Zack Dorward

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zackdorward.com

LinkedIn
Github

EDUCATION

University of Alberta   Expected May 2025
BSc Computer Software Engineering   GPA: 3.6

Notable coursework: Data Science, Machine Learning, Data Structures and Algorithms, Database Design

WORK EXPERIENCE

DFI Piling   May 2024 – Dec 2024
Software Engineer Intern   Edmonton, AB
- Built key features for the DFI mobile app using **.NET Maui,** including an AI receipt scanning tool using an OpenAI API, increasing data accuracy for receipt submissions by 40%.
- Implemented a server-based data pipeline in **C#** to streamline real-time monitoring of piling operations, reducing data lag from hours to minutes.
- Refactored database queries and indexing strategies, reducing API response times by 50% and improving app performance.

Darkhorse Analytics   Jan 2023 – Aug 2023
Software Engineer Intern   Edmonton, AB
- Collaborated on various websites for non-profit organizations using **Vue.js** and **Typescript**, including interactive charts and visualizations **Javascript** libraries such as **D3.js**.
- Wrote **Python** scripts to process client data input into various applications, significantly improving workflow efficiency.
- Led the development of key features for a Mapbox project, communicating with various stakeholders to ensure alignment with project goals and priorities.

City of Edmonton   May 2021 – Dec 2021
Data Analyst Intern   Edmonton, AB
- Developed regional maps for snowplow route optimization in Edmonton using **Python** and **ArcGIS Pro**.
- Led the procurement of 2 contracts with the City each exceeding a total spend of $1,000,000, leveraging analytical skills to identify cost-saving opportunities.

PROJECTS

What To Code | Collaborative Personal Project
- Developed a full stack application with **Next.js** to help developers get off the ground with their project idea.
- Utilized ChatGPT API to generate project ideas based on the user's prompt.
- Integrated with Github for user authentication.

Equity Explorer | Personal Project
- Developed a full-stack web application serving a REST API to retrieve and analyze real-time stock market data.
- Leveraged various **Python** libraries including **Pandas** and **Plotly** to scrape, fetch, and visualize information, integrating external APIs for data retrieval and manipulation.

Alouette | Western Engineering Competition 2023 (WEC)
- Won 1st place at the University of Alberta Engineering Competition in programming and was invited to participate in WEC against various western universities.
- Developed an educational wildlife game using **Vue.js,** earning 3rd place overall at WEC.

Mindshift | natHACKS 2022
- Developed a Chrome extension in **Javascript** to modify screen brightness based on real-time EEG data.
- Employed data analysis techniques to monitor, clean, and manipulate data read from a hardware device utilizing the fft-js library.

VOLUNTEERING/EXTRACURRICULARS

Vice President of Internal Affairs, Engineering Students' Society   May 2021 - May 2023
- Elected to oversee 100+ club volunteers and led a team of 5 directors who controlled recruitment, human resources, merchandise, operations, and first year students.