

Education

- Northeastern University** (expected) Winter 2025
PhD Computer Science
- University of Southern California** Dec. 2014
MS Computer Science
- University of California, Los Angeles** Jun. 2012
BS Mathematics
BA Design & Media Arts

Publications

- Ryan Williams**, Anthony Gavazzi, Engin Kirda (2024). [Enhancing Network Security through Vulnerability Monitoring](#). NSS 2024.
- Zachary Ratliff, Wittmann Goh, Abe Wieland, James Mickens, **Ryan Williams** (2024). [Holepunch: Fast, Secure File Deletion with Crash Consistency](#). IEEE S&P 2024.
- Ryan Williams**, Anthony Gavazzi, Engin Kirda (2023). [Solder: Retrofitting Legacy Code with Cross-Language Patches](#). SANER 2023.
- Anthony Gavazzi, **Ryan Williams**, Engin Kirda, Long Lu, Andre King, Andy Davis, Tim Leek (2023). [A Study of Multi-Factor and Risk-Based Authentication Availability](#). USENIX Security 2023.
- Tongwei Ren, **Ryan Williams**, Sirshendu Ganguly, Lorenzo De Carli, Long Lu (2022). [Breaking Embedded Software Homogeneity with Protocol Mutations](#). LNICST 2022.
- Amogh Pradeep, Hira Javaid, **Ryan Williams**, Antoine Rault, David Choffnes, Stevens Le Blond, Bryan Alexander Ford (2022). [Moby: A blackout-resistant anonymity network for mobile devices](#). PETS 2022.
- Ryan Williams**, Tongwei Ren, Lorenzo De Carli, Long Lu, Gillian Smith (2021). [Guided Feature Identification and Removal for Resource-constrained Firmware](#). TOSEM 2021.
- Mansour Ahmadi, Reza Mirzazade Farkhani, **Ryan Williams**, Long Lu (2021). [Finding Bugs Using Your Own Code: Detecting Functionally-similar yet Inconsistent Code](#). USENIX Security 2021.
- Alexander Heinricher, **Ryan Williams**, Ava Klingbeil, Alex Jordan (2021). [Weldr: fusing binaries for simplified analysis](#). SOAP 2021.
- Elin Carstensdottir, Erica Kleinman, **Ryan Williams**, Magy Seif Seif El-Nasr (2021). ["Naked and on Fire": Examining Player Agency Experiences in Narrative-Focused Gameplay](#). CHI 2021.

Working Experience

- BitSight Technologies** Aug. 2023 - present
Senior Research Scientist
- Working on the product research team primarily focused on developing new methodologies for deriving graded risk vectors.
 - Collaborating with cross-functional teams to enhance risk scoring algorithms.
- Raytheon BBN Technologies** 2014 - 2023
Scientist
- Worked as a developer and technical lead on numerous DARPA and IARPA projects in the networking and cybersecurity domains.

- Contributed to DARPA program proposals, wrote white papers, and published technical works.
- Worked part-time for the artificial and machine intelligence group with an NLP focus.

Northeastern University

2018 - present

Research Assistant

- Worked on various projects in the cybersecurity and privacy institute, mainly focused on program analysis and transformation for security.
- Mentored junior researchers on program analysis-related projects.

Teaching Experience

Northeastern University

Spring 2025

Teaching Assistant

Northeastern University

Spring 2021

Lecturer

Northeastern University

Fall 2020

Teaching Assistant

Professional Services

IEEE Symposium on Security and Privacy (S&P)

2022

Reviewer (Special Issue)

FEAST Workshop

2020

Organizational Committee

Technical Skills

Programming Languages Software

C/C++, Rust, OCaml, Python, Racket, Java, JavaScript, Bash
Coq, Spark, Hive, OpenSearch, SQL, Git, LaTeX, Docker