

Erdembileg Ariunbold

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GitHub: github.com/Zwique | Blog: zwique.gitbook.io

EDUCATION

University of Utah

BS in Computer Engineering (GPA: 3.7)

- Organizations/Awards: Honors Program, Dean's Honors List

Salt Lake City, Utah

Graduation Date: Dec 2027

SKILLS & INTERESTS

Skills: Python (6 yrs) | C++ & C | Crypto & Exploit Development | CTF Automation & Security Tooling | Web Development

Interests: CTFs & Cybersecurity Challenges | Penetration Testing | Open-Source Projects | Mentorship & Teaching | Workshops & Tech Education

EXPERIENCE

Information Security Specialist Intern, MCS Holding

Intern

Ulaanbaatar, Mongolia

May 2026 - Present

- Conducted **penetration testing** across multiple in-scope MCS systems, including internal IP ranges, web applications, infrastructure services, authentication flows, access control, and security misconfigurations.
- Identified, validated, and reported **50+ security issues**, preparing clear vulnerability reports with evidence, impact, severity, CVSS scoring, and remediation guidance.
- Researched **AI security agents**, pentesting tools, and security benchmarks to evaluate their capabilities in vulnerability discovery, automated testing, code review, and security workflow improvement.

Capture the Flag

Competitor

Remote

January 2022 - Present

- Serve as a **staff member** of [0xL4ugh](#), [Kheshig](#), and [flagaholic](#), contributing to **Top 50** global finishes in international Capture The Flag (CTF) competitions while participating weekly.
- Designed and maintained CTF infrastructure and authored challenges (OSINT, cryptography, reverse engineering) for **48-hour competitions**, including [BlitzCTF 2025](#) and [0xL4ughCTF V5](#).
- Performed penetration testing via **Hack The Box**, actively competing in seasonal challenges and exploiting vulnerabilities such as injection flaws and privilege escalation.
- Built **Z-Vuln-Lab**, an open-source vulnerable web lab for beginners with **modular, branch-based scenarios** covering real-world common exploits with versioned releases and reproducible environments: github.com/Zwique/Z_Vuln_Lab

Backend & Distributed Systems, TechX

Intern

Remote

Feb 2026 - April 2026

- Built backend data pipelines to **extract, process, and store AI conversations** from multiple sources, enabling scalable and structured data ingestion
- Integrated **PostgreSQL and Amazon S3** for reliable data persistence and efficient retrieval across processing workflows
- Deployed and configured infrastructure on Amazon Web Services (EC2, S3), handling environment setup, service integration, and secure connectivity
- Analyzed and optimized system performance using **p50/p90 latency metrics**, improving efficiency of scraping and data processing pipelines

Extended Essay

Writer

Ulaanbaatar, Mongolia

September 2022 - May 2024

- Conducted a **3,990-word** independent research project analyzing the **RSA** encryption algorithm and its **limitations** related to key size and computational security.
- Demonstrated strong skills in cryptographic analysis, academic research, and technical writing within the IB framework. Publication: github.com/Zwique/Extended-Essay

IB Mathematics: Analysis & Approaches HL

Tutor

Ulaanbaatar, Mongolia

September 2022 - May 2024

- Conducted **small-group** tutoring sessions, developing targeted lesson plans to improve problem-solving and exam performance.
- Implemented diverse **teaching strategies** to enhance understanding of complex mathematical concepts and improve **problem-solving skills**.

LEADERSHIP EXPERIENCE

Cybersecurity Club, University of Utah

Co-captain of CTF

Salt Lake City, Utah

Jan 2026 - April 2026

- Organizing and managing the **UtahSec CTF** event at the **University of Utah** by creating challenges and maintaining backend server infrastructure.
- Mentoring new members on cybersecurity concepts, tools, and strategies, improving team skill levels and competition performance.

Cybersecurity Club, University of Utah Asia Campus

President

Incheon, Korea

September 2024 - December 2025

- Founded and led the university's Cybersecurity Club, coordinating members across technical, educational, and competitive branches.
- Organized the UAC Capture the Flag competition for **three** semesters, managing challenge design, infrastructure setup, and event operations for participants.