


# Kieran Pattison

3<sup>rd</sup> Year Computer Science + Math | [kieranpattison23@gmail.com](mailto:kieranpattison23@gmail.com) 

## TECHNICAL SKILLS

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**Languages:** Java, C, C++, Python, JavaScript, SQL, Ruby, HTML, CSS, R, TypeScript, Scheme  
**Frameworks\Libraries:** NumPy, Jupyter, scikit-learn, Matplotlib, Pandas, JSON, JUnit, Swing, GDB, Twilio  
**Other skills:** Docker, Kubernetes, Multi Threaded Programming, L<sup>A</sup>T<sub>E</sub>X, Git, MS Office, Bash, Network Programming

## PROJECTS

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### IMC Prosperity Challenge

Mar 2023

- Participated in a global simulated trading competition hosted by IMC, placed **top 5%** of the contestants (11,578) by achieving an 80% return on investment.
- Collaborated with a team of three to develop multiple trading strategies using technical and fundamental analysis in **Python**, and created a profit and loss visualizer using the **Matplotlib** library.
- Learned the importance of diversification, risk management and adaptation to changing market conditions.

### Course Checker

Jul 2023

- Used **Python** to create a bot that monitors seat openings in specified UBC courses and then utilized **Twilio's** API to send SMS notifications to the user.
- Checked courses using Python **cookies**, **requests** and **regex** to request the page and then efficiently find the required seat information.
- Simulated real browser traffic by using specific request headers.

### Student-Athlete Scheduler

March 2022

- Created a Scheduling application using **Java** and its **Swing GUI** toolkit. The app, specifically designed for myself and other student athletes, helped to manage workouts, assignments and exams by giving a visual breakdown of the week and displaying a task list.
- Designed the app using **object-oriented** principles and reduced repeated code (abstraction & inheritance).
- Saved states with **JSON** object persistence and tested each part of the design using **JUnit** unit tests.

### Spaceship Game LAN

Apr 2019

- Coded a spaceship shooting game with programmed enemies and obstacles using **Python** and **PYFLTK**.
- Later modified it to use **UDP** protocol to play over classroom LAN against classmates.

## EXPERIENCE

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### Co-op Software Engineer

Jan 2023 – May 2023

*Xneelo Development Ltd.*

*Vancouver, BC*

- Was part of an **Agile** team on the back-end using **Ruby on Rails** to develop a web application for hosting and creating WordPress sites and **MySQL** for site databases.
- Worked in Dev-Ops maintaining integration tests, the **CI/CD** pipeline and debugging the product.
- Modified and developed open source **Docker** containers and deployed **Kubernetes** pods for local development and to clusters.
- Wrote a **RESTful** API for BIND to simulated DNS verification in local development and integration tests and deployed it into a container.

### Lifeguard and Swimming Instructor

May 2021 – Aug 2023

*City of Richmond*

*Richmond, BC*

- Taught private and group lessons for children ages 2-13 and wrote reports for swimming progress while communicating with parents.
- Worked at four different locations with teams of lifeguards to coordinate pool coverage and manage emergencies.
- Interacted with and solved problems for the public (disputes and customer service) and responding to potential emergencies.

### Software Intern

Aug 2023 – Present

*CodeCertainAI*

*Online, Part-time*

- Working with Jupyter, Pandas and scikit-learn to train a model to generate in-line code-review style comments for pull requests using open source repositories.

## EDUCATION

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**University of British Columbia**

Sep 2021 - Apr 2026

*Bachelor of Science, Combined Major in Computer Science and Mathematics*

*Vancouver, BC*

**Key courses:** Software Construction (Java), Algorithms / Data Structures (C++), Computer Systems (C), Elementary Statistics (R), Linear Algebra, Differential Equations and Multivariable Calculus.