Simon Chase

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SKILLS

Languages: Java, C, C++, JavaScript (p5.js), Racket
Tools: Git/GitHub, Bash, Visual Studio Code, IntelliJ IDEA, LaTeX

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

PROJECTS

Physics Engine | *Java, Java AWT*
- Created a basic physics engine from scratch using Java AWT
- Explored and implemented optimizations, improving a benchmark scenario from ∼30 fps to ∼60 fps
- 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 appliction in Java from scratch
- Designed server class to be self-hostable to improve privacy and security for users

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