

Leyton Meadows

📍 Chicago, IL ✉ contact@leytonmeadows.com ☎ (773) 412-3219 📧 Lmeadows16 🌐 leytonmeadows.com

Education

M.S. Information Assurance & Cyber Defense

Marquette University

Milwaukee, WI

August 2026 - May 2028

- Cumulative GPA: 4.0
- **Relevant Coursework:** Ethical Hacking, Network Design & Security, System Administration, Compiler Construction

B.S. Computer Science

Marquette University

Milwaukee, WI

August 2023 - May 2027

- Cumulative GPA: 3.25 | Dean's List
- **Relevant Coursework:** Operating Systems, Programming Languages, Hardware Systems, Project, Fundamentals of Artificial Intelligence

Honors & Affiliations

- **CyberWIN Scholar** | NSF CyberCorps: Scholarship for Service
- **Upsilon Pi Epsilon (UPE)** | Vice President | International Computing & Information Honor Society
- **Association for Computing Machinery (ACM)** | Treasurer
- **Eagle Scout** | Scouting America
- **Kevin A. Rapacz Award** | Notre Dame College Prep | Sole annual recipient for leadership and professional development

Experience

Embedded Operating Systems Researcher - NSF REU

Embedded Xinu Lab – Marquette University, Milwaukee WI

June 2026 - August 2026

40 hrs/week

- Selected for a 10-week NSF Research Experience for Undergraduates (REU) to design and implement core subsystems of the 64-bit RISC-V port of the Embedded Xinu operating system.
- Implemented Sv39 virtual memory with per-process isolated address spaces and safe user data transfer across the kernel boundary.
- Designed the user process system: POSIX-style threads sharing heap and stack views, child processes with parent tracing and protection, and virtualized device descriptors with stdin/stdout/stderr inheritance.
- Redesigned the kernel's interrupt and exception handling to support preemptible and blocking kernel operations, with stackable kernel interrupts.
- Built interrupt-driven asynchronous device drivers (serial UART, TTY) on top of a device-tree-driven abstraction layer, with the device table, system-call table, and platform configuration generated at build time.

Undergraduate Teaching Assistant

Department of Computer Science – Marquette University, Milwaukee, WI

August 2025 - Present

10 hrs/week

- Support students in Hardware Systems, Operating Systems, and System Administration through labs, assignments, and technical instruction.
- Troubleshoot Linux systems, networking, C programming, scripting, hardware/software interactions, and system configuration.
- Evaluate coursework and collaborate with faculty to reinforce debugging, systems, networking, and cybersecurity concepts.

Facility Manager

Office of Residence Life – Marquette University, Milwaukee, WI

August 2026 - Present

10 hrs/week

- Lead and coordinate a team of 19 Desk Receptionists, overseeing scheduling, training, communication, and day-to-day front desk and mailroom operations.
- Developed automated workflows using Microsoft Forms, Excel, and Power Automate to streamline building inspections, package tracking, reporting, and staff operations.
- Manage operational processes for an 8-floor residence hall, including building inspections, package handling, key control, incident documentation, and facility concerns.
- Coordinate with Residence Life staff and university departments to identify, document, escalate, and resolve

safety, security, and facility issues.

Computer Science Tutor

On Your Marq Program – Marquette University, Milwaukee, WI

January 2025 - Present

5 hrs/week

- Provide individualized tutoring in computer science and programming, adapting instruction to students' learning needs and experience levels.
- Help students strengthen understanding of programming fundamentals, debugging, algorithms, and problem-solving techniques.
- Guide students through technical coursework while emphasizing independent problem-solving and effective debugging strategies.

Technical Projects

IoT Device Penetration Testing

[Write Up](#) 

- Conducted a simulated security audit of a purpose-built SoC security-training board: cracked its password-protected serial debug shell with John the Ripper, dumped internal and external flash memory, identified the device's undocumented data stream, and recovered all embedded secrets.
- Reverse-engineered the board's obfuscated salt-and-hash verification mechanism in Ghidra, locating a device-specific secret that standard analysis tooling missed.

Embedded Firmware Analysis and Automation

[Write Up](#) 

- With a three-person team, performed static security assessments of a consumer router, an IP camera, and bare-metal firmware, finding hard-coded root credentials, embedded private keys and cloud-service tokens, a vulnerable BusyBox version, and an insecure U-Boot boot chain allowing unsigned code execution. Co-authored the mitigation report.
- Built a modular, portable Bash triage scanner with pluggable analysis modules and dependency verification, and used it to independently reproduce the assessment's findings.

People of the Holocaust | Senior Design Project

[Live Site](#) 

- Developing a senior design historical knowledge graph platform that reframes the Encyclopedia of Camps and Ghettos around individual people to help researchers, students, and the public explore the human impact of the Holocaust.
- Built a searchable React/Vite database UI and Python NLP pipeline to scrape encyclopedia articles and identify person-place-action relationships.
- Implementing interactive geospatial visualizations with Leaflet/OpenStreetMap and Supabase-backed data models to support temporal mapping, graph visualization, and network analysis.

Secure User Login and Authentication

[Secure User Login](#) 

- Developed a secure authentication system implementing user registration and login functionality with protected credential storage.
- Applied secure password-handling and authentication practices to mitigate common credential-based security vulnerabilities.

Technical Skills

Languages: C, Python, Java, Bash, JavaScript, SQL

Security: Ghidra, Wireshark, Nmap, OpenSSL, Firmware Analysis, Penetration Testing

Embedded & Low-Level: RISC-V, UART, Device Trees, U-Boot, Memory-Mapped I/O, Interrupt Handling

Systems & Networking: Linux, Unix, TCP/IP, System Administration

Tools & Technologies: Git, GitHub, Make, React, Supabase, L^AT_EX