

(289) 931-8160
e93zhang@uwaterloo.ca

Edward Zhang

Computational Mathematics

edward-zha.github.io/website/
github.com/edward-zha
linkedin.com/in/Zhang-Edward

SKILLS

Languages	HTML5, CSS, JavaScript, TypeScript, C++, Java, PHP, SQL, Python, Bash
Tools and Frameworks	MongoDB, Express.js, React.js, Node.js, Vue.js, Tailwind CSS, Bootstrap, jQuery, Selenium, Nightwatch, Alpine Linux, Docker

PAST EXPERIENCE

WCMS QA Developer — University of Waterloo Sep 2022 — Dec 2022

- Led quality assurance and development for the Waterloo Content Management System through **5 version releases** using the **Drupal** CMS.
- Engineered automated regression/functional/unit tests in **PHP** and **JavaScript**, expanding existing test-base coverage by **50%**.
- Directed the expansion of existing test coverage by integrating **Nightwatch.js** into existing JavaScript testing framework, facilitating for increased test coverage and variety.
- Collaborated effectively with large teams through GitLab version control, **Jira**, and Microsoft Teams.
- Gained experience in **Agile** sprint cycle methodology through sprint cycles and Scrum meetings.

Coding Tutor — A.N. Myer Secondary School Oct 2020 — Mar 2021

- Advised and taught school peers through after-hour tutorial sessions approximately 4 hours per week, through extensive contributions to solidify **Python** understanding.
- Demonstrated exceptional planning and organizational ability by preparing homework content before sessions and by providing constructive criticism when needed, leading to a drastic improvement in the students' coding ability.

KEY PROJECTS

AI Image Generation App | MongoDB, Express.js, React, Node.js, JavaScript, HTML, Tailwind CSS Dec 2022 — Jan 2023

Link: edward-zha.github.io/AI-Image-Generation-App/

- Developed and deployed an online **AI Image Generation** application using the **M.E.R.N.** software stack.
- Designed and distinctively stylized **50+** front-end layout components using React and **Tailwind CSS**, facilitating compact and exceptional user experience.
- Integrated the **OpenAI DALL-E** image-generation model through the DALL-E API, enabling users to create AI-generated images through text prompts.
- Processed and managed over **100+** images stored through Cloudinary, an **cloud**-based image management service.

Wordle Webpage | React, Node.js, JavaScript, HTML, CSS Mar 2022 — Jun 2022

Link: edward-zha.github.io/wordle/

- Designed and implemented the famous web-based word game "Wordle", using **React.js**, **HTML**, **CSS**, **JavaScript**, hosted on GitHub Pages.
- Managed and developed multiple modules through sophisticated inter-component communication through React Context and the useContext hooks.

Monopoly Clone (Watopoly) | C++ Apr 2022 — May 2022

- Developed a **Linux** terminal-based Monopoly clone using pure **C++** for 4 players.
- Displayed and consumed game-state data using C++ standard input/output streams.
- Applied Object-Oriented coding principles through the use of modularized programming and the Observer design pattern.
- Collaborated effectively with team members through GitHub and the Git branching, which led to great project/code organization, readability, and success.

Personal Portfolio Website | JavaScript, HTML, CSS Mar 2022 — Present

Link: edward-zha.github.io/website/

- Designed and deployed an ongoing personal website showcasing myself and my projects through **JavaScript**, **HTML**, and **CSS** within VSCode.

EDUCATION

Candidate for Bachelor of Honours Mathematics — University of Waterloo Sep 2021 — Est. Dec. 2025

Relevant Courses

Computer Science

- Object-Oriented Software Development: Designed and tested programs requiring hundreds of lines of code using various design patterns (C++).
- Tools and Techniques for Software Development: Leveraged commands and utilities in the Linux Command Line Shell and version control systems (Linux/Bash).