CLIVE A. CHAN

UWaterloo Software Engineering '21

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SUMMARY

Objective: Summer 2017 Software Engineering Co-op/Internship

- Self-taught full-stack developer, 8+ years of experience, 10+ languages, 1000+ commits/year.
- Extensive practical experience, across startup, volunteer, freelance, and research environments.
- Organized multiple major STEM events and initiatives, led 3 popular STEM clubs, coordinated large-scale teamwork, and learned strong outreach, communication, and leadership skills.
- Extremely strong academic performance, awarded in multiple national science and math competitions.

Citizenship USA/Canada Dual

EXPERIENCE

(Stealth Mode startup) *software engineer*   **July 2016 - present**
- Collaborated remotely with a globally distributed team based in California, gaining experience with collaboration tools like GitHub, Slack, Asana, ProductBoard, and good old phone calls.
- Gained familiarity with the integration-manager Git workflow, NodeJS design paradigms such as Promises and submodules, integration of many external REST APIs, usage of RethinkDB, Redis, and Postgres databases, and writing of thorough Markdown documentation and Mocha unit tests.

VitaeDev *co-founder & technology officer* **<vitaedev.com>**   **April 2016 - present**
- Led a student-run team coding free websites for nonprofits like Lexington Community Education.
- Took responsibility for mentoring less experienced team members in Apache/PHP/MySQL dev.

Clive.IO Web Services *freelance web developer* **<clive.io>**   **June 2014 - present**
- Solicited multiple volunteer and paid webdev jobs, from creating a nonprofit's homepage to building a highly customizable and accessible website editor for a local tech education business.

MIT PRIMES *computational analysis researcher*   **February - June 2016**
- Worked on a long-term computational research project in the highly academic environment of MIT, with guidance from the lab's professors and PhD students.

LEADERSHIP

FIRST Robotics

LexHack 12hr high school hackathon, co-founder & co-director, gr. 11 & 12 <lexhack.org> <live.lexhack.org>

OpenSource town-grant-funded high school MakerSpace, co-founder and co-director, gr. 11 & 12

FIRST Tech Challenge Team, research and development lead, gr. 11 & 12; 4x World Championship qualifier

Science Bowl

LexSciBowl middle school science contest, founder and director, gr. 11 & 12 <lexscibowl.org>

Lexington High School Science Bowl Team co-captain in gr. 12; physics & math specialist; earned 4th place nationally

Diamond Middle School Science Bowl Team co-coordinator, gr. 11

Math Team

Lexington Math Tournament middle school math competition, director, gr. 11 & 12 <lhsmath.org/LMT>

Math Team co-captain of 1st place team in both MA and New England math leagues, gr. 11 & 12

Webmaster of 70k+ LOC PHP gr. 10-12 <github.com/cchan/lhsmath.org>

SELECTED PROJECTS

Take a look at the full selection at github.com/cchan. On paper, prepend https://github.com/ to all links.

C++ Neural Networks (cchan/cppNN) Fast neural network library built from scratch in C++ and Make, based on heavily optimized and parallelized affine transformations. Trained using genetic and backpropagation algorithms, culminating in a complex predator-prey simulation for Science Fair.

LexHack (lexhack) Public-facing website, NodeJS mentor request interface, and live announcement feed for LexHack, a high school hackathon I cofounded in 2014.

EC2 Server Suite (cchan/ec2) Powerful collection of tools in NodeJS and Bash which I use to maintain my AWS EC2 server, including hosting for several websites, email bounce handling, and process management.

LHS Math Team Website (lhsmath/lhsmath.org) Logistical nerve center of the LHS Math Team and the annual 150+ participant Lexington Math Tournament. I maintained and augmented 70k+ lines of existing PHP.

Vocative (vocative/vocative.github.io) Chat platform based on AngularJS, Firebase, and Material Design. Used to teach an English class and to coordinate LexSciBowl, a large middle school science contest I founded.

PROGRAMMING SKILLS

Lines of code: 120,000+ public on GitHub <github.com/cchan>, over 1000 commits in past year including many open source contributions.

Languages

Native speaker: Git & GitHub, C/C++, Java, HTML5/Pug, CSS3/Sass, Browser JS & JQuery, NodeJS, PHP
Conversationally fluent: MySQL, Makefiles, Python, Octave/MATLAB, AngularJS, WWW infrastructure
Curious tourist: Amazon EC2, Maven, Travis CI, Docker, ReactJS, R, TensorFlow/NumPy, Raspberry Pi

ACADEMICS

University of Waterloo, Bachelor of Software Engineering, Co-op: 2016-2021
  Fall 2016 Carl A. Pollock Engineering Scholarship and University of Waterloo President's Scholarship
Lexington High School Diploma: 2012-2016

SAT Scores	2360 SAT; 240 PSAT; 800 SAT II Math I+II, Chemistry, Physics
AP Scores	5 on Calculus AB & BC, Biology, Chemistry, Physics C Mechanics & E&M, Computer Science, Statistics, and Macro/Micro Economics; National AP Scholar
National Merit Scholarship	Finalist
Advanced Courses	Multivariable Calculus and Linear Algebra at Harvard Extension School, gr. 10

National Science/Math Awards
  USA Computing Olympiad Platinum League **USA Chemistry Olympiad** 2x School Finalist
  USA Physics Olympiad Silver Medalist **USA Math Olympiad** AMC 12 School Winner, 5x AIME qualifier

BESIDES THAT . . .

- Big dreams about machine learning and AI, and hoping to join the Waterloo Aerial Robotics Group's Computer Vision team.
- Hoping to join the Unaccompanied Minors or Waterboys a cappella ensembles at Waterloo.
- Love winding down with ice skating, singing, and stargazing.