

Brighten Zhang

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SKILLS

Languages

HTML & CSS, C/C++, Python, Java, JavaScript, TypeScript, Racket, Ruby, Applescript

Tools & Frameworks

Django, Flask, React.js, Node.js, Selenium, Cypress, Git, Heroku, MongoDB, Visual Studio

EDUCATION

University of Waterloo

Waterloo, ON

Candidate for BCS Computer Science

Sep. 2022 - Apr. 2027 (expected)

- President's Scholarship of Distinction
- Excellent Academic Standing

PROJECTS

Moraband Chess Engine | [Github](#)

- Developed a UCI-compatible chess engine in C++ using modern search and evaluation techniques to build professional software design and project management skills
- Legal move generation measured 160,000,000 nodes/second (moves/second) on Apple silicon M1, single-threaded
- Applied a traditional alpha-beta search algorithm within a nega-max framework with iterative deepening, and incorporated transposition tables and tapered material values in evaluation functions
- Hosted a Lichess.org BOT account on the Heroku cloud as a python app running worker dynos

bistromath25.github.io | [Github](#)

- Created a personal website and portfolio using HTML & CSS to showcase projects in a professional environment
- Applied concepts of HTML responsive web design and client-side Javascript for an enriched user experience

Word Predictor | [Github](#)

- Implemented a trigram language model based on Markov Chains in Python using the nltk module to predict the appropriate next word in a sentence based on an input text
- Created a Flask RESTful API with message endpoints and responses from an SQLite3 database with over 1,000 entries

imgdb Image Host | [Github](#)

- Built an image-hosting web application using the Node.js framework to easily share images online publicly with friends with minimal dependencies

WORK EXPERIENCE

QA Automation Engineer

May. 2023 - Present

Relay Financial

Toronto, ON

- Implemented and maintained a Selenium-for-Android data-driven automated testing framework alongside a Cypress web automation framework to verify and ensure the functionality of Relay's mobile and web applications
- Reduced total mobile automation daily regression runtime by over 30% by refactoring base driver programs to minimize time spent during application initialization between test suites
- Streamlined registration and individual bank account deletion testing routines via Relay's internal API
- Contributed minor front-end cosmetic changes and accessibility labels for an inclusive user experience

Summer Camp Counsellor

Jul. 2021 - Aug. 2022

City of Toronto

Toronto, ON

- Collaborated with other counsellors to design and lead engaging camp activities for young children aged 6 to 12
- Fostered positive social connections between campers and eased pandemic anxiety
- Maintained clear communication with parents and guardians to ensure participants' safety and enjoyment