

# Erdembileg Ariunbold

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GitHub: [github.com/Zwique](https://github.com/Zwique) | Blog: [zwique.gitbook.io](https://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, UT

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

### Capture the Flag

Competitor

Remote

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](#) and [0xLaughCTF](#) events, 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.

### Backend & Distributed Systems, TechX

Intern

Remote

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

Writer

Ulaanbaatar, MN

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](https://github.com/Zwique/Extended-Essay)

### IB Mathematics: Analysis & Approaches HL

Tutor

Ulaanbaatar, MN

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

SLC, US

Jan 2026 – Present

- 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, KR

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.