Chun Kit Li

4B Computational Mathematics and Statistics | University of Waterloo

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Skills

- **Computer Languages:** Java, MATLAB, SQL, R, Pascal, C, C++, Python, Bash, MIPS, Scheme(Racket)
- **Web Development:** HTML/CSS, JavaScript, p5.js
- **Tools:** Apache Maven, Apache Tomcat, IntelliJ IDEA, PyCharm, CLion, Eclipse

Work Experience

The Education University of Hong Kong

Sep. - Dec. 2019

IT Intern | Office of the Chief Information Officer - Student Administration Team

- Transitioned the school system's data forms for over 13 500 users by using **Java, XML,** and **PL/SQL**
- Helped writing technical documentation for the new system for future developers
- Researched and developed methods to increase development efficiency
- Used **Eclipse**, **Apache Tomcat**, and **Apache Maven** to manage and modify the new school system

Projects

Reliable Data Transfer Protocol

Mar. 2021

- Used **Java** to implement **reliable data transfer protocol** between users via network emulator
- Used **DatagramSocket** class to establish UDP connections between users and the network emulator
- Implemented **Packet** class for users transfer data packets via UDP connections
  - Inherited **Seriablizable** class for **Packet** such that data packets can receive by user correctly
- Sender sends 30 packets to receiver and receiver will respond with acknowledgment messages
- Sender resends packet after a period of time if it does not receive the corresonding message
- Network emulator will discard packets/messages from both sender and receiver by a set probability
  - Inherited **Thread** class such that network emulator can be multithreading for sending and receiving

Socket Programming

Feb. 2021

- Used **Java** to implement client and server programs for client to push/pull files to server via **TCP** sockets
- Used **Socket** class to establish TCP connection between client and server
- Client establishes a persistent TCP connection and sends a random available local port number to server
- Server establishes a non-persistent TCP connection using that random available local port number to client
- Client pushes to/pulls from server via that non-persistent TCP connection

Education

University of Waterloo

Sep. 2016 - Jun. 2021

Candidate for Honours Bachelor of Mathematics

- Major in Computational Mathematics and Statistics with Computing Minor
- University of Waterloo President's Scholarship
- Term Honours - Term Distinction (for term average with at least 80%) since Winter 2020
- **Relevant Coursework:**
  - Object Oriented Programming
  - Algorithms
  - Data Structures
  - Database
  - Networks and Distributed Computer Systems
  - Applied Cryptography