



Clive A. Chan

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Academics

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

Lexington High School (Lexington, MA): June 2016 graduation (expected)

GPA 3.77 (grades 9-11 + grade 12 semester 1)

SAT 2360 (superscored)

SAT II 800 on Math I & II, Chemistry, and Physics; 780 on Biology

AP 5 on Calculus AB & BC, Biology, Chemistry, Physics C Mech & E&M, Computer Science, and Statistics;
4 on United States History

National AP Scholar

National Merit Scholarship Finalist

Supplementary Courses

Multivariable Calculus & Linear Algebra (Math E21a & b) at **Harvard Extension School**, grade 10

Coursera's Machine Learning, grades 10-12

USA Computing Olympiad Preparation Course at KByte, summer grade 10

DEEP Summer Engineering Program at University of Toronto, summer grade 11

Individual Competitions

USA Computing Olympiad Platinum League gr. 12

USA Physics Olympiad Silver Medalist gr. 12, Honorable Mention gr. 11, Semifinalist gr. 11-12, participant gr. 9-12

USA Math Olympiad Qualified for AIME gr. 8-11; Qualified for Junior Math Olympiad gr. 8

USA Chemistry Olympiad Top 4 in school, Avery Ashdown Exam Qualifier gr. 11-12

MIT BattleCode 2016 Participant; defeated referenceplayer <github.com/cchan/battlecode-369>

LHS Science Fair 2015 Predator-Prey Coevolution with Neural Networks

Programming Experience

Self-taught full-stack developer, 7+ years of experience in programming, especially web applications. Independently learning and researching machine learning, with research experience in cancer comparison studies.

Notable projects: clive.io, lexscibowl.org, live.lexhack.org, lhsmath.org, calcbee.org, vocative.github.io

Lines of code: 92,000+ public on GitHub <github.com/cchan> in past 2-3 years, mostly in web-based applications.

Work & Research Experience

Private C++ instructor summer grade 9

KByte Teaching Assistant, summer grade 10

MIT PRIMES student researcher, grade 12-present

Taught basics of C++ programming to elementary school students.

Helped students learn Processing & build their own interactive projects.

Working on graph-based system to compare cancer treatment regimens fairly based on comparison studies with varied significance, levels of evidence, and numbers of patients.

VitaeDev web dev firm co-founder, grade 12-present

Lead programmer in a group of students writing modern websites for Greater Boston Area businesses and providing free services to nonprofit community organizations. <vitadev.com>

Web Development Languages/Technologies

Expert: HTML5, CSS3 (& Sass CSS), JavaScript, JQuery, PHP, MySQL, Firebase, AngularJS, AngularFire

Proficient: Linux Server Admin, NoSQL, Socket.IO, NodeJS, CoffeeScript, Google Analytics, Apache, Twisted, Express JS, Amazon EC2, Jekyll

Other Computer Languages/Technologies

Expert: C/C++, Java, Git & GitHub, DOS Batch, Linux Bash, SSH, Nmap

Proficient: Python, Numpy, TensorFlow, Caffe, Octave/MATLAB, LaTeX, Raspberry Pi, Arduino, Visual Studio, Android Studio, Eclipse, GIMP, Maven, Travis CI, R

Leadership

Science Bowl

LexSciBowl, Founder & Coordinator,
gr. 11-12

Founded and twice coordinated LexSciBowl, the first-ever high school student-run middle school science contest, based on Science Bowl buzzer competition format. With extensive outreach, attracted 60 competitors to its first annual competition May 2015, and over 80 in April 2016. <lexscibowl.org>

Science Bowl Team Co-Captain, gr. 12

Lead a top National Science Bowl team, the decade-long reigning champions in the New England region. Write tryouts, select team members, run all practices, and compete (specialties physics and math) in regional and national events. Competed in National Science Bowl, earning 4th place nationally in 2016.

Math Team

Lexington Math Tournament,
Executive Coordinator, gr. 11-12

Coordinated overall logistics, outreach, and tech for three annual Lexington Math Tournaments, Lexington High School's student-run middle school math competition, with about 160 competitors from across New England 2014-2016. <lhsmath.org/LMT>

Math Team Co-Captain, gr. 11-12

Deliver lectures and manage tryouts and logistics for competitions throughout the year; successfully maintained team's longtime New England math league dominance, with the most USAJMO qualifiers of any school nationally in 2016. <lhsmath.org>

Webmaster, gr. 10-12

Maintain and update 70,000+ lines of PHP, through which the Math Team is administrated. <lhsmath.org>

FIRST Robotics

LexHack, Co-Founder & Coordinator, gr. 11-12

Co-founded and twice coordinated LexHack, a 12-hour student-run hackathon. Managed over \$3000 of sponsorship covering the entire event, and attracted over 70 hackers in September 2014 and almost 100 in September 2015. <lexhack.org>

OpenSource High School MakerSpace,
Co-Director, gr. 11-12

Co-direct \$20000 of grant money awarded to LHS Robotics to build a student-run MakerSpace for LHS students and teachers to use and to create curricula and train teachers for future elementary school engineering classes. Program now encompasses all Lexington public schools, events at regional venues, LexHack (above), and beyond, and is endorsed by the superintendent.

Team 4029 *Two Bits and a Byte*, Research & Development Lead, gr. 11-12

Lead research for novel software robot control methods, with special interest in machine learning and computer vision. LHS Robotics builds and programs a robot for the FIRST Tech Challenge, consistently ranking among the top teams worldwide.

LHS Student-Faculty Senate

Voting Student Senator, gr. 10

Honorary Student Senator, gr. 11-12

Honorary senator of the LHS Student-Faculty Senate, a unique system of high school government comprising both students and faculty.

VitaeDev

Co-founder & Lead Programmer, gr. 12

Lead a group of students writing modern websites for Greater Boston Area businesses and providing free services to nonprofit community organizations. <vitaedev.com>

Other Employment

Lexplorations Counselor, summer grade 9 Helped teach engineering class for elementary school students.

Kumon Teaching Assistant, grades 10-11 Taught children in math & reading; informal TA supervisor.

Interests & Activities

Singing: Baritone & Basso Profondo, Honors Chorus grades 10-12; vocal soloist, Les Miserables, LHS Pops grade 9

Worship leader, church high school youth group

Played piano for 10 years

Recreational skating

Recreational photography