



CLIVE A. CHAN

University of Waterloo Software Engineering

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Coder for **8 years**. **100,000+** lines written in **10+ programming languages**. **1565 commits** in 2016.

Hackathon founder, **Silicon Valley startup** programmer, **Hyperloop team** embedded software member.

TECHNICAL SKILLS

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

Con conversationally fluent: C, Java, Python, Linux, Windows, Matlab, SQL, jQuery, Bash

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

EDUCATION

University of Waterloo, Bachelor of Software Engineering, Co-op: 2016-2021

Fall 2016 Average: 95.5% (A+)

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

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

LEADERSHIP

Waterloo Tech Talks 🌟 *founder*

- Ongoing series of student-delivered talks on various tech topics at UWaterloo.

SE Class of 2021 Academic Representative

LexHack 🌟 *co-founder & co-director 2x*

- First high school-run hackathon in Massachusetts, with 70+ participants and \$1000+ in prizes and swag annually.

LexSciBowl 🌟 *founder & co-director 2x*

Lexington Math Tournament 🌟 *director 3x*

AWARDS

US Computing Olympiad *Platinum League*

US Physics Olympiad *Silver Medalist*

US Math Olympiad *5x AIME qualifier (top 5% nationally), USAJMO qualifier*

University of Waterloo *Carl A. Pollock and President's Scholarships*

EXPERIENCE

SkillFlow 🌟 *software engineer*

Jul 2016 – present

- Helped design highly scalable NodeJS stack, with 1000+ peak users, and collaborated to ideate and implement a new tutorials product.
- Gained familiarity with scalable software design, SQL and NoSQL databases, documentation and unit testing, and SV startup culture.

VitaeDev 🌟 *co-founder*

Apr 2016 – present

- Led a team of students coding free websites for Lexington nonprofits.
- Mentored the team in LAMP backend stack and web design principles.

Clive.IO 🌟 *freelance web developer*

Jun 2014 – present

- Solicited multiple volunteer and paid webdev jobs, from nonprofits' websites to a custom CMS. Examples include LHS Math Team, LexSciBowl, CalcBee, Science Bowl, LexHack, VitaeDev.

PROJECTS

Amazon EC2 Server Suite 🌟

Feb 2016

- Automatic server and domain maintenance tools in NodeJS and Bash to manage and monitor webapps and other processes on my server.
- Includes a Facebook Messenger bot to notify me of server events.

Sandwich-o-matic 🌟

Nov 2016

- Winner of Best Hardware Hack at ECHacks 2016 and featured on Hackaday, Arduino Blog, MLH, and more.
- Wrote the NodeJS server backend for this IoT voice-controlled sandwich maker, with streaming speech recognition to Google APIs.

C++ Neural Networks 🌟

Jul 2014

- Neural network and matrix math library written from scratch.
- Implemented and tested backpropagation, and simulated predator-prey interactions using genetic algorithms.

Second Harvest HungerSquad Dispatcher 🌟

Oct 2016

- Created a new on-demand match-dispatch system for Second Harvest to coordinate food donors and volunteers: "Uber for Food Donations"
- Wrote and deployed a REST API wrapping all server-side functionality, with a full authentication token system.

Vocative 🌟

Dec 2015

- Chat platform using AngularJS, Firebase, and Material Design.
- Includes specialized features to facilitate class discussion.

ACTIVITIES

Waterloop (SpaceX Hyperloop Team) 🌟

- Canada's Hyperloop team; first to achieve pneumatic levitation.
- Member of Embedded and Website teams; leading web VR project.

OpenSource MakerSpace

- Won \$5000 town grant and cofounded a student engineering lab, with free materials and tools, programming mentors, and teacher training.

FIRST Tech Challenge Team

- Four-time World Championship qualifier; led software R&D projects, including PID control and sonar localization.