

Aaron R. Ortwein

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Education:

Doctor of Philosophy, Computer Science and Engineering

University of Michigan (UM), Ann Arbor, MI

Expected May 2028

Master of Science, Computer Science

University of Maryland (UMD), College Park, MD

September 2022 - May 2023

- GPA: 4.0

Bachelor of Science, Computer Science | Cybersecurity Minor

University of Maryland (UMD), College Park, MD

September 2019 - May 2022

- Honors College — Advanced Cybersecurity Experience for Students Living-Learning Program (ACES LLP), ACES Minor Program, Computer Science Departmental Honors
- GPA: 3.954 (Cum Laude)

Technical Experience:

Computer Science

September 2019 - Present

- *Graduate Computer and Network Security (CMSC614)*: Implemented and evaluated a variant of website fingerprinting attacks in which an adversary predicts a set of potentially visited websites from a single observation and predicts the exact visited websites by identifying similar websites between multiple prediction sets
- *Departmental Honors Thesis and Master's Scholarly Paper*: Measured and characterized the functionality of Internet censorship mechanisms deployed by Russian internet service providers, and discovered packet-manipulation strategies for evading them

Work Experience:

Research Intern, University of Maryland, College Park

June 2023 - August 2023

- Published and presented short paper in Free and Open Communications on the Internet (FOCI) 2023 on Internet censorship performed on transit traffic by Russian Internet Service Providers
- Led team of two undergraduate interns in a research project to investigate extent of Internet censorship by transit Internet service providers on a global scale
- Mentored two undergraduate interns throughout a research project to develop a novel website fingerprinting attack against the Tor network

Teaching Assistant, University of Maryland, College Park

September 2020 - May 2023

- Assisted students in learning introductory Unix concepts (HACS201) and the design and execution of a semester-long cybersecurity group research project (HACS202)
- Updated HACS201 instruction materials (lecture slides, homework assignments, and quizzes) to better assist students in learning course concepts and better prepare them for HACS202
- Updated HACS202 class infrastructure, including migrating to LXC/LXD containers and writing Python, JavaScript, and Bash code to automate/simplify project setup

System Security Analyst Intern, T. Rowe Price

Summer 2021, Summer 2022

- Performed daily tasks in support of Identity and Access Management operations, including writing SQL queries to update or confirm access and investigating and resolving access issues
- Leveraged SQL and Microsoft Excel to analyze free-form text fields in database records and recommend new access options for associates