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About me

- University of Waterloo Computer Science undergraduate student in 4B term, with an exchange term at École Polytechnique Fédérale de Lausanne.
- Self motivating with many hobbies, blog at *blog.sunapi386.ca*. Very passionate about crafting software. I had switched from two previous majors: physics, business.
- Over six years of experience using unix: Ubuntu, Arch Linux, OS X and unix utilities like grep, fdisk, etc.
- Experienced working in startup environments, with five terms at *VeloCity residence*. Enjoys security conferences and hackathons. Attended DEFCON, Hope #12, MHacks, HackMIT, PennApps.
- Won Twilio's "communication prize" at PennApps 2013 with *Cleverbot*, which was to get Cleverbot to respond to your facebook messages. Demo: *http://youtu.be/-tEexMRq7fY*

Interesting Projects

- Project highlights from last term:
  - Multithreaded quicksort, token ring network simulation using coroutines in μC++, a concurrent C++ dialect developed at University of Waterloo.
  - Built a remote procedure call library in C++ over TCP, for both the client and server side. Implemented the go-back-N, a reliable transmission protocol, over UDP using **Java**.
  - Created exploits in **C** using vulnerabilities such as buffer overflow and format strings. Implemented an intrusion detection system in ruby that parses output from tcpdump to detect spoofed packets, malicious hosts, and worms.
- Dotabuff-ripper: My personal project, a tool written in **Ruby** to aid the counter-hero picking in 5v5 dota games. A scraper collects about hero winrates from *Dotabuff* and inserts into a **Neo4j graph based database**. The tool then suggests a list of potential counter-picks.
- MIPS compiler using context-free parsing to generate **MIPS assembly** code. Also designed a simple pipelined CPU written in **Verilog**, supporting 8 instructions for computer architecture class. Theoretically this is sufficient to run my machine code produced by my MIPS compiler.

Experience

- Software Engineering Intern Shutterfly Inc. in Silicon Valley, California (July 2014 - Aug 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**.

- Amateur Keyboard Masher at Encircle Inc. in Kitchener, Ontario (May 2014 - June 2014)

A VeloCity Garage startup, touching **android**, **coffee**, **python**. Worked on feature implentations in web such as and android app like sticky headers.

- Undergrad Research Assistant at University of Waterloo (Jan. 2014 - Apr. 2014)

Developed process for acquiring input from a *NI myDAQ*, a low-cost data acquisition device, and data analysis using **Matlab**.

- Software Tools Developer Intern at BlackBerry Ltd. in Ottawa, Ontario (Sept. 2013 - Dec. 2013)

Built additional features to the GitLab open source project using **Ruby on Rails**. Developed a testing framework for testing website user interfaces, using the **Selenium** framework based in Java.

- Physics Teaching Assistant at Wilfrid Laurier University in Waterloo (Sept. 2011 - Apr. 2012)

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