Kyle Morgan King

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EDUCATION

University of Maryland, College Park, MD *GPA: 3.81 / 4.00*
Bachelor of Science, Bioengineering *Expected May 2016*

Gemstone Honors Program: Team Liaison and Full Stack Developer *Expected Citation May 2016*
- Self taught the Meteor framework to rapidly prototype an interactive web application: https://redbarbikes.com
- Collaborated with electrical engineering team to develop real time and distributed internet of things bike system
- Conducted user interviews to understand ideal user experience, define feature set, and refine value proposition
- Invented bike lock and integrated NFC and contact sensors; microcontroller and modules; and battery
- Addressed multidisciplinary concerns for security, usability, energy usage, and sensor consolidation

Startup Shell *Jan 2014 - Present*
- Prototyping an adjustable microscope stage from laser cut and 3D printed parts with integrated springs
- Assembled 3D printed pill dispenser model to address the issue of low medication adherence

QUEST Honors Program *Jan 2013 - Dec 2014*
- Built Meteor app for secure doctor and patient communication and presented the prototype at the Fall Showcase
- Applied design thinking to create a USB laptop security device and a food inventory application
- Improved customer experience and removed 10-20% of wasted time for Academic Computers for Terps

TECHNICAL EXPERIENCE

Maryland MEMS and Microfluidics Lab: Undergraduate Research Fellow *Jan 2014 - Present*
- Pioneered optical technique to improve microfluidic immunoassays for low-resource diagnostic applications
- Fabricated thermoplastic droplet generator to produce 30-40 μm diameter low melting point agarose beads
- Designed photolithographic mask to mold PDMS microfluidic chip and CNC-machined PMMA chip

Canon US Life Sciences: Research and Development Intern *Jun 2015 - Aug 2015*
- Delivered automated and functional prototype based on theoretical concept for simple fluidic handling
- Applied knowledge of C to develop precise stepper motor controls and conducted image analysis in MATLAB
- Utilized a machine shop, CNC, laser cutter, 3D printer, and SolidWorks to rapidly develop 2D/3D prototypes
- Applied knowledge of Solidworks in designing and fabricating devices that demonstrate concept feasibility
- Uncovered new technique to extend device capabilities and presented results to company

4K for Cancer: Lead Mechanic *Dec 2013 - Aug 2014*
- Fundraised $5,450 for the Ulman Cancer Fund to provide support for young adults with cancer
- Self-taught Jade, SCSS, JS, JQuery, Leaflet, Grunt and Gulp for development of personal website

DasSarma Lab, University of Maryland School of Medicine: Undergraduate Researcher *Jun 2013 - Aug 2013*
- Introduced synthetic DNA into 6 mutant plasmids of Halobacterium using restriction enzymes and electrophoresis

TECHNICAL SKILLS

Programming: C, Python, Linux, Raspberry Pi, Arduino, Meteor, MongoDB, MySQL, CoffeeScript, MATLAB
Engineering Skills: Solidworks, AutoDesk, CNC Mill, 3D Printer, Machine Shop, Thermoplastic Fabrication
Biological Skills: BLAST/NCBI, PCR, Restriction Enzymes, DNA Sequencing, Protein Engineering, Cell Culture

CERTIFICATIONS AND AWARDS

SEEDS Research Fellowship: University of Maryland *Sep 2014 - May 2016*
MTech ASPIRE Research Grant: University of Maryland *Sep 2015 - Dec 2015*
Eagle Scout Award: Troop 792 *Dec 2010*