

Simon Chase

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SKILLS

Languages: Java, C, C++, JavaScript (p5.js), HTML/CSS, Racket

Tools: Git/GitHub, Bash, Linux, Visual Studio Code, IntelliJ IDEA, L^AT_EX

PROJECTS

Physics Engine | *Java, Java AWT*

- Created a basic physics engine from scratch using Java AWT
- Explored and implemented optimizations, **doubling benchmark performance**
- Implemented a hybrid of time-based and event-based calculations to handle **100s of moving objects**

Sudoku Solver | *C++*

- Researched optimal strategies to solve sudoku problems
- Implemented the dancing links algorithm using **doubly linked lists** to maximize the program's solving speed
- Achieved **solve times of under 1s** for all sudoku problems

Carrier Pigeon | *Java, Socket*

- Utilized socket to create a local messaging application in Java from scratch
- Designed server class to be self-hostable to **improve privacy and security** for users

EXPERIENCE

Assistant Manager

Oct. 2019 – Aug. 2021

Gravity Climbing Gym

Hamilton, ON

- **Managed up to 5 staff**, with broad responsibilities throughout the gym
- Took ownership of new initiatives, such as a Bluetooth music system and upgrading equipment
- Worked as **part of a team** to ensure smooth gym operations and drive sales

Belay Instructor

Aug. 2019 – Aug. 2021

Gravity Climbing Gym

Hamilton, ON

- Led in-depth courses on how to belay for **up to 10 customers**
- Emphasized best safety practices, leading to a **100% pass rate** of the follow-up test
- Developed **communication skills** through teaching

Youth Coach

Feb. 2018 – Dec. 2020

Gravity Climbing Gym

Hamilton, ON

- Oversaw a semi-competitive youth climbing program as head coach
- Formulated and led lessons and drills, leading to **3 athletes advancing** to the competitive team

COMPETITIONS

Canadian Computing Competiton (Senior Division)

- Ranked in the **top 12%** of 2900+ competitors in 2021
- Ranked in the **top 8%** of 2800+ competitors in 2020

Other

- Ranked **1st out of 500+ competitors** in the UWaterloo Financial Literacy Competiton
- Reached finals at Ontario lead climbing provincials

EDUCATION

University of Waterloo

Waterloo, ON

Bachelor of Computer Science, 90% Average

Sept. 2021 – April 2026

- President's Scholarship of Distinction
- Advanced stream computer science classes