Bill Lin

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Education

University of Toronto — Toronto, ON
Bachelor of Science | Computer Science Specialist, Mathematics Major — Sep. 2022 - Present
CGPA: 4.0: 96% Course Average

Steveston-London Secondary School — Richmond, BC
Received the $1,250 District Scholarship for Applied Design, Skills, and Technologies and the $1,250 BC Achievement Scholarship for the top 8,000 graduates — Sep. 2017 - Jun. 2022

Competitions

International Collegiate Programming Contests — Sep. 2022 - Apr. 2023
- Placed 9th on UofT's North American Qualifier to secure a spot on the ICPC team
- Represented University of Toronto at the 2022 ICPC East Central NA Regional Contest, placing 30th out of over 80 university teams

Canadian Computing Olympiad - Bronze Medal — May 2022
University of Waterloo - Centre of Education for Mathematics and Computing
- Qualified by placing in the top 25 out of over 8,000 other competitors in the Canadian Computing Competition
- Applied algorithms such as Dijkstra, BFS/DFS, Kruskal's MST and data structures such as Arrays, Queues, and Trees to solve problems

Google Code Jam Round 3 - 728th/28000 — June 2022
- Qualified for Round 3, placing 728th place out of over 28000 participants
- Used C++ to solve challenging data structure and algorithm problems

Google Kickstart - 70th/11000, 2nd in Canada — 2021 - 2022
- Participated in every Google Kickstart Round from 2021-2022 (for a total of 16 rounds)
- Best rankings: **70th/11000** in 2021 Round D (2nd in Canada), **80th/7150** in 2022 Round B

Projects and Experience

Research Task: Optimizing Small General Matrix Multiplication | *C++* — July 2023 - Present
Huawei
- Sponsored by Huawei to design an algorithm that is faster than the current best open-source implementation OpenBLAS for small matrix multiplication
- Implemented an algorithm that is faster than OpenBLAS by **2%** for small inputs
- Designed a new tiling algorithm and auto-generated kernels to speed up computation

Epidemic Simulator | *Python, Pygame* — Jan. 2023 - Apr. 2023
- Created a model consisting of people moving in a set area to simulate how a disease with certain properties would spread
- Allows the user to specify variables that impact the infection, such as number of people, rate of infection, infection radius, people's movement speed, etc.
- Displayed data to the user using Pygame, with tables storing data along with an animated graph showing the proportion of the uninfected, infected and recovered people
- Implemented Brownian motion as a toggle for the user to experiment with different movement trajectories

Teaching Assistant - Programming 11 — Jan. 2022 - June 2022
Steveston-London Secondary School
- Assisted in teaching an intro to programming class for grade 11-12 students
- Taught concepts such as arrays, binary search and recursion
- Helped students debug and assisted them with their Pygame projects

Skills

Languages: Java, Python, C++, HTML/CSS, LaTeX
Developer Tools: Git, Xcode, PyCharm, IntelliJ, CLion