

# Denton Liu

## Software Engineering

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in DentonL  
Denton-L

### Summary of Qualifications

- o Proficient in Java, C, C++ and various assembly languages.
- o Enjoys working in and understanding low-level environments such as embedded systems.
- o Familiar with building websites using HTML5, CSS3 and JavaScript.
- o Adept with Linux and common applications such as Git and GDB.

### Projects

- LAByrinth
- o Created a labyrinth game using an Arduino-like microcontroller with C.
  - o Utilised both serial and parallel I/O to communicate with peripherals.
  - o Wrote an abstraction layer over hardware in order to simplify higher-level development.
- Breadboard Computer
- o Created a computer based on the 6502 processor on a breadboard using only ICs (integrated circuits).
  - o Programmed a version of Pong using 6502 assembly.
  - o Utilised an EEPROM programmer to load an assembled hex image.
- Java-Webchat
- o Employed RMI (Remote Method Invocation) to communicate between server and clients.
  - o Implemented a user database which took precautions to secure user data using salted hashes.
  - o Made use of object-oriented programming principles in order to create a cleaner codebase.

### Experience

- 2014 **IT Volunteer**, *Administration*, Newcomer Centre of Peel.
- o Created tool to backup user data using Windows Batch scripting.
  - o Acted as system administrator.
  - o Provided technical assistance to employees.
- 2010–2015 **Cadet Warrant Officer**, *Royal Canadian Air Cadets*, 700 David Hornell VC Squadron.
- o Planned and organised events, such as training weekends, as a member of a team.
  - o Captained the drill team consisting of the squadron's most successful cadets.
  - o Commanded over 120 peers during graduation parade of Drill and Ceremonial Instructors Course.

### Education

- 2015–2020 **Candidate for Bachelors of Software Engineering**, *University of Waterloo*, Waterloo, Ontario.  
*Cumulative GPA: 3.85*
- 2011–2015 **Ontario Secondary School Diploma**, *Martingrove Collegiate Institute*, Toronto, Ontario.  
*Academic Average: 95.0%*

### Awards and Scholarships

- |      |   |                                |
|------|---|--------------------------------|
| 2015 | Sandford Fleming Foundation Programming Competition Award | Second Place                   |
| 2015 | Dean's Honours List at University of Waterloo             | Term Average of 87% or Greater |
| 2014 | University of Toronto High School Design Competition      | First Place                    |

### Interests and Hobbies

- o Plays cello, double bass and piano.
- o Avid unicyclist.
- o Fanatical user of L<sup>A</sup>T<sub>E</sub>X.
- o Proud Vim user.
- o Runs Arch Linux on personal computer.