Yu-Ching Chen

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SUMMARY

Completed computer science specialist program at University of Toronto focusing on computer systems. Interested in most aspects of computer science, but more interested in C and hardware programming. Have been using Linux operating system for 4 years and currently using Arch Linux. A member of University of Toronto's computer science student union; helping out on their events and students in computer science needing help.

PROFESSIONAL EXPERIENCE

Junior Developer — *June '11 – Sept '11*
411.ca

- Created PHP scripts running tests on a Selenium server.
- Back end web testing on test servers and on primary server
- Active part of the IT department, participated in scrum meetings and engaged in the sprints.
- Set up local server for localized controlled testing

TECHNICAL

- C/C++
- Java
- Python
- Verilog
- Assembly Language

EDUCATION

University of Toronto
Honors B.Sc — Class of 2016
Computer Science Specialist (computer systems focus)

PROJECTS/VOLUNTEER

Drink Mixer (ATtiny45 8-bit MCU) (2016)

With a partner we created a drink mixer via USB from laptop to Arduino Uno board for user friendly instructions written in c++, relays message to a 2 bit channel using I^2c bit banging from GPIO with proper syncing and framing from Arduino to ATtiny45 on a breadboard. In turn ATtiny45 communicates with 3 motors through a driver using I^2c with pwm to control flow of fluid from our pumps to mix drinks to a specific amount. *Code provided on github-ECE385*

Fault tolerant chat server (2016)

UDP and TCP chat client that interfaces with the server given a specific http protocol as a distributed system. Client must connect to server by obtaining information from a static location server and exchange control packets using TCP while opening channels open UDP sockets for message exchange. Client must also be user friendly and fault tolerant to the point where users never experiences bugs or crashes. *Code provided on github -CSC469*

CPU microbenchmark (2016)

Purpose of the benchmark is to explore how Operating Systems delegate tasks and the time it takes, specifically x86 systems running Linux. Also to understand how numa nodes work and benchmarking the speed it takes for CPUs to read and write from the nodes. Able to explain what each benchmark tests and compare with other technologies. *Code provided on github -CSC469*

Compiler Creation (2016)

Created a single pass compiler in java to a specific grammar. Top down LL parser for lexical analysis and parsing text into tokens. Used visitor pattern for creating abstract syntax tree for syntax analysis and symbol tables design. Passed into code generation where we were given a machine specification (memory, stack pointers, available machine instructions, data types). Optimized compiler with certain design in activation records and loop optimization. *Code available on request*

CSSU Member - CSSU events & Hack nights (2015-2016)

Office administrator at UofT's undergrad computer science student union. Assisted all members of the union, helped represent computer science undergraduate students and assisted with any problems. For majority of the hack nights hosted this year, I mentored and supervised peers on any help they needed with any hacks to the best of my ability. Also helped set up and run most other CSSU events.