Simeng Yang

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SKILLS

Programming Languages

- C / C++
- C#
- Java
- JavaScript
- Python
- SQL
- HTML / CSS / JS
- PHP

Tools and Technologies

- Git / Mercurial
- Jira
- Jenkins
- Linux
- LaTeX

EDUCATION

UNIVERSITY OF WATERLOO

Bachelor of Computer Science, Honours
Expected May 2021

AWARDS

Certificate of Distinction

The Centre for Education in Mathematics and Computing
• Awarded for scoring in the top 25 percentile for various mathematics contests.

Most Outstanding Senior Cadet

National Army Cadets of Canada
• Awarded to an outstanding Cadet in their last year of training for exceptional service.

INTERESTS

- Swimming lengths
- Steam microeconomy trading

EXPERIENCE

SOFTWARE DEVELOPER | Genesys Laboratories

May - August 2017 | Markham, ON

- Independently developed an interface to encapsulate Opus audio in the Ogg media container for playback over Chrome and Firefox in **C++**.
- Implemented features for the Genesys Web Real-Time Communication (RTC) service.
- Conducted automated unit tests on the Genesys Voice Platform with **Jenkins** continuous integration platform.

PROJECTS

STUDENT DATABASE MANAGEMENT SYSTEM

HTML, CSS, JS, PHP, MySQL

- Implemented a login-authenticated database to facilitate student registration into courses and manage student records.
- Developed the web interface from scratch, with database integration using **MySQL** and **Apache** and user-interactive dropdown using **JS**.
- Implemented robust input sanitation for text-fields using custom error-handlers and regular expressions in **PHP**.

SKETCHIT! – NXT MINDSTORMS 2D PRINTER

C++, ROBOTC

- Implemented a printer to reproduce sketches from a set of 25+ points, built using NXT sensors, motors and a programmable brick microcomputer.
- Developed a graphical interface for plotting points through keyboard and mouse input, using the Horstmann Graphics library in **C++**.
- Coded the calibration and 3-axial operation of the printer with **ROBOTC**.

SKITTLE SORTER AND DISPENSER

Arduino

- Designed an autonomous Skittle dispenser for allocating Skittles into separate bins, with motors, an RGB sensor and 3D-printed components.
- Synchronized the rotation of the feeding wheel and operation of the release shaft in **Arduino**.
- Optimized reliability of RGB-sensing by compiling consistency analyses for red, blue and green light from **Arduino** serial port data.

PONG

Arduino

- Programmed multiplayer Pong on an 8x8 LED matrix with **Arduino**.
- Developed subroutines to efficiently toggle LED states of matrix.