

# Joshua Liu

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## Skills

Proficient: C++, C, Objective-C, Swift, Ruby, Python, Git, Xcode, Scheme  
Familiar: AWS, Go, Javascript, HTML, CSS, Linux, Bash, Vagrant

## Experience

**Tapslash**, Software Engineering Intern - New York, NY  
June 2015 - May 2015

- Joined early stage startup focused on creating a mobile keyboard used to share information.
- Reimplemented keyboard UI in Swift and Objective-C improving load speeds by **50ms** and memory usage by **32%**.

## Projects

### Vim Text Editor clone

November 2017

- Built a clone of the vim text editor in C++.
- Implemented support for command multipliers, C++ syntax highlighting, macros, regex search, and more.

### DuckDuckGo Molar Mass Instant Answer, [joshualiu.me/molar\\_mass](http://joshualiu.me/molar_mass)

May 2017 - June 2017

- Built an instant answer for the DuckDuckGo search engine that calculates molar masses of chemical compounds for search queries such as "molar mass of H2SO4".
- Packaged molar mass algorithm in a Perl module, which was merged into DuckDuckGo and is **currently live** and being served to **thousands of monthly users**.
- Implemented query parser and evaluator to calculate the molar masses of chemical compounds.

### Reppin, [joshualiu.me/reppin](http://joshualiu.me/reppin)

April 2016

- Collaborated in a team to create an iOS Application that serves as a virtual personal trainer by using **computer vision** to count repetitions of various exercises through the camera.
- Developed and calibrated an **object tracking algorithm**, and built custom data analytics UI to display exercise data.
- Won 3rd Place out of 100 teams at HackBCA 2016.

## Education

**University of Waterloo**, Candidate for B. Computer Science, **3.93/4.0 GPA**

September 2016 - June 2020 (expected)

- Faculty of Mathematics Dean's Honours List - Winter 2017
- Selected Coursework: Object Oriented Software Development, Algorithm Design and Data Abstraction, Logic and Computation, Linear Algebra 1 + 2

## Awards

- Best Internet of Things, **HackPrinceton 2017 Spring**
- 3rd Place, **HackBCA 2016**
- Finalist, **Dream It. Code It. Win It. 2015**
- 2nd Place, **HackBCA 2015**
- Best Google Glass Hack, **MHacks 2015 Spring**
- Microsoft Sponsor Award, **PennApps 2014 Fall**