

Alexander Hong

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EDUCATION	University of Toronto , Toronto, Ontario B.A.Sc. in Engineering Science, June 2014 <ul style="list-style-type: none">• Thesis: Multi-Robot Machine Learning in Urban Search & Rescue (Advisor: Goldie Nejat)• Relevant Courses: Algorithms & Data Structures, Database Systems, Artificial Intelligence, Scientific Computing, Systems Design, Control Systems, Robotics	
RELEVANT EXPERIENCE	Epson Canada , Markham, Ontario Computer Vision Software Engineer Intern, <i>R&D</i> May 2012 - Aug 2013 <ul style="list-style-type: none">• Analyzed cascade object detection and keypoint matching algorithms in MATLAB to be used in adaptive robotics, improving algorithm pipeline's performance by > 30%• Developed evaluation software tools in C++ for machine vision algorithm solutions analysis, providing effective feedback of algorithm's performance to research team• Built frameworks for automating both code-driven and GUI software testing, reducing testing process time by 75% MDA Corporation , Brampton, Ontario Autonomy & Controls Lead, <i>Space Systems Design</i> Sept 2013 - Dec 2013 <ul style="list-style-type: none">• Designed a space system for orbital debris removal using top-down design methodology, leading to rigorous design reviews• Led team in addressing the command & control aspects of the design, creating control systems and software architectures while acknowledging stakeholders' needs Univesity of Toronto , Toronto, Ontario Flight Simulation Research Intern (Advisor: Peter R. Grant) Summer 2011, Winter 2014 <ul style="list-style-type: none">• Improved upset recovery training for pilots by implementing stall-warning and stall-recognition software onto flight simulator• Increased RC aircraft maximum flight speed from 15 m/s to 17 m/s, by developing software tools for optimizing aerodynamic, structural, and propulsive performances Holography Research Intern (Advisor: Emanuel Istrate) Summer 2010 <ul style="list-style-type: none">• Created software for optimizing brightness of full colour digital holograms, increasing brightness in final product by 10% <i>Autonomous Robotics Design Competition</i> Winter 2011 <ul style="list-style-type: none">• Designed successful autonomous robot to deploy traffic-cones onto roads with unsafe conditions• Led team in programming MCU logic, and designing sensor circuits, ranking top 5 in contest	
TECHNICAL SKILLS	<ul style="list-style-type: none">• Programming: C/C++ (expert), Java (expert), Python, Ruby, Assembly, Prolog, SQL, *nix/Shell, Windows/batch, OOP, Test Automation, Computer Vision, AI, UI Design• Technologies: MATLAB/Octave, Git/SVN, L^AT_EX• Design: Software & Systems Engineering, Controls & Autonomy, Project Management	
INTERESTS	Dragonboat Racing, Gymnastics, Rock Climbing, Painting, Machine Learning, AI, Startups	

COMMUNITY LEADERSHIP	Assistant Coach, Iron Dragons Dragon Boat Racing Team, U of T	2012
	<ul style="list-style-type: none"> • Cooperated with the coaching team to design supplementary strength development programs for athletes • Guided athletes through proper progressions and techniques in dragonboat paddling and weightlifting • Directed the team in competitive races placing 5th in the Canadian University Division 	
	Equipment & Uniforms Director, U of T Emergency First Responders	2010 - 2012
	<ul style="list-style-type: none"> • Supervisor: Led the response team to act in a timely manner to significant medical emergencies • Maintained detailed records of the team's inventory and ordered new uniforms and equipment • Ensured all equipment were cleaned, restocked, and ready for use after each campus event • Collaborated with executive members to organize training workshops to ensure members are prepared to respond 	
	NSight Mentor, U of T Engineering Science Mentorship Program	2010 - 2012
	<ul style="list-style-type: none"> • Assisted a group of first year Engineering Science students through trials and tribulations 	
HONORS AND AWARDS	• Gymnastics Ontario - Sunshine Classic Masters	2014, 2013
	• Skule TM Iron Dragons "Most Spirited" Dragonboat Athlete	2011, 2010
	• Skule TM Iron Dragons "Most Dedicated" Dragonboat Athlete	2010
CERTIFICATIONS	<ul style="list-style-type: none"> • University of Toronto Institute for Leadership Education: Organizational Leadership • CISCO Networking Academy: Fundamental of Java Programming Language • CISCO Networking Academy: PC Hardware and Software 	

References available upon request