

Simeng Yang

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Skills

Proficient C/C++, C#, Python

Familiar Java, JavaScript, Perl, WAMP Stack, SQL, PHP, HTML, Matlab

Tools & Technologies Unix/Linux, GDB, Valgrind, Git/Mercurial, Jira, Apache

Experience

Software Development Intern

Markham, ON

GENESYS LABORATORIES

May - August 2017

- Developed a backend interface from scratch to encapsulate audio in a media container for recording and playback over Chrome and Firefox in **C++**.
- Implemented unit tests for audio encapsulation with the Google tests framework on Windows and Linux.
- Wrote VXML scripts to invoke recording and playback by simulating user agent scenarios with SIP protocol.
- Programmed and tested features for the Genesys Web Real-Time Communications platform.
- Performed and underwent code reviews to ensure a consistently high quality of code.

ECOO Programming Contest

Toronto, ON

REGIONAL QUALIFIER

Feb 2016/2015

- Finished as **semi-finalists** in 2015 and 2016.
- Solved computational problems by implementing **Search, Sort, and Pathfinding** Algorithms in C#, Python and C++.
- Applied **dynamic programming** to optimize solutions and satisfy runtime constraints.

Projects

Student Database Management System

JAVASCRIPT, PHP, MYSQL, WAMP STACK, HTML, APACHE

- Implemented a login-authenticated database to manage student records using **WAMP Stack**
- Developed the web interface from scratch, with database integration using **MySQL** and **Apache**
- Implemented robust input sanitation for text-fields using error-handlers and regular expressions in **PHP**

SketchIt! - 2D Printer

C/C++

- Implemented a printer to reproduce sketches from a set of 25+ points on a brick microcomputer.
- Developed a graphical interface for plotting points through keyboard and mouse input in **C++**.
- Coded the calibration and 3-axial operation of the printer with **embedded C**.

Jumbotron - Skittle Sorter and Dispenser

C/C++, EMBEDDED C

- Designed an autonomous dispenser for allocating Skittles using an RGB sensor.
- Synchronized the rotation of the feeding wheel and operation of the release shaft in **C++**.

PolyTown

C/C++

- Coded a story-telling game with object-oriented features such as inheritance, polymorphism, encapsulation, and dynamic memory storage using **C++**.

Education

University of Waterloo

CANDIDATE FOR BACHELOR'S OF COMPUTER SCIENCE, 3.9 cGPA

Sep. 2016 - Exp. May 2017

- Faculty of Engineering Entrance Scholarship, \$3,500
- President's Scholarship of Distinction, \$2,000

Awards

2016/2015 **Semi-finalists**, ECOO Programming Contest

Toronto, ON

2016 **Top Senior Cadet**, National Army Cadets of Canada

Hamilton, ON