Rachel McAmis

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EDUCATION

University of Washington Expected PhD, Seattle **Cumulative GPA:** 3.94
September 2022 – June 2026
University of Washington Bachelor of Science, Seattle
Cumulative GPA: 3.84, Cum Laude
Paul G. Allen Center for Computer Science & Engineering, Interdisciplinary Honors
September 2018 – June 2022, B.S. in Computer Science with Interdisciplinary Honors
Relevant Technical Courses: Natural Language Processing, Machine Learning, Artificial Intelligence, Computer Vision, Cryptography, Modern Algorithms (ML-focused), Algorithms, Software Design and Implementation, Security, Hardware Security, Security Research Seminar, Quantum Computing, Theory of Computation, Data Structures and Parallelism, Hardware/Software Interface, Systems Programming, Calculus, Linear Algebra, Differential Equations

INDUSTRY EXPERIENCE

SWE Intern – Microsoft Security, Compliance, and Management
June 2021 - September 2021
- Implemented app to automatically rotate important secrets for Microsoft Threat Experts
- Decreased Azure service outages and manual secret rotation for engineers
Solutions Architect Intern—Amazon Web Services
June 2020 - September 2020
- Implemented AWS infrastructure solution proof-of-concept for restaurant chain
- Acted as project manager for other interns and developed AWS teaching tools to directly impact hundreds to thousands of partners
Skills used: AWS infrastructure/development

PUBLICATIONS

R. MCAMIS, M. Sim, M. Bennett, T. Kohno. "Over Fences and Into Yards: Privacy Threats and Concerns of Commercial Satellites." Privacy Enhancing Technologies Symposium (2024).
R. MCAMIS, T. Kohno. "The Writing on the Wall: Personal Information in (not so) Private Real Estate." Usenix Security (2023).
E. Zeng, R. MCAMIS, T. Kohno, F. Roesner. "What Factors Affect Targeting and Bids in Online Advertising? A Field Measurement Study." IMC (2022).
L. Organick, B. H. Nguyen, R. MCAMIS et al. "An Empirical Comparison of Preservation Methods for Synthetic DNA Data Storage." Small Methods (2021).

RESEARCH EXPERIENCE

Graduate Research Assistant UW Security and Privacy Research Lab
June 2023 – Present
- Exploring the current vulnerabilities of satellites.
Skills in progress: Network security, security analysis of software
Graduate Research Assistant UW Security and Privacy Research Lab
June 2022 – June 2023
- Understanding the privacy threats and implications of commercial satellite imagery technology.
Skills used: Commercial drone piloting, qualitative coding, user studies
Undergraduate/Graduate Research Assistant UW Security and Privacy Research Lab, Indoor Mapping
September 2021 – June 2022
- Independent project advised by faculty exploring the sensitive information revealed in the emerging technology of 3D indoor mapping.

Skills used: Python, qualitative coding

Undergraduate Research Assistant UW Security and Privacy Research Lab, Ad Prices
September 2020 – June 2022
- Co-developed a browser extension to study the relationships between pricing/topic of ads and ad targeting, using information on real users' browsing profiles. Extension can be found at https://github.com/eric-zeng/ad-ecologist.
Skills used: TypeScript, web programming backend and frontend, statistics

Undergraduate Research Assistant UW Security and Privacy Research Lab, Cybersecurity-Bio team
December 2019 - June 2020
- Exploiting different components of a liquid handling robot (used in biology, research, pharmaceuticals)
Skills used: Wireshark, Python, reverse engineering, computer architecture/security

Undergraduate Research Assistant UW Molecular Information Systems Lab (MISL)
May 2019 - January 2020
- 3rd author in publication, Paid research on DNA archival storage experiments error analysis
Skills used: Python, data visualization, statistical analysis, Matplotlib

PROJECTS
Tidbit (trytidbit.com) Increasing discoverability of small and medium articles
November 2022 - April 2023
Skills used: AWS, SQL, Python, web design, SQL, backend development

Hardware Security Evaluating Traditional Cache Side-Channel Attacks on AWS Graviton Processor (Class Project)
March 2022 - June 2022
Successfully executed multiple hardware side-channel attacks on AWS Graviton3 processor

Computer Vision (Class Project)
May 2023 – June 2023
Generated and tested approaches for manipulating state-of-the art shadow generation algorithms with the goal of making them closer to real-time

SKILLS
Proficient: Solutions Architect Associate Certified | Azure, AWS | Python, Java, C, CSS HTML | Git | LaTeX | Linux/Command Line | TypeScript
In Progress: Wireshark, Cryptographic protocols, C++, React, SQL injection, Buffer overflow

ORGANIZATIONS
Team Type 1 Diabetes Ambassador 2018-2019| ACM CSE Student Mentor 2019-2020| Club Northwest Running (15 hrs/week) | Batman's Kitchen (UW Hacking Club) 2018-2019| American Indian Society of Engineering and Science (AISES)

HONORS
Certifications: Seal of biliteracy | *Scholarships*: Team Type 1 (type 1 diabetic athletes), Verplank (four-year for type 1 diabetic athletes), AISES Chevron 2018 and 2020, UW Mary Gates Honors (two years full-ride), Rotary, AISES Video Gaming Technologies, PEMCO, Chickasaw Nation Higher Education grant, Sound Credit Union