Bernard Teo Zhi Yi

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Skills and Abilities

- Proficient in (modern) C++, C, C#, Java; some experience with JavaScript, Swift
- Strong algorithmic problem solving skills
- Familiar with multi-threaded programming and atomic operations, including lock-free data structure design
- Have experience with Visual Studio and Git for multiple projects

Interests

- Algorithmic problem solving, data structures and algorithms, parallel programming, zero-cost abstractions, modern C++

Work Experience

Software Engineer Intern — Jump Trading LLC

June-August 2019 | C++14/17

- Attended a four-week training programme, followed by six weeks of work on the market data portion of the trading platform used by all trading teams

Notable Competitions

ACM International Collegiate Programming Contest (ICPC)

- Ranked 62nd at ACM-ICPC World Finals 2019
- Ranked 1st at ACM-ICPC Asia Yangon On-Site Regional Contest 2018
- Ranked 7th at ACM-ICPC Asia Singapore On-Site Regional Contest 2018
- Ranked 5th at ACM-ICPC Asia Jakarta On-Site Regional Contest 2017

International Olympiad in Informatics (IOI)

- Bronze Medal in 2013
- Participation in 2012

Google Code Jam

- 51st globally in 2019
- 295th globally in 2018
- 834th globally in 2017

Distributed Code Jam

- 155th globally in 2017
- 79th globally in 2016

Singapore Mathematical Olympiad (SMO)

- Silver Award for Open Category in 2013 and 2014

Notable Projects

Circuit Sandbox

GitHub repository: https://github.com/btzy/circuit-sandbox

Summary poster: https://btzy.github.io/circuit-sandbox-poster.pdf

May-August 2018 | NUS Independent Software Development Project | C++17

- Circuit Sandbox is an open-source desktop cross-platform (Windows, Mac, Linux) sandbox simulation game built with SDL2.0 and designed to be fast and efficient
- Consists of over 12000 lines of C++ code utilizing various C++11/14/17 features
- Implement separate simulation, rendering, and file I/O threads that almost always communicate in a wait-free manner
- Implement generation of circuit graph, and other performance optimizations

Other Experience

National Olympiad in Informatics (NOI) Scientific Committee

January-March 2017

- Design and prepare task statements, and ensure quality control of the tasks for the competition

Education

2017-present

National University of Singapore
BComp (Hons) in Computer Science
BSc (Hons) in Applied Mathematics
Double Degree Programme
Current CAP (as of June 2019):
5.00 out of 5 (BComp)
4.95 out of 5 (BSc)

Notable modules taken:

- CS2100 Computer Organisation
- CS2105 Intro. to Computer Networks
- CS2106 Intro. to Operating Systems
- CS3203 Software Engineering Project
- CS3210 Parallel Computing
- CS3230 Design and Analysis of Algo.
- CS3233 Competitive Programming
- CS4231 Parallel and Distributed Algo.
- MA2101 Linear Algebra II
- MA2104 Multivariable Calculus
- MA2108S Mathematical Analysis I (S)
- MA3218 Applied Algebra

2009-2014

Hwa Chong Institution
Science and Mathematics Talent Programme

Scholarship

NUS Merit Scholarship recipient

Teaching

Teaching assistant for
CS2030 Programming Methodology II:

- Spring 2018 (score: 4.7 out of 5)
- Fall 2018 (score: 4.8, 4.6 out of 5)

Links

- GitHub: @btzy
- LinkedIn: bernard-teo
- Personal Website: bernardteo.me