

Education

McMaster University	Hamilton, ON	August 2016 - Present
Bachelor of Engineering	Expected Graduation: June 2020	
<ul style="list-style-type: none">• Maintained a 4.0 GPA, across all first year courses.• Member of PhaseOne, McMaster's official community of coders, makers and technology enthusiasts.• Member of McMaster ACM Chapter, McMaster University's chapter for the ACM International Collegiate Programming Contest.		

Projects

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- **WFMT - Python/OpenCV** An OpenCV application for the measurement of Whitefish. WFMT applies thresholding with minimum fitting polygons to automate standard measurements, dramatically reducing the workload on researchers and increasing overall efficiency by 280%.
 - **FIRST Team 4733 Vision System - C++/OpenCV** A shooting system capable of tracking goals from retroreflective tape with OpenCV, determining distance via triangle similarity, and calculating firing angle through a linear regression of past data.
 - **Collaborative Whiteboard - Node.js/Socket.io** A real time collaborative whiteboard. Brush strokes of individual users are transmitted from client to server via socket.io causing all users to receive an update to their whiteboard.
 - **IsoRender - Javascript/Bootstrap** A 3D object editor and rendering system for isometric figures. Allows the user to perform rotations along all axis and provides saving functionality by encoding shape data in character strings.
 - **PytchControl - Python** Uses PyAudio to detect patterns in changing pitch, allowing users to interface with their computer via whistling or humming a series of notes.

Experience

Technologies Co-op Student	Hatch	May 2017 - August 2017
<ul style="list-style-type: none">• Utilized a Scrum inspired methodology to lead development of a Python based HMI for use in Industrial IOT.• Developed embedded software for wireless sensor nodes to interface across a network and minimize power loss.• Built multithreaded Linux daemons to control data collection, OLE for Process Control (OPC), and Websockets.		
Founder/Instructor	AP Comp Sci With Wy	January 2016 - June 2016
<ul style="list-style-type: none">• Built an unofficial online course where students could learn the AP Computer Science curriculum.• Taught a class of 26 students, developed 10 units of content and provided one-on-one assistance.		
Vision Code Specialist/Mentor	FIRST Robotics	January 2016 - April 2016
<ul style="list-style-type: none">• Worked in a group environment to develop vision code in C++ through the use of OpenCV.• Mentored first year robotics members, teaching them the essentials of programming and giving them a place in the development cycle.		

Awards

Hatch Scholarship, awarded for academic achievement, community contribution and leadership experience.
Gold Medal, obtained for scoring within the top 4% of participants in the HackerRank 101 Hack competition.
Provost Honour Roll, for outstanding performance with a 12.0 GPA on at least 30 units.

Languages and Technologies

■ Python ■ C++ ■ Java ■ JavaScript
■ OpenCV ■ sklearn (scikit-learn) ■ Flask ■ Node.js ■ Socket.io ■ Materializecss ■ Linux