

Zolboo Erdenebaatar

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EDUCATION

Dalhousie University, Halifax, Nova Scotia, Canada

Master of Computer Science

Expected May, 2023 — GPA: 4.30/4.30

Dickinson College, Carlisle, PA, United States

Bachelor of Science, Computer Science and Math

Graduated May, 2021 — GPA: 3.87/4.00

RELEVANT EXPERIENCE

Software Developer (Contract)

Bluethumb Technologies — Halifax, NS

Aug 2021 - May 2022

- Developed backend microservice-based infrastructure for a start-up financial business web application using Express, NodeJS and MySQL.
- Communicated product requirements, deadlines and progress with the company team over the lifecycle of the development.

Web Developer Intern

Academic Tech Dept, Dickinson College — Carlisle, PA

Aug 2018 - May 2019

- Remodeled Mixxer, a language exchange website with over 300,000 users, using React
- Engineered a search page that increased the platform's user retention rate by 10%.
Link: language-exchanges.org

Cybersecurity Researcher

NIMS Lab, Dalhousie University — Halifax, NS

Aug 2021 - May 2023

- Identify inference attack vulnerabilities in encrypted traffic from IoT devices and instant messaging mobile applications. Perform machine learning analysis on the traffic, including generating datasets, feature engineering and visualizing results. Published at IEEE NOMS.
- Obfuscate exploitable traffic metadata by stream-shaping mobile and IoT traffic using Python scripts and Linux network analysis tools, including tcpdump, tc, and Wireshark.

Data Science Intern

National Research Council Canada — Ottawa, ON

May 2022 - Dec 2022

- Invented a novel data analysis technique to identify operational deficiencies in the Navy frigates' engines using various computational methods such as Dynamic Time Warping and Pearson Correlation. Patent pending.
- Engineered an ML pipeline to preprocess, train and visualize our models using Python and R.

Teaching Assistant

CS Department, Dalhousie University — Halifax, NS

Jan 2022 - Dec 2022

- Create and configure various websites and Linux machines as Capture-the-Flag challenges for students with specific vulnerabilities, such as command injections and privilege escalations.

OTHER EXPERIENCE

Open Source Contributions to Numpy: Fixed bugs, updated documentations and implemented scientific functions for the masked array module of Numpy, a widely used numerical library.

1st place at: Canada's National Cyber Security Challenge (Regionals). Placed 3rd in the country among over 200 participants.

Pending publication at: IEEE Network Operations and Management Symposium 2023.