Andy Zhen

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Education

University of Waterloo   Apr 2026
Candidate for B. A. Sc. in Mechatronics Engineering   Waterloo, ON

Relevant Coursework: Algorithms and Data Structures (C++), Digital Computation (C, C++), Computer Structures and Real-Time Systems (C), Microprocessor Systems and Interfacing (C), Advanced Calculus (Python)

Experience

Vivid Seats   Jan 2024 – Apr 2024
Web Engineering Co-op, SEO   Toronto, ON

- Implemented enhancements for a B2C event ticketing marketplace **(Next, Apache)** to improve **INP** scores by up to **75%** in anticipation of the deprecation of the FID metric by Google.
- Achieved Google Organic Search **6-month highs** in production page rankings and nominal clicks.
- Improved image quality across the site with **Cloudinary** transformations, and fixed related presentation bugs.
- Assisted with upgrading frontend repos to **Next 14**, **React 18**, and **Node 18** and resolving dependency issues.

ODAIA Intelligence   May 2023 – Aug 2023
Full-Stack Developer Co-op   Toronto, ON

- Refurbished the internal project creation form by developing a new UI using **React**. Improved front-end validation resulted in **100% fewer** downstream pipeline failures from malformed requests.
- Set up **AWS Lambda** functions (**boto3**) following **REST API** principles to upload files to **S3**, decreasing deployment times for a file-delivery service by up to **50%** per session.
- Created a testing infrastructure to validate the contents of CSV deliverables after generation.

ODAIA Intelligence   Sep 2022 – Dec 2022
Test Engineering Co-op   Toronto, ON

- Refactored, maintained, and authored tests for a **TestCafé** end-to-end testing suite.
- Set up nightly **Jenkins** pipelines to run tests nightly against a B2B SAAS app for 4 client environments.
- Developed a Slack bot using **Bolt SDK** to access testing functionality within the company workspace.

Projects

DISCOGRAPH   2023

- Created an animated visualization of a user's top Spotify tracks with **React** and provided recommendations based on seed parameters with the **Spotify API**.
- Set up API endpoints with **Express** to enable the **OAuth** flow. Used **Axios** to send HTTP requests to the backend and process responses.
- Deployed both the frontend and backend using **Vercel**.

Personal Developer Portfolio   2023

- Designed and developed a comprehensive portfolio web app to showcase personal projects and information about me with **Next**.

Skills

Languages   TypeScript, JavaScript, Python, C++, C, Java, PHP, SQL, HTML & CSS
Frameworks & Libraries React, AWS, Next, Express, Material UI, Redux, Jest, Axios, pandas
Tools   Git, Jira, Bitbucket, Zsh, Jenkins, Docker, Figma, Vercel, VS Code, Postman

Awards

UX Laurier Designathon (1st place) – UX Laurier | 2022