CLIVE A. CHAN

University of Waterloo Software Engineering

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in cchan3141

Founder of a hackathon, a startup, and multiple tech outreach events. **Silicon Valley startup** programmer. **Hyperloop** software lead.

TECHNICAL SKILLS

Native speaker: C++, NodeJS (ES6), HTML5, CSS3, JavaScript, Git

Conversationally fluent: C, Java, Python, PHP, Linux, Matlab, SQL, jQuery, Bash

Curious tourist: AWS, NoSQL, Docker, Travis CI, React, R, TensorFlow, Keras, Go

AWARDS

US Computing Olympiad *Platinum Division*

Putnam Exam *Score of 20 (median = 1)*

US Math Olympiad *5x AIME qualifier, USAJMO qualifier*

US Physics Olympiad *Silver Medalist*

LEADERSHIP

Waterloo Tech Talks ⊕ *founder*
- Series of student-delivered tech talks.
- Hosted a co-op information panel with 50+ students in attendance.

LexHack ⊕ *co-founder & co-director 2x*
- First high school-run hackathon in MA.
- Attracts 80+ participants and $3k+ in sponsorships every year.

OpenSource MakerSpace ⊕ *cofounder*
- Won $5000 grant, cofounding a school-wide engineering lab providing free tools, materials, mentors, and teacher training.

LexSciBowl ⊕ *founder & co-director 2x*

Lexington Math Tournament ⊕ *director 3x*

EDUCATION

University of Waterloo, Bachelor of Software Engineering, Co-op
Fall 2016 Average: **95.82% (4.00 GPA)**

Harvard Extension School Multivariable Calculus & Linear Algebra (2013-2014)

MOOC coursework, including Stanford's *Machine Learning*, Princeton's *Algorithms*

EXPERIENCE

Bloomberg LP *software engineering intern*   **May – Aug 2017**

SkillFlow ⊕ *backend software engineer*   **Jul 2016 – Mar 2017**
- Helped develop highly scalable NodeJS stack, with 1000+ peak users.
- Built Enterprise edition of core product, refactored much of the code, published 3 open-source modules, and wrote docs and unit tests.

VitaeDev ⊕ *co-founder*   **Apr 2016 – present**
- Led a team of students coding free websites for local nonprofits.
- Mentored the team in LAMP backend and web design principles.

Freelance Work ⊕ *web developer*   **Jun 2014 – present**
- Wrote many complex webapps and static websites, including LexSciBowl, CalcBee, Science Bowl, LexHack, and VitaeDev.

STUDENT TEAMS

Waterloo Hyperloop Team ⊕ *Software and Systems Lead*
- Canada's only qualifying SpaceX Hyperloop Competition team, with 100+ members; first pod in history to achieve pneumatic levitation.
- Overseeing a team of ~15 programmers, from first-years to graduates.
- Building an optical position sensor system functional at Mach 1, and writing a WebSocket-UDP-UART communication pipeline in Go and C.

Lexington FTC Robotics Team ⊕ *Research and Development*
- Four-time World Championship qualifier; led software R&D projects, including PID and sonar localization for autonomous control.

HACKATHONS

1st place @ Google Games Waterloo 2017 *Team fcf21600f...370*
- Solved challenging algorithms and logic puzzles under time constraint.

2nd Place @ Bloomberg Code B 2017 ○ *Team DuckDuckGoose*
- Real-time Python AI for a large multiplayer Asteroids-like game.

1st Place @ McHacks 2017 ○ *Signbot*
- Two-handed robot translating between English speech and ASL.

Best Hardware Hack @ ECHacks 2016 ○ *Sandwich-o-matic*
- Voice-controlled sandwich maker, featured on Hackaday, Arduino, MLH.

PROJECTS

Amazon EC2 Server Suite ○
- Automatic server maintenance tools using NodeJS and Bash.
- Includes a reverse proxy with CloudFlare HTTPS, seven live web servers, and a Facebook Messenger bot to track server events.

C++ Neural Networks ○
- Neural network and matrix math library written from scratch in C++.
- Implemented backpropagation, and ran a genetic algorithm simulation demonstrating predator-prey coevolution.

Lexington High School Math Team Website ○
- Refactored a 30k+ line PHP codebase over several years, abstracting common libraries, automating the dev cycle, and securing SQL queries.