Steven Luo | Electrical Engineering

www.swluo.me ● github.com/o00o00o ● swluo@uwaterloo.ca ● (519) 729-8764

Technical Qualifications

Proficient with:
- C, C++, Java, Python, SQL, Bash, Assembly (ARM)

Tool Experience:
- Git, Makefile, GDB Debugger, Matlab/Simulink

Development Environments:
- Android, Arduino, Keil MCU, PIC, Unix

Interpersonal Skills

- Successful bilingual (English and Mandarin) team player with exceptional communication and time management skills
- Proven self starter with a can-do attitude, always ready to take on responsibilities regardless of the job description

Projects

Android Pedometer App (Java)
January 2016
- Analyzed accelerometer data using software implemented low bypass filter
- Created footstep recognition algorithm using finite state machine
- Used recursive path finding algorithms with navigation points on SVG map
- Delivered code on time every two weeks, meeting all deliverables

Android Track Your Boom (Java)
April 2016
- Used Google Play Services framework to implement "my location" on Google Maps API
- Compared and contrasted sonic boom by drawing overlays on Google maps
- Created sonic boom sound effect and animated jet flyby

Pomodoro Timer (C++, SDL)
August 2016
- Utilized SDL framework to capture and process all raw input from I/O
- Handled graphics manipulation using texture rendering and alpha blending
- Hardcore mode ignores system shortcut and forces window foreground

Hack the North 2016 (C++, SQL)
September 2016
- Turned raw data into useful, queryable format for Non-profit use
- Parsed a 230,000 entry dataset from Open Data Canada into SQL database
- Created a user friendly search interface that queried from SQL database

Work Experience

Hardware Testing & Support
Global Fleet Management
May 2016 – August 2016
- Designed and implemented new test bench to support new GPS trackers with legacy tracker support
- Programmed GPS trackers through serial communication (Bash Scripting)
- Conducted remote diagnosis using SMS bootstrap
- Performed local diagnosis with multimeter and test bench

Java Instructor
Peach Arch Education
May 2016 – August 2016
- Developed course plan for Java Programming Level 1 (Grade 8 - 12)
- Incorporated object-oriented principles specifically encapsulation and inheritance into projects
- Designed final project to be a full brick breaker game including texture control, score counter, and audio/visual effects

Education

University of Waterloo
BASc, Electrical Engineering
June 2020
- Conference speaker and conference delegate for Engineering Society
- Webmaster for Waterloo Engineering Society's WordPress website. Helped develop new digital services and conduct website overhaul.