Erdembileg Ariunbold

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

EDUCATION

University of Utah   **Salt Lake City, UT**
BS in Computer Engineering (GPA: 3.7)   *Graduation Date: May 2028*
- Organizations/Awards: Honors Program, Dean's Honors List

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

Capture the Flag   **Remote**
Competitor   *January 2022 - Present*
- Serve as a key **staff member** of 0xL4ugh, a professional Capture The Flag (CTF) cybersecurity team competing in international events on a weekly basis.
- Authored and maintained infrastructure and challenges for the BlitzCTF 2025 event, including osint, crypto, and reverse engineering challenges.
- Performed penetration testing on **Hack The Box** machines, exploiting and securing vulnerable systems to develop hands-on skills.
- Assist in **training and mentoring** new members by sharing techniques in debugging, automation scripting, and exploit development.

Backend & Distributed Systems, TechX   **Remote**
Intern   *Feb 2026 - Present*
- Design and implement **fault-tolerant backend** services for a platform that archives and cites AI conversations from ChatGPT, Gemini, Claude, and Meta AI.
- Build and optimize **APIs, caching layers, and database** schemas to minimize latency and support high concurrency.
- Deploy and manage backend infrastructure on **Amazon Web Services** (AWS) using scalable cloud services.

Extended Essay   **Ulaanbaatar, MN**
Writer   *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   **Ulaanbaatar, MN**
Tutor   *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 Asia Campus   **Incheon, KR**
President   *September 2024 – December 2025*
- Founded and led the university's Cybersecurity Club, coordinating members across technical, educational, and competitive branches.
- Organized the UAC CTF for **three** semesters, managing challenge design, infrastructure setup, and event operations for participants.
- Supervised the development of a **GitBook-hosted** CTF resource website, making cybersecurity education accessible to beginners.