

# Tristan Hume

Student Developer - University of Waterloo Computer Science

 [thume.ca](http://thume.ca)  
 [github.com/trishume](https://github.com/trishume)  
 [tristan@thume.ca](mailto:tristan@thume.ca)

## Work

**UWaterloo HCI Lab** Undergraduate Researcher, Winter 2016-present

- Designed and developed a hands-free mouse alternative using eye and head tracking that is competitive with the mouse in speed and accuracy.
- Developed high accuracy low-latency audio recognition algorithms for various mouth noises (i.e lip popping). This combines with the previous technique by providing hands-free clicking.

**Shopify (Shipping Team)** Developer Intern, Summer 2015

- Earned the best possible rating on my work term evaluation for being "one of the most prolific and valuable members of the team".
- Helped develop [Shopify Shipping](#). I [maintained ActiveShipping](#), fixed production disruptions, and implemented package tracking.
- Owned the front-end and back-end development of the [unified fulfillment and label purchase form](#) now used by thousands of merchants every day.

**Shopify (Stack Team)** Developer Intern, Summer 2014  
Containerized deployment tools with Go, Docker and Chef.

**Shopify (Apps Team)** Developer Intern, Summer 2013  
Ruby on Rails development + Writing a user-friendly parser.

**The Eclipse Foundation** High-school Co-op Developer, Fall 2012  
Implementing features and fixing bugs in the Eclipse IDE.

**Halogen Software** Student Software Developer, Summer 2012  
Web accessibility + automated a 2 week process to 5 minutes.

## Projects

- [Crushing the Wikipedia link graph](#) into a 600MB binary file for [fast path finding in memory](#).
- [An iOS app](#) for long term personal finance simulation and visualization with 7000 users.
- An LLVM-based [compiler](#) and Qt-based IDE for [Turing](#).
- Designing, assembling, wiring and programming [my keyboard](#).
- [An implementation](#) of a webcam pupil tracking algorithm in OpenCV that garners weekly emails from researchers.
- Being the [first contributor](#) and long time top contributor to [Spacemacs](#). I contributed many of the first layers and fixes.

Plus a financial data exploration web app, [a blog](#), an [election game](#), [two other iOS apps](#), a [git repo manager](#), a chess engine, a [converter](#) from PNGs to mathematical functions for graphing, a [project](#) which made the Reddit frontpage, a [face tracking hack](#), a [Turing interpreter in Turing](#) and many more...



## About

I'm a UWaterloo CS student who's been working as a developer for 5 years and programming for 10. I'm particularly interested in computer vision, compilers, and finance. My many open source projects have over 20,000 combined users (300,000 if you count web apps).

## Reading

For the past 8 years I've spent on average 2 hours per day reading about programming and technology. That adds up to 3 times the number of lecture hours in a CS degree. I've read hundreds of academic papers (mostly on HCI, compilers, computer vision, and databases), thousands of articles (largely from 5 years of [Hacker News](#)), and many programming books.

## Anecdotal Evidence

At Shopify I was one of two interns (out of hundreds in the past) to get a significant unsolicited raise to the pay level of a full time employee, as well as stock options.

## Languages Used

I love trying new language so I've used a lot of them:

**10,000+ lines written**

Ruby, C++, Javascript

**5,000-10,000 lines**

Objective-C, Java, Turing, HTML, CSS, PHP

**1,000-5,000 lines**

Go, Emacs Lisp, Racket, Python, D, Lua

**500-1,000 lines**

Haskell, Rust, Nim, Bash, Scala

**250-500 lines**

Nix, Julia, Haxe, Actionscript