

# MICHAEL PHILIP SIKORA

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## EDUCATION

### **Bachelor of Science, Mechanical Engineering**

University of Maryland-College Park, MD

A. James Clark School of Engineering

Dean's List | Fall 2013

Senior | Expected May, 2014

*Cumulative GPA 3.1*

### **Relevant Coursework**

Integrated Product and Process Development

Energy Conversion System Sustainability

Product Engineering and Manufacturing

Entrepreneurship

Computer-Aided Design

Control Systems and Optimization

Mechanical Design of Electronic Systems

Mircoelectromechanical Systems (MEMS) ~ 15 hrs. in clean room

### **Computer Skills**

MATLAB, Simulink, HTML 5.0, CSS3, JQuery, Ruby on Rails, Arduino C, C++, JAVA (Android), Python

Solidworks, Autodesk Inventor, PTC CREO, Eclipse, Microsoft's Office, the Adobe Suite

## WORK EXPERIENCE

### **UMD Innovation Lab - College Park, MD**

*Winter 2014 to Present*

- Mechanical Engineer – research position focusing on assistive robotics
  - Developing an assistive device for people with visual impairments. The device uses a sensor array to determine the distance and height of objects.
  - Working in C++ and Linux. 3D modeling and 3D printed prototypes.

### **AP Ventures - Columbia, MD**

*Spring 2013 to Fall 2013*

- Web Developer
  - Developed online courses for Maryland's STEM program. Used HTML, CSS, and JQuery to design online apps and interactive features for the website.

### **S&V Development**

*Spring 2012 to Fall 2012*

- Co-Founder of College-Simple.com
  - My first startup. Programmed using AJAX methods an interactive website for young engineers at UMD to use for resources and advice.

## ENGINEERING PROJECTS

### **Capstone Project - The Lacrosse Sidekick:**

*Fall 2013*

- Draft and Design Leader, CAD, Presenter, Technical Writer (5 members)
- Designed and prototyped an autonomous return device for lacrosse practices, similar to a pitching machine. Analyzed the potential concepts, market, costs, and final design. Built a prototype that was featured at a UMD design showcase.

### **DeWalt Power Tool Redesign:**

*Spring 2013*

- CAD, Presenter, Technical Writer, Design Leader (5 members)
- Wrote a 130 page benchmark report on a DeWalt screw gun comparing performance and costs to competitors. Redesigned the DeWalt to operate more efficiently during withdrawal tasks. Modeled and 3D printed a prototype which was presented to a board of DeWalt engineers.

### **Drug Delivery System:**

*Fall 2012*

- Programmer, Presenter, Technical Writer, Team Leader (5 members)
- Simulated a magnetized particle traveling through a blood vessel and attracted to an infected area by a magnetic field, using MATLAB. Used dimensionless analysis to account for scaling between models.

### **Solar/Molten Salt Power Plant:**

*Spring 2012*

- Programmer, Presenter, Design Leader (3 members)
- Designed, calculated, and coded the rankine cycle and the molten salt process with a gas burner. Successfully produced a constant 20 MW output of electricity over a day with varying humidity and temperature.

## EXTRACURRICULAR

UMD Club Lacrosse (2012-2013)  
Bitcamp (2014)

UMD Flag Football (2013)

UMD SEE Media Editor (2012-2013)