

EMMA CUNNINGHAM

Applied Research • AI • Cybersecurity • Analytics

Youngstown, OH (Open to Relocation)

<https://www.linkedin.com/in/emma-cunningham-0a6505293>

PROFESSIONAL SUMMARY

Analytical and user-focused emerging IT professional with a strong technical foundation in Cybersecurity Analytics and Operations. Four-time published researcher with experience in data-driven systems and AI-assisted problem solving. Strong background in analytics, system design, and research-based development. Experienced in building AI tools, analyzing real-world datasets, and translating academic research into practical applications.

RESEARCH & PUBLICATIONS

- **Blockchain-Based Access and Usage Control of Government, Educational, and Electronic Health Record Systems (Most Recent)**
 - Studied blockchain-enabled frameworks to enforce fine-grained access control and prevent unauthorized data exposure.
 - Analyzed privacy risks, data immutability trade-offs, and real-world deployment constraints.
 - Demonstrated how decentralized architectures can mitigate centralized data leakage risks.
- **Additional Publications**
 - Research contributions to data-driven digital twins applied to stress management and student engagement in educational environments.

EXPERIENCE

Data Analyst Intern – IST Mobile Cloud Computing & Data Research Team, Penn State

May 2025 - Sept 2025, Monaca, PA

- Assisted in data analysis and visualization for research on mobile cloud computing systems.
- Co-authored and presented research “A Data-Driven Digital Twin for Student Engagement Prediction in e-Learning Systems” at a SiberX Seattle conference.
- Developed various apps/models and interpreted results for research.

Facilities & Technology Assistant - Cardinal Mooney

May 2024 - August 2024

- Assisted with installation and troubleshooting of security cameras and door access systems to enhance campus safety.
- Provided technical support to faculty and staff on access management software, improving system reliability and user efficiency.

CORE SKILLS

Soft Skills: Communication, Problem Solving, Collaboration, Leadership

Programming & Tools: Python, R, SQL, PyTorch (working knowledge), Jupyter, Seaborn

Research & Analysis: Experimental design, statistical analysis, reproducibility, technical writing

EDUCATION

Bachelor of Science – Cybersecurity Analytics & Operations

The Pennsylvania State University

Graduation: May 2026