

Yousef A. Alsalloum

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Education

The Pennsylvania State University

Bachelor of Science, Cybersecurity Analytics and Operation

May 2026

Minor in Security and Risk Analysis

GPA: 3.97/4.00

Skills

- Fluent in Arabic and English
- Kali Linux, Ubuntu Linux, Wireshark, Microsoft Windows, MacOS, Git, Github
- Intermediate C#, Intermediate Java, Intermediate Python, HTML, CSS, JavaScript
- Ghidra Decompiler, HxD Hex Editor
- Intermediate Decryption Techniques (Ciphey, StegPy, StegCracker)
- UI/UX Design, Frontend Development

Work Experience

Undergraduate Research Assistant

The Pennsylvania State University

University Park, PA
January 2025 – Present

- Programmed and implemented custom Python tools to collect and archive social media data.
- Automated retrieval of posts, user metadata, and snapshots to support analysis of diplomatic usage of social media.
- Assisted in curating datasets as well as analysis of engagement and messaging patterns among state-affiliated accounts.

Learning Assistant

The Pennsylvania State University

University Park, PA
January 2025 – May 2025

- Supported instruction for Discrete Mathematics (IST 230) through clarifying complex concepts with weekly office hours and in-class help.
- Troubleshooted issues students had with software or hardware.
- Collaborated with 2 peers to lead concept reviews, further enhancing student performance in topics.
- Graded assignments and assisted professor with assessment planning and logistics.

Programming Projects

X-Search-Scraper

Twitter/X Data Collection Tool

- Developed a Python CLI that uses the X (formerly Twitter) API that streamlines data collection for research purposes by automating retrieval of tweets and user metadata through public endpoints and archival methods. Designed with JSON/CSV export support, scalability and modularity for adaptation to changing APIs and optimized for research and OSINT applications.

Wayback-SS-tool

Web Archive Screenshot Automation

- Developed a Python CLI that automates screenshot captures of archived web pages from the Wayback Machine. Using a Selenium-powered headless browser and API lookups, retrieves snapshots through URLs and timestamps specified by the user. Features include configurable image width, filename formatting, specified directory output, and overwrite options. Designed and optimized for research and page back-up purposes

Wazza

Chat Application with End-to-End Encryption

- Developed a secure real-time chat application with Python (FastAPI) and JavaScript implementing full client-side end-to-end encryption through usage of Elliptic-Curve Diffie-Hellman key exchange and AES-256-GCM. Built a browser-native encryption workflow wherein keys never leave the client and all WebSocket communication only uses ciphertext. Designed with modular encryption logic, automatic key negotiation, and extensibility toward Signal-style forward secrecy and multi-user rooms.