

Bowen Shi

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Education

Bachelor of Science in Computer Engineering
University of Manitoba

2015 - present

Expected graduate on February 2019

Related Courses

Parallel Processing, Computer Graphics, Data Structures and Algorithms, Operating Systems, Microprocessing Systems and Interfacing, Telecommunication Network

Technical Skills

- Programming: **Java (4 years)**, **C/C++(3 years)**, Python, Assembly, Verilog, HTML, CSS, MPI, OpenGL, OpenCL, OpenMP, CUDA
 - Software and APIs: Android Studio, SSH, I2C, MATLAB, Processing, Greenfoot, Windows Office, TCP/IP, Socket Programming, OpenCV
 - Hardware: Raspberry Pi 3, FPGA boards, dsPIC 24/33 family chips
 - Operating Systems: Linux, Windows, macOS, Android
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Significant School Projects

Electrical and Computer Department Capstone Design Project

Sept2017-May2018

- 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

System Design Principles Project

Sept2016-Dec2016

- 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, where as, multi-threaded programming was used for supporting multiple clients in real-time

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

Human-Computer Interaction Project

Sept-Dec2018

- Designed an online movie tickets system through User-Centered Design Process “Investigate - Ideate – Prototype – Evaluation” process
- Implemented the online system in “Model – view – controller” pattern with HTML, CSS and JavaScript
- Created milestone reports during the process of the project to demonstrate the credible work

Other Related Skills & Experience

Software Development Skills

- Implemented the basic Linux shell using C language
- Programmed basic Algorithms such as the Conway's Game of Life using Java and C language, also in parallel processing tasks using C++
- Implemented Data Structures, such as Lists, Queue, Stack and Hash table
- Built P3D/OpenGL programs using Java, such as implement simulations of complex realistic objects animation in Processing

Communication and Leadership Skills

- Bilingual; Native Mandarin but fluent in written and spoken English
- Develop my comprehensive leadership skills by attending the **Student Leadership Development Program** on February and March 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 overload as a student volunteer in the **University of Manitoba Student Volunteer Program** from 2017 to present