

JASON SUN

Profile

- Very driven and motivated with many hobbies (visit my blogs at blog.sunapi386.ca). Especially interested in computer science, which was discovered from trying two previous majors during undergrad. Physics, and before that, business.
- Over eight years of experience using unix: Ubuntu, Arch Linux, OS X, and unix utilities like grep, less, find, fdisk, and etc.
- Experienced working in start-up environments, at Velocity Residence and Velocity Garage. Enjoys technology conventions; ones I had attended were: DEFCON (#22), 2600 Hope Number 9, PennApps 2013, MHacks 2014, HackMIT 2014, and HackZurich 2014.

Education

University of Waterloo
BS in Computer Science

2012 - 2015

Work Experience

Shutterfly Inc. - Redwood City, California
Software Engineer Intern

07 / 2014 - 08 / 2014

- Develop functional load tests for distributed services. Design and implemented a distributed key value storage service, using technology like Jersey RESTful Web Services framework and Apache Cassandra.

Encircle Inc. - Kitchener, Ontario
Software Developer

05 / 2014 - 06 / 2014

- A start-up in the Velocity Garage, worked in java, coffee, and python. Worked on the web and android application stacks.

University of Waterloo - Waterloo, Ontario
Undergrad Research Assistant

01 / 2014 - 04 / 2014

- Working with professor and experimented acquiring sound input from a NI myDAQ, a low-cost data acquisition device (DAQ), and performing data analysis on it using Matlab.

RIM (BlackBerry) - Ottawa, Ontario
Software Tools Developer Intern

09 / 2014 - 12 / 2014

- Built features to the GitLab open source project (Ruby on Rails). Developed a testing framework for testing website user interfaces, using the Selenium Java framework.

Wilfrid Laurier University - Waterloo, Ontario
Physics Teaching Assistant

09 / 2011 - 04 / 2012

- Developed a spectrometer reading program in python, using the pySerial library, and automate queries over serial port - previously you had to punch numbers on the machine.

Interesting Projects

Advanced Algorithms class (EPFL CS 450)

A graduate course in algorithms, learned theoretical techniques and their applications to solve problems. Interesting techniques such as network flow, randomization, dynamic programming.

Intelligent Agent class (EPFL CS 430)

Developed intelligent agents to pick up and deliver parcels in a simulated environment, with intelligent behaviours: reactive, deliberative, centralized, decentralized, and auctioning.

Concurrency class (CS 343)

Multithreaded quicksort, implementation of well-known concurrency control mechanisms, such as monitors. Language is in uC++, a concurrent dialect of C++, developed at University of Waterloo.

Distributed Systems class (CS 454)

Built a remote procedure call library in C++ on top of TCP, both client and server side. Implemented the go-back-N reliable transmission protocol, over UDP using Java.

Computer Security class (CS 458)

Created exploits in C using techniques such as buffer overflow, and format strings. Implemented an intrusion detection program which parses output from tcpdump to detect spoofed packets, malicious hosts, and worms.

Compilers class (CS 251)

Built a MIPS compiler in C++, parsing a subset of C keywords and generating MIPS assembly code.

Computer Architecture class (CS 450)

Designed a pipelined CPU in Verilog, supporting 8 instructions for computer architecture class. This is sufficient to run machine code produced by the MIPS compiler, from the CS 251 compilers class.

Personal project

Dotabuff-ripper is a tool written in Ruby to aid the counter-hero picking in 5v5 dota games. A scraper collects about hero win rates from Dotabuff and inserts into a Neo4j graph based database. The tool then suggests a list of potential counter-picks. Meant to have a web interface, but the web component (written with Ruby on Rails) is only partially completed.

Awards and Achievements

Won hackathon prizes at:

- HackZurich 2014 at ETH Zürich, received Tamedia Digital Award (all-inclusive team trip to visit startups in Berlin, Germany) with .GIFMelt: An iOS app that lets a user easily capture and share GIF images.
- PennApps 2013 at University of Pennsylvania, received Twilio's Communication Award (\$500) with Marmoset: A chatbot to respond to your chosen Facebook friends without them knowing.