

Michael Elliot King

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Education

2009 - 2014 **B.Eng., Mechanical Engineering**
McGill University – Montreal, Quebec

Experience

- 3/2016 - Present **MECHANICAL ENGINEER II**
- 3/2015 - 3/2016 **MECHANICAL ENGINEER I**
- 9/2014 - 3/2015 **MECHANICAL ENGINEER INTERN** ~→
Charles River Analytics – Wakefield, Rhode Island
- Designed, tested, and implemented a submersible pneumatic and electrical system for urgent surfacing maneuvers in unmanned vehicles
 - Designed a pressure-balanced oil-filled electronics enclosure & proof-tested it in a hyperbaric chamber to full ocean depth
 - Lead the design of maintenance & operations logistics of a next generation large displacement unmanned underwater vehicle [LDUUV]
- 9/2013 - 7/2014 **DEVELOPMENT OF A VARIABLE-FRICTION SHOE-SURFACE MECHANISM**
Independent Interdisciplinary Design Project – Montreal, Quebec
- Created from scratch a mechanism to fit in the sole of a shoe and dynamically simulate the friction of a full range of surfaces
 - Designed the mechanical, electrical and software systems using Inventor and Arduino
 - Manufactured complete functioning prototype of mechanism to 0.05mm tolerances using conventional milling & turning, CNCing, and welding
 - Implemented a PD controller to actuate two compact braking pads using a stepper motor, gear system, and lead screws
- 8/2013 - 7/2014 **CO-FOUNDER & MECHANICAL ENGINEERING LEAD** ~→
McGill Robotics – A.U.V. Design Team – Montreal, Quebec
- 3rd place static, 10th place overall – AUVSI International RoboSub Competition in San Diego - July 2014
- Created and implemented a comprehensive team structure, brand strategy, work environment, and management system for a student organization with 98 members
 - Lead all mechanical design, manufacturing, implementation, and testing for the team of 60 developing an autonomous underwater vehicle from scratch
 - Designed the vehicle assembly with Inventor for FEA, dynamic modeling, 3D printing, machine drawings
- 9/2013 - 5/2014 **DEVELOPMENT OF THE PROPULSION & CONTROL SYSTEM FOR AN A.U.V.** ~→
Mechanical Engineering Senior Capstone Project – Montreal, Quebec
- Designed and simulated a 5-DOF propulsion and control system using C++ and ROS
 - Implemented the system by interfacing with the planner, computer vision, and motor control

Software & Programming Skills

Computer Aided Design: *SolidWorks, Inventor, AutoCAD*

Programming Languages: *Python, C, C++, Objective-C, ROS*

Web Development: *HTML5, CSS, Markdown, Jekyll, Google Analytics, SEO*

Media & Graphics: *Illustrator, Lightroom, Photoshop, InDesign, Final Cut Pro*

Last updated April 20, 2016 • For the most recent version, see michaellelliotking.com/resume