Simeng Yang

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SKILLS

Programming Languages
- C / C+ +
- C#
- Java
- Python

Tools and Technologies
- Git
- HTML / CSS / JS
- PHP
- MySQL
- Android
- $\LaTeX$
- SolidWorks
- AutoCAD

EDUCATION

UNIV ERSITY OF WA TERLOO
Bachelor of Computer
Science, Honours
Expected May 2021

COURSEWORK
- Digital Computation
- Data Structures and Algorithms

AWARDS

Faculty of Engineering Entrance Scholarship
University of Waterloo
- Awarded to top applicants to the faculty of engineering.

Certificate of Distinction
The Centre for Education in Mathematics and Computing
- Awarded for scoring in the top 2 5 percentile for various mathematics contests.

INTERESTS
- Swimming enthusiast
- Budding programmer
- Trading in Steam microeconomy
- Enjoying the outdoors

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 functions to efficiently toggle LED states of matrix.
- Debugged digital circuit with logic probes to validate output and connections.

EXPERIENCE

WARRANT OFFICER | 62 Royal Hamilton Light Infantry
Sep 2013 – Jun 2016 | Hamilton, ON
- Coordinated Cadet activities, including the fundraising of $5,000+ towards the Cadet unit and participation in the city-wide Remembrance Day Parade.
- Awarded '**Most Outstanding Senior Cadet**' and '**Top Master Cadet**' for exceptional service.

LIFEGUARD-IN-TRAINING | National Lifesaving Society
Sep 2015 – Jun 2016 | Hamilton, ON
- Created lesson plans for teaching children of varying swimming levels.
- Supervised a pool of 100+ swimmers under the guidance of a mentor lifeguard.

TEACHING ASSISTANT | St. Patrick's School
Sep 2012 – Jun 2013 | Hamilton, ON
- Led and provided feedback for groups of students on a weekly basis, improving overall student performance in reading and writing.