

Timothy Zheng

Computer Science and Finance

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EDUCATION

University of Waterloo

2021 - 2026

Candidate for Bachelor of Computing and Financial Management

Waterloo, ON

- Dean's list - GPA: 3.80 | Cumulative Grade: 89.80%
- Relevant Coursework: Functional Programming, Algorithm Design & Data Abstraction, Financial Data Analysis.
- Lead the creation of a dynamic finance program that achieved the highest grade (97.5%) & 2nd place in contest.
- Clubs and Activities: UW Badminton Club Executive, UW Formula Motorsports Business Section.
- International Baccalaureate Diploma and High School Diploma with Honours from St. Robert CHS (2021).

WORK EXPERIENCE

IMOXKids2AI

Jun – Oct 2021

Python Instructor

Dublin, Ireland (Remote)

- Instructed a class of six elementary students from Dublin, Ireland virtually from Canada using Zoom.
- Taught intermediate programming concepts (functions, data structures, recursion, search and sorting algorithms).

COMMUNITY & LEADERSHIP

Director of Operations

Oct 2020 – Jun 2021

St. Robert Coding Club

Thornhill, ON

- Managed, instructed and directed a 150-member club of high school students interested in coding.
- Prepared students for the CEMC Canadian Computing Competition in the Junior and Senior stages.

PROJECTS

Smart Stock Portfolio Generator | *Jupyter Notebook, Pandas, Matplotlib, Numpy, yFinance*

Oct – Dec 2021

- **Runner-up** contest submission from Computational Finance course.
- Quantitatively analyzes live financial data to produce the most volatile portfolio from any list of stock tickers.
- Calculated stock beta, standard deviation, Sharpe ratio, and stock option interest ratios to rank stocks and used Monte Carlo methods to determine optimal portfolio weights.
- Optimized code execution by threading and caching API calls to our financial data source, yielding a **20x decrease** in our program's total run time.

DiscardApp | *JavaScript, HTML, Google Firebase, BeautifulSoup4, Google Places API, Azure CI/CD*

Jun 2021

- AtlasHacks II First Place Winner, byteCode Summer 2021 Runner-up.
- Created a web application with a **team of 4** to display the best credit card to use in your wallet by determining where you are shopping using **Google Places** categories, **web-scraped** Rakuten referral links and a curated Canadian credit card list attracting **800 unique visitors** every month.

CheckinWithMe | *Python, Natural Language Processing, AstraDB, Requests, Discord.py, Heroku CI/CD*

May 2021

- Mental Health Hacks Hackathon Winner: Best use of Linode Cloud, Best Domain Name from Domain.com.
- A Discord bot that uses **tone/sentiment analysis** to detect and respond to users' moods leading to an increased awareness **about their mental health**.

RobCoin | *Python, Flask, OpenSSL*

Apr 2021 - Jun 2021

- Co-created original **code** and **instructional material** for a **proof of work cryptocurrency** from scratch.
- Tailored original instructional material alongside code development to educate Coding Club members in **blockchain, public/private-key cryptography, hash functions** and **distributed computing**.

TECHNICAL SKILLS

Languages: Python, JavaScript, HTML/CSS, SQL, Markdown, LaTeX.

Skills: CI/CD, Web Scraping, Microsoft Office Suite (Excel, Word, Outlook), SSH/Linux Shell.

Libraries: Flask, React, Bootstrap, Pandas, Matplotlib, yFinance, BeautifulSoup, Google Cloud Platform.

Tools/Applications: Git, GitHub, Heroku, VS Code, PyCharm, Jupyter Notebook, PuTTY, Ubuntu, GNU Bash.