Mary Cotrupi

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EDUCATION

Rensselaer Polytechnic Institute (RPI)   Troy, NY
BS in Computer Science and Information Technology & Web Science | GPA: 3.8/4.0   **Aug 2023 - May 2027**

- **Concentrations**: Artificial Intelligence, Machine Learning, Data Science, and Information Security
- **Coursework:** Data Structures, Computer Organization, Foundations of Computer Science (Discrete Math), Intro to Algorithms, Principles of Software, Web Science & Systems Development, Cloud Security, Managing IT Resources

TECHNICAL SKILLS

Technologies: Java, Python, C++, Kali Linux, Git, MS Azure, Nmap, React, Node.js, R/R Studio, HTML/CSS/JavaScript, PHP, SQL, Burp Suite, Wireshark, C, Assembly (MIPS), MongoDB, Verilog, Qiskit

Certifications: ISC2 Certified in Cybersecurity (CC), CompTIA IT Fundamentals+ (ITF+)

EXPERIENCE

Research Assistant | Rensselaer Cybersecurity Collaboratory   **Aug 2024 – Present**
Ethics of Generative AI for Cybersecurity Training

- Callahan, Brian, Quinn Colognato, and **Mary Cotrupi**. 2024. *"Generative AI for Cybersecurity Awareness Training: Skills, Strategies, and Accountabilities."* BSides St. Pete Conference, FL 2024. Sep. 14, 2024.

Augmented Reality CTF Pedagogy

- Callahan, Brian Robert, Sanya Joseph, Shoshana Sugerman, Quinn Colognato, Aanya Mehta, Tanvi Mehta, Emily Goldman, **Mary Cotrupi**, Ishneet Kaur, Victoria Cai, Gabriel Bezerra, Adam Kaplan, Arielle Revis, Lala Liu, Samuel Leung, Elif Kulahlioglu, Rachel Schneider, Mikah Schueller, Quinn Sharp, and James Porvazik. Forthcoming. *"RC3TF, an Augmented Reality CTF: A case study in improving cybersecurity pedagogy for the undergraduate research laboratory."* Proceedings of the 20th Annual Symposium on Information Assurance (ASIA). University at Albany. Albany, NY. Jun. 3-4, 2025.

Cyber Sentinel Skills Challenge | U.S. Department of Defense   **June 2025**

- Selected participant in a competitive national cybersecurity challenge hosted by the DoD, testing skills in Forensics, Malware/Reverse Engineering, Networking & Reconnaissance, OSINT and Web Security

National Cyber League (NCL) Competition | Cyber Skyline   **Aug 2023 – Present**

- Specialized in Enumeration & Exploitation, Password Cracking, and Open-Source Intelligence; ranked in the top 10% of 4,199 teams nationally (Spring 2024)

LEADERSHIP & HONORS

ISC2 Capital District NY Chapter   **Aug 2024 - Present**

- Organized monthly chapter meetings, bringing together students and cybersecurity professionals
- Worked with ISC2 leadership to create a cybersecurity academic conference and career fair at RPI

ACM-W (Women in Computing) | Rensselaer Polytechnic Institute   **Aug 2023 – Present**

- Mentored underrepresented first-year CS students and led Spring 2024 fundraising strategy as elected finance chair

Rensselaer Cybersecurity Collaboratory   **Aug 2023 – Present**

- Student Leader & Admin - organized and led weekly CTF team meetings, teaching topics on Reverse Engineering, Insider Threats, and Cyber Forensics

PROJECTS

Mongoose – AI-Powered Resume Optimization Platform | RPI ITWS-4500   **Spring 2025**

- Developed full-stack web application utilizing MongoDB, Express, React.js, Node.js, and Python (FastAPI) to automate resume enhancement based on AI and job description analysis. Integrated ATS scoring and hosted on MS Azure

Web Designer and Media Manager | The Porch LLC – Sandwich, NH   **July 2021 – Present**

- Built https://theporchnh.com with HTML/CSS/JS, WordPress, and implemented SEO practices to reach 4000+ users