.
- Trained team researchers to analyze the quality of account remediation advice from popular web services.

**University of Maryland, Baltimore County (UMBC)**

**Undergraduate Student Researcher**

**Advisor: Dr. Anupam Joshi, (410) 455-2590, may be contacted**

**Fall 2015 - Spring 2019**

**1000 Hilltop Cir, Baltimore, MD 21250**

MINING CYBER THREAT INTELLIGENCE ABOUT OPEN-SOURCE PROJECTS AND LIBRARIES Summer 2018

- Mined threat intelligence about open-source systems from issue reports in GitHub public code repositories.
- Tracked library and project dependencies for installed software on a client machine.
- Represented all stored threat intelligence and software dependencies in a security knowledge graph.

## **PUBLICATIONS**

### **Conference Publications (Peer Reviewed)**

1. *Who Comes Up with this Stuff? Interviewing Authors to Understand How They Produce Security Advice*  
Lorenzo Neil, Harshini Sri Ramulu, Yasemin Acar, Bradley Reaves  
Nineteenth Symposium on Usable Privacy and Security (SOUPS), Aug 2023
2. *Analyzing Cybersecurity Definitions for Non-experts*  
Lorenzo Neil, Julie Haney, Kerriane Buchanan, Charlotte Healy  
Seventeenth IFIP International Symposium on Human Aspects of Information Security & Assurance (HAISA), July 2023
3. *What Challenges Do Developers Face About Checked-in Secrets in Software Artifacts?*  
Setu Basak, Lorenzo Neil, Bradley Reaves, Laurie Williams  
IEEE/ACM International Conference on Software Engineering, May 2023
4. *What are the Practices for Secret Management in Software Artifacts?*  
Setu Basak, Lorenzo Neil, Bradley Reaves, Laurie Williams  
IEEE Secure Development Conference (SecDev), Oct 2022
5. *Investigating Web Service Account Remediation Advice*  
Lorenzo Neil, Elijah Bouma-Sims, Evan Lafontaine, Yasemin Acar, and Bradley Reaves

Seventeenth Symposium on Usable Privacy and Security (SOUPS), Aug 2021

6. *Mining Threat Intelligence about Open-Source Projects and Libraries from Code Repository Issues and Bug Reports*

Lorenzo Neil, Sudip Mittal, Anupam Joshi

IEEE International Conference on Intelligence Security Informatics (ISI), Nov 2018

#### Posters

1. *Peering into the Phish Bowl: An Analysis of Real-World Phishing Cues*

Lorenzo Neil, Shanee Dawkins, Jody L. Jacobs, Julia L. Sharp

Nineteenth Symposium on Usable Privacy and Security (SOUPS), Aug 2023

2. *Cybersecurity Definitions for Non-Experts*

Lorenzo Neil, Julie Haney, Kerriane Buchanan, Charlotte Healy

Nineteenth Symposium on Usable Privacy and Security (SOUPS), Aug 2023

3. *Mining Cyber Threat Intelligence about Open Source Projects and Libraries*

Lorenzo Neil, Sudip Mittal, Anupam Joshi

UMD Louis Stokes Alliance Minority Participation Research Symposium (LSAMP), Dec 2018

#### PRESENTATIONS

##### **Symposium on Usable Privacy and Security (SOUPS)**

Summer 2023

- Powerpoint presentation: "Who Comes Up with this Stuff? Interviewing Authors to Understand How They Produce Security Advice".

##### **Symposium on Usable Privacy and Security (SOUPS)**

Summer 2023

- Poster presentation: "Cybersecurity Definitions for Non-Experts".

##### **IFIP International Symposium on Human Aspects on Information Security & Assurance**

Summer 2023

- Powerpoint presentation: "Analyzing Cybersecurity Definitions for Non-experts".

##### **Capital-Area Colloquium on Trustworthy and Usable Security/Privacy (CACTUS/P)**

Spring 2022

- Powerpoint presentation: "Investigating how Experts write General Security Advice".

##### **Symposium on Usable Privacy and Security (SOUPS)**

Summer 2021

- Powerpoint presentation: "Investigating Web Service Account Remediation Advice".

##### **Who Are You?? Adventures in Authentication Workshop (WAY)**

Fall 2020

- Powerpoint presentation: "Investigating Web Service Account Remediation Advice".

##### **UMD Louis Stokes Alliance Minority Participation Research Symposium (LSAMP)**

Fall 2018

- Powerpoint presentation: "Mining Cyber Threat Intelligence about Open Source Projects and Libraries".

##### **IEEE Intelligence and Security Informatics (IEEE ISI) 2018 Conference**

Fall 2018

- Powerpoint presentation: "Mining Cyber Threat Intelligence about Open Source Projects and Libraries".

#### HONORS & AWARDS

Dean's List

Fall 2017

UMBC Meyerhoff Scholar

Fall 2015 – Spring 2019

UMBC NSA Scholar

Fall 2015 – Spring 2019

NC STATE Bridges To Doctorate Fellowship Scholar

Fall 2019 - Fall 2021

NC STATE Black Graduate Student Association (BGSA) Treasurer

Fall 2020 - Fall 2022

Graduate Fellowship for Stem Diversity (GFSD) Recipient

Fall 2022 - Present

NIST Graduate Student Measurement Science and Engineering (GMSE) Fellowship Program

Summer 2022 - Present