

Peter Zhou

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EDUCATION

University of Toronto

Toronto, ON

HBSc in Computer Science, Applied Statistics.

June 2027

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

EXPERIENCE

Backend Developer Intern

May 2024 – Sept 2024

Canadian Stem & AI Academy

Richmond Hill, ON

- Worked on a RESTful API to manage students and classes for the non-profit organization
- Developed endpoints using **Node.js** and **Express.js** that interfaced with the **MySQL** Database
- Achieved **200%** speedups on some frontend pages by optimizing database queries on endpoints which were commonly called
- 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**

Fullstack Developer

May 2023 – Sept 2023

RoboEDU

Richmond Hill, ON

- Created a 12 week Java and Python curriculum to teach OOP and DSA to high school students
- Helped record **200+** short lectures, which have been used to teach hundreds of students
- Wrote a modular frontend using **React** components to host the videos for the branch
- Enabled simple scalability of future videos using **Node.js** to dynamically generate webpages from video metadata

PROJECTS - [PETERZHOU.DEV/PROJECTS](https://peterzhou.dev/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
- Currently developing a program to search for and trade on arbitrage opportunities between exchanges

Hall Effect Keypad | *C, Circuit Design, Cad Design, Firmware*

May 2023 – Sept 2023

- Co-founded a small business to design, manufacture and sell an innovative game controller
- Used embeded magnets with hall effect sensors to generate an analog signal, as opposed to a digital switching signal that traditional keypads use
- Wrote firmware in **C** which interpreted analog signals from sensors on the PCB and passed along keystroke actions to the host computer
- Allowed for **0.1mm** sensitivity by reducing noise from hall effect sensors with a weighted rolling average algorithm
- Achieved **less than 1ms** of input delay by bit hacking calculations to optimize computations

Rhythm Game Discord Bot | *Python, RESTful API, SQLite, BeautifulSoup*

August 2020 – Sept 2022

- 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
- Achieved significantly faster response times by multithreading API calls
- Stored user data in a **SQLite** database to autofill info in commands
- 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, Bash/Shell, Nginx

Platforms: Amazon Web Services (EC2, EBS, RDS), Cloudflare

Interests: Homelab, Biking, Mechanical Keyboards, Cooking, Chess