

# Michael Elliot King – Curriculum Vitæ

DEPARTMENT OF MECHANICAL ENGINEERING  
MCGILL UNIVERSITY  
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Born: February 14, 1991 – Quincy, MA  
Nationality: American

## Summary

I am an undergraduate Mechanical Engineering student interested in engineering design, robotics, and human computer interaction. I am currently looking for full time employment following my graduation in May 2014.

## Education

2009 - 2014  
(Expected) **B.Eng., Mechanical Engineering**  
*McGill University*, Montreal, Quebec

## Relevant Experience

- 8/2013 - Present **MECHANICAL ENGINEERING LEAD | CONTROL SYSTEMS**  
*McGill A.U.V. Robotics Design Team* – Montreal, Quebec  
Competing in AUVSI International RoboSub Competition in San Diego  
Supervised by Professor Meyer Nahon
- Lead all mechanical design and manufacturing for a team of 80 students creating an autonomous underwater vehicle
  - Design, simulate, and implement control system for the propulsion of an unmanned submarine [Capstone Project]
  - CAD of the vehicle for FEA, dynamic modeling, 3D printing and simulations
- Summer 2013 **CONTROL SYSTEMS & ENGINEERING INTERNSHIP**  
*T. Davlin Glass* – Cambridge, Massachusetts  
Designer gold-leaf glass tiles and glass products
- Designed, manufactured, and wired systems to control the temperature of custom-built, high-powered glass kilns
  - Aided in the design and construction of additional kilns
- Summer 2012 &  
Summer 2013 **PAID ENGINEERING INTERNSHIP**  
*Robies Heating & Cooling HVAC* – Hyannis, Massachusetts
- Calculated thermal loads
  - Developed and implemented automated programs for generating project estimates
  - Developed workflow and inventory management system
  - Recorded and analyzed air data
  - Provided company-wide technical support
  - Prepared reports for clients and staff
  - Analyzed sales trends and provided detailed reports

8/2012 - 8/2013

## **MATERIAL COLLECTION SYSTEM LEADER | MARKETING & MEDIA DIRECTOR**

*McGill LunarEx Robotics Design Team* – Montreal, Quebec

Placed 12th out of 50 international teams at NASA's Lunabotics Mining Competition – Orlando, Florida

Supervised by Professor Peter Henry Radziszewski

- Member of a team of 40 students creating an autonomous mining lunar robot
- Lead the efforts of a five person group responsible for designing, constructing and assembling the mechanism that collects and dumps lunar regolith simulant
- Brought original concepts to realization through sketching, CADing, machining, assembly, and testing
- Machined & CNCed aluminum, moulded composites, 3D printed new materials, and fabricated sheet metal parts
- Developed rebranding strategies to increase interest and team credibility
- Enhanced project marketing and sponsorship visibility through media exposure
- Documented each step of the design process, meetings, outreach, and competition with my photography
- Shot, directed and edited a promotional film that was sent to all sponsors and shared on social media outlets

1/2013 - 8/2013

## **FRONT END & USABILITY LEAD**

*Braille University iPhone Application* – Montreal, Quebec

Tool to aid in teaching Braille to blind children using an electronic medium

Supervised by Professor Jeremy Cooperstock, *McGill Center for Intelligent Machines*

- Created a mobile application focusing on usability and the user interface
- Using a user-centered design approach, created prototypes, conducted user-tests, and coded the application to be easy to use, even without the use of vision
- Collaborated with Braille education professionals to create an authentic curriculum and legitimate learning tool (Anne Jarry, Nathalie Martiniello: *Université de Montréal*)

## **Software & Programming Skills**

Computer Aided Design: Autodesk Inventor, AutoCAD, Solidworks

Data Analysis: MATLAB, Excel

Programming Languages: Python, C, Objective-C

Version Control Systems: Git, Autodesk 360

Web Development: HTML, CSS, Markdown, Jekyll, Google Analytics, SEO

Digital Typesetting: L<sup>A</sup>T<sub>E</sub>X

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

## **Activities & Interests**

2010 - Present

Photography - [www.michaelleliotphotography.com](http://www.michaelleliotphotography.com)

2009 - Present

McGill University Intramural Ultimate Frisbee (1st Place 2010, 2011)

2012 - 2013

Photo Contributor - [The McGill Tribune](http://TheMcGillTribune.com)

2011 - 2012

McGill Engineering Undergraduate Society Website Committee

2010 - 2011

McGill University International Student BUDDY Mentor Program

Last updated: December 9, 2013 • [www.michaelleliotking.com](http://www.michaelleliotking.com)