Peter Zhou

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EDUCATION

University of Toronto — Toronto, ON
HBSc in Computer Science, Applied Statistics. — *Sept. 2023 - May 2028*

- Relevant coursework: *Data structures and Algorithms Analysis, Software Development Process (Agile, SCRUM), Computer Systems (C and Unix), Computer Architecture*
- Minor in Economics

EXPERIENCE

Backend Developer — May 2023 – May 2024
Canadian Stem & AI Academy — *Richmond Hill, ON*

- Worked on a RESTful API to manage students and classes for the non-profit organization
- Developed over 30 endpoints using **Node.js** and **Express.js** that interfaced with the **MySQL** Database
- Parallelized endpoints which were commonly sequentially called to reduce latency on the frontend, allowing up to **200%** speedups on certain page loads
- Wrote documentation to assist the frontend team on integrating the API with the frontend app
- Deployed on **AWS Elastic Beanstalk** servers for production, with the database hosted on **AWS RDS**

AP Level Computer Science Teacher — May 2023
Canadian Stem & AI Academy — *Richmond Hill, ON*

- Created Java and Python curriculums to teach high school students to an AP level
- Recorded **200+** short online lectures, which have been used to teach hundreds of students
- Developed a frontend website using **React** and **Node.js** to host the videos on an easy to use interface

PROJECTS

Predictive Markets Arbitrage Trading Bot | *Python, RESTful API, Git* — Jan 2025 – Present

- Wrote a **Python** package which accesses the APIs of multiple exchanges such as Kalshi and PolyMarket
- Created a system that integrated data from multiple exchanges into a unified interface, enabling cross-exchange algorithms
- Developing a program to search for and trade on arbitrage opportunities between exchanges

Hall Effect Keypad | *C/C++, Circuit Design, Cad Design, Firmware* — May 2023 – Sept 2023

- Co-founded a small business to design, manufacture and sell an innovative game controller
- Wrote firmware in **C** which interpreted analog signals from sensors on the PCB and passed along keystroke actions to the host computer
- Used a weighted rolling average algorithm to eliminate noise from the hall effect sensors
- Bit hacked calculations to optimize latency, achieving **less than 1ms** of input delay

Rhythm Game Discord Bot | *Python, RESTful API, SQLite, BeautifulSoup* — August 2019 – Sept 2023

- Developed and maintained a bot that allowed players to interact with their stats through Discord
- Wrote an API wrapper in **Python** to access the game's data, utilizing **BeautifulSoup** to scrape webpages where necessary due to a lack of supported endpoints
- Stored user data in a **SQLite** database to keep track of user data and simplify bot requests
- Serviced over **20,000+** commands from **200+** unique users throughout the bot's lifetime

SKILLS

Languages: Python, C/C++, Java, Assembly, Javascript/Typescript, HTML, CSS, SQL
Frameworks: React, Node.js, Flask, Tailwind.css, Express.js, jQuery
Developer Tools: Linux, Git, Docker
Platforms: Amazon Web Services (EC2, EBS, RDS), Cloudflare
Interests: Homelab, Biking, Mechanical Keyboards, Cooking, Chess