

# Bowen Shi

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## **Education**

Bachelor of Science in Computer Engineering  
*University of Manitoba*

**Sept 2015 – Feb 2019**

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## **Technical Skills**

- Programming: **Java (4 years)**, **C/C++ (3 years)**, Python, Verilog, HTML, CSS, MPI, OpenGL, OpenCL, OpenMP, CUDA, SQL
  - Tools and software: Android Studio, SSH, Git, I2C, MATLAB, Processing, Greenfoot, Windows Office, OpenCV
  - Other Related knowledge: Agile, **Object Oriented Programming**, TCP/IP, Socket Programming, Design patterns, Software life-cycle, Raspberry PI 3, Linux
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## **Significant School Projects**

### **Capstone Design Project**

**Sept 2017-May 2018**

- Organized the 4 team-member team in designing an Object Characteristics Detection and Sorting Project that determines object characteristics
- Involved in programming the Raspberry Pi controller board to automatically sense objects and use image processing techniques to determine their physical characteristics using Python on a Linux-based OS
- Led other team members in their tasks involving programming and interfacing the controller board with external circuitry

### **Human-Computer Interaction Project**

**Sept 2018-Dec 2018**

- Designed an online movie tickets system through User-Centered Design Process
- Created milestone reports and Gantt charts during the process of the project
- Implemented Web-based system in “Model – view – controller” pattern with HTML, CSS and JavaScript

### **System Design Principles Project**

**Sept 2016-Dec 2016**

- Created the System based on Client-Server model; Object Oriented Programming, interface and embedded techniques were integrated into the system, in which, the system consists of microcontroller end, proxy server end and Android end
- Implemented the communication between three sub-systems by socket programming based on TCP/IP protocol

- Tested the entire system by GUI implementation in both proxy server end and Android end in Android Studio
- Engineered the system for user to gain Internet-based remote control of a microcontroller

## **Other Related Skills & Experience**

### **Software Development Skills**

- Programmed basic Algorithms such as the Conway's Game of Life using Java and C language, also in parallel processing tasks using C++
- Designed object-oriented paradigm systems and performed the requirements workflow, analysis workflow, design workflow and tests
- Implemented Data Structures, such as Lists, Queue, Stack and Hash table in Java
- Built P3D/OpenGL programs using Java, such as implement simulations of complex realistic objects animation in Processing
- Learned database systems including the relational, hierarchical, network and entity-relationship models with emphasis on the relational model and SQL

### **Communication and Leadership Skills**

- Bilingual; Native Mandarin but fluent in written and spoken English
- Developed my comprehensive leadership skills by attending the **Student Leadership Development Program** on 2018, which explored a multitude of leadership techniques, theories and models through interactive workshops and activities
- Assisted new volunteers with on the volunteer job training and back up other members in the event of absences and work as a student volunteer in the **University of Manitoba Student Volunteer Program** from 2017 to 2019