

# EMILY JAO

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## EDUCATION

### Pennsylvania State University, *College of IST*

B.S., Cybersecurity Analytics and Operations, Minor in Information Sciences & Technology

**Relevant Coursework:** Object-Oriented Design and Software Applications, Malware Analytics, Cyber Forensics, Cyber-Defense

Studio, Programming for the Web, Info Security Management, Networking and Telecommunication

GPA: 3.60

### International Studies Institute

- Coursework: HIST 360: History & Culture of Italian Food

Florence, Italy

May – June 2024

## CERTIFICATIONS & SKILLS

**Certification:** CompTIA Security+

**Languages:** Python, Java, JavaScript, HTML/CSS, SQL, MongoDB, R

**Tools:** SIEM, Linux (Ubuntu), OSForensics, FTK Imager, Autopsy, Ghidra, HxD, Wireshark, ServiceNow, Salesforce, Power BI

**Security Skills:** Incident Response, Threat Analysis, Vulnerability Assessment, Network Security, SOC Operations, Risk Assessment

## PROJECT WORK EXPERIENCE

### Active Directory Security Lab (GOAD), *Researcher*

Jan 2026 – Present

- Built and analyzed a 15+ machine AD lab to identify access control weaknesses and misconfigurations.
- Executed offensive and defensive exercises, recommending improved monitoring and logging strategies.

### SSH Honeypot Deployment, *Cybersecurity Project Lead*

Dec 2025 – Jan 2026

- Deployed Dockerized Cowrie SSH honeypot, capturing 10s of unauthorized login attempts to analyze attacker behavior.
- Conducted Nmap scanning and brute-force testing to strengthen detection rules and TTP awareness.

### Binary Reverse Engineering & Password Recovery, *Security Analyst*

Sep – Nov 2025

- Performed static and memory analysis using Ghidra and Autopsy on 100+ lines of code, mapping password validation logic.
- Documented authentication mechanisms, improving understanding of binary security vulnerabilities.

## PROFESSIONAL EXPERIENCE

### Penn State Stuckeman School

University Park, PA

*Office & Technology Assistant*

Jan 2026 – Present

- Provided frontline technical support for 15+ daily technical issues for 80 faculty and students, improving workflow efficiency.

### Siemens K.K.

Tokyo, Japan

*Data Analyst Intern*

May – Aug 2025

- Cleaned and de-duplicated 10,000+ Salesforce records using Snowflake, improving data quality for 60+ internal users.
- Supported OT cybersecurity initiatives and IEC 62443 compliance assessments, contributing to enterprise risk scoring.

### Penn State IT Desk

University Park, PA

*IT Consultant*

Oct 2023 – Dec 2024

- Delivered Tier 1 technical support for 100+ students and faculty, resolving OS, network, MFA, and endpoint issues.
- Logged and tracked incidents in ServiceNow to maintain service continuity for 45K+ users across infrastructure.

## LEADERSHIP EXPERIENCE

### Engineering Consulting Collaborative (E-CC)

University Park, PA

*Case Competition Director*

Jan 2026 – Present

- Mentored and led 10 students in Deloitte and case competitions, teaching structured problem-solving and consulting skills.

### IST Career Development Organization (ICDO)

University Park, PA

*President*

Feb 2025 – Present

- Increased membership by 200% through structured recruitment and industry-partner events.
- Organized career fairs connecting 20+ students with professional development resources.

### Competitive Cybersecurity Organization (CCSO)

University Park, PA

*Purple Team Member*

Oct 2024 – Present

- Secured 5+ Windows/Linux servers and remediated vulnerabilities across 10+ shared resources in purple team simulations.

## COMPETITIONS, AWARDS & LANGUAGES

**Competition:** Nittany AI Shark Tank – 1<sup>st</sup> Place, Collegiate Cyber Defense Competition – Alternate

**Awards:** Student Leader Scholarship, Omicron Sigma Sigma National Honor Society, Microsoft Cybersecurity Scholarship Program

**Language:** Fluent Japanese, Intermediate Mandarin