

JACOB MAHON

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EDUCATION

<i>Stevens Institute of Technology</i> Hoboken, NJ	Expected in 2030
Doctor of Philosophy in Computer Science Focus: Agentic AI for Critical Infrastructure Cybersecurity	
<i>New Jersey Institute of Technology</i> Newark, NJ	2026
Master of Science with Thesis in Computer Science (GPA: 3.86)	
<i>Montclair State University</i> Montclair, NJ	2023
Graduate Certificate in Computing Technology (GPA: 3.93)	
<i>Seton Hall University</i> South Orange, NJ	2022
Bachelor of Science in Finance (GPA: 3.89) Honors: Magna Cum Laude, Dean's List, Servant Leader Scholar	
<i>County College of Morris</i> Randolph, NJ	2023
Associate of Applied Science in Computer Information Systems (GPA: 3.70) Honors: Magna Cum Laude Information Security Certificate (NSA/DHS accredited)	

RESEARCH EXPERIENCE

Research Assistant (Incoming)	September 2026-Present (Incoming)
<i>Stevens Institute of Technology</i> Hoboken, NJ PI: Dr. Gabriela Ciocarlie - Joining a research lab focused on Agentic AI applications for cybersecurity challenges in software supply chains and critical infrastructure - Expected to contribute to research exploring AI-driven approaches, automated security analysis, and cybersecurity techniques to enhance critical infrastructure resilience	
Graduate Research Assistant	2024-2025
<i>New Jersey Institute of Technology</i> Newark, NJ PI: Dr. Zhihao Yao Project: “Pypitfall: Dependency Chaos and Supply Chain Vulnerabilities in Python” - Designed a research project to evaluate the prevalence of vulnerable dependencies in PyPI - Independently designed data extraction and organization methods for Python library dependencies - Developed Python scripts to automate data collection and configured specialized software across multiple machines for parallel data extraction - Independently collected data from 600,000+ libraries - Analyzed 375,000+ Python packages and identified potential exposure in 37.3% (140,000+ packages) and guaranteed exposure in 1.2% (4,500+ packages)	

Research Intern

2024

Hudson Institute | Washington, D.C.

Advisor: [Timothy Walton](#), Sr. Fellow, Policy Center: Center for Defense Concepts and Technology

Project: People's Liberation Army Command and Control

- Researched how the People's Liberation Army uses AI to enhance decentralized planning
- Systematically collected open-source intelligence from Mandarin-language internet sources to analyze China's AI adoption in military planning
- Synthesized findings, analyzed collected data, and presented results to senior leadership

Project: SHIPS for America Bill

- Applied financial modeling techniques to analyze shipbuilding trends and developed tables and figures for the final research report, [Shoring Up the Foundation: Affordable Approaches to Improve US and Allied Shipbuilding and Ship Repair](#)
- Presented research analysis to policy fellows supporting congressional engagement
- Compiled evidence on U.S. shipbuilding competitiveness that informed congressional briefings and contributed to the development of the bipartisan SHIPS for America Bill

RESEARCH PUBLICATIONS

Mahon, J., Hou, C., & Yao, Z.

"Pypitfall: Dependency Chaos and Supply Chain Vulnerabilities in Python."

IEEE International Conference on Big Data (IEEE Big Data), 2025.

First Author. Presented in Macau SAR, China

PROFESSIONAL EXPERIENCE

Workforce Development Instructor

2024-Current

County College of Morris | Randolph, NJ

- Independently proposed, designed, and taught an innovative cybersecurity bootcamp
- Instructed technology courses focused on computer science and information technology
- Provided academic and career guidance to students pursuing technology careers
- Created instructional materials, assessments, and interactive exercises

Substitute Teacher

2022-2025

ECLC of NJ | Chatham, New Jersey

- Assisted students ages 5–21 with exceptionalities in academic learning and vocational skills

TECHNICAL SKILLS

Programming: Python, Java, C/C++, Bash, SQL, Assembly

Security: Ethical Hacking, Vulnerability Analysis, Penetration Testing, Network Security

AI/ML: Machine Learning, Artificial Intelligence

Systems: Linux, Operating Systems, Computer Networks

Languages: English (native) Mandarin Chinese (fluent), Spanish (conversational)

INDUSTRY CERTIFICATIONS

SecurityAI+

PenTest+

Security+

Network+

Data+

Certified Technical Trainer+

Project+

Linux Essentials (LPI)

HSK-4 (Mandarin Certification)

AWARDS

U.S. Congressional Service Award Medal Recipient

2022