SIMENG **YANG**

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Skills

Proficient C/C++, C#, Python
Familiar Java, JavaScript, SQL, PHP, HTML / CSS, LAMP Stack, Android
Tools Unix/Linux, GDB, Valgrind, Git/Mercurial, Jira, Apache

Experience

Software Development Intern
Markham, ON

GENESYS LABORATORIES
May - August 2017

- Developed a backend interface to encapsulate audio in a media container for recording and playback over Chrome and Firefox in **C++**.
- Implemented unit tests for audio encapsulation with Google Test on **Linux** and **Windows**.
- Wrote **XML** scripts to simulate user-agent scenarios with SIP protocol over the media server.
- Programmed and tested features for the web-based Real-Time Communications (RTC) system.
- Performed and underwent code reviews to ensure a consistently high quality of code.

ECOO Programming Contest
Toronto, ON

REGIONAL QUALIFIER X 2
Feb 2016/2015

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

Projects

Student Database Management System
JAVASCRIPT, PHP, MYSQL, LAMP STACK, HTML, APACHE

- Implemented a login-authenticated database to manage student records using **LAMP 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**.

Classifier
PYTHON

- Implemented a Support Vector Machine in **Python** to identify employees who may have committed fraud based on financial and email datasets.
- Tuned classification algorithm to achieve 85% accuracy on a dataset of 14,000+ employee profiles.

SketchIt! - 2D Printer
C/C++

- Programmed 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 Dispenser
C/C++

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

Education

University of Waterloo
CANDIDATE FOR BACHELOR'S OF COMPUTER SCIENCE, 3.9 CGPA
Sep. 2016 - Exp. May 2021

- DSE200x (Online) - Python for Data Science, edX
- UD120 (Online) - Intro to Machine Learning, Udacity