

## Education

08/2015 – 10/2016 **M.S, B.S in Computer Engineering**, *Washington University in St. Louis*, St. Louis, MO.  
GPA: 3.79 • Second Major: Electrical Engineering

08/2013 – 05/2016 **B.S in Computer Science**, *Washington University in St. Louis*, St. Louis, MO.

08/2009 – 05/2013 **B.A in Physics**, *Franklin & Marshall College*, Lancaster, PA.  
Major GPA: 3.54 • Second Major: Mathematics

**Coursework:** Software Engineering, Digital Hardware Development, Embedded Systems, Cloud Applications

## Work Experience

05/2015 – 12/2015 **bioMérieux Inc. – Firmware Verification/Development Co-op**, St. Louis, MO.

- Executed verification protocols to test firmware specifications
- Wrote scripts to support infrastructure software for repository backups
- Setup and configured multiple servers, networking equipment, and virtual machines

05/2014 – 08/2014 **Google Inc. – Operations Engineering Intern**, Lenoir, NC.

- Involved in troubleshooting, repairing, and upgrading production servers and networking equipment
- Modified an existing Chrome extension to interface with and control a USB hardware device
- Integrated XBee radios with an Arduino to remotely control a motor

01/2014 – 05/2014 **Washington University in St. Louis – Web Content Assistant**, St. Louis, MO.

- Performed extensive system testing on forms and web pages
- Updated multiple websites using SharePoint, HTML, and CSS

01/2010 – 04/2013 **Franklin & Marshall College – Physics Teaching Assistant and Tutor**, Lancaster, PA.

- Reviewed lab plans to observe, assist, and quiz students during lab
- Tutored students to improve their understanding and application skills

07/2008 – 07/2009 **OLE Nepal – System Administration Intern**, Kathmandu, Nepal.

- Communicated with developer to help port, translate and test application
- Provided support for software development, networking, and hardware repairs

## Research Projects

01/2016 – 10/2016 **Master's Project**, *Advanced Sensors Research Laboratory, Washington University in St. Louis*.

- Integrated a near infrared based image guided surgery system with mixed reality using Microsoft HoloLens
- Developed an FPGA design to configure an imaging sensor through SPI and gather data through LVDS
- Wrote C++ code to process and transfer imaging data from a camera through an FPGA
- Built a HoloLens app to construct a mixed reality environment using data from an imaging sensor

08/2013 – 08/2016 **Class Projects**, *Washington University in St. Louis*.

- Built a DAQ which included developing a PCB layout, an FPGA design, and a multithreaded C++ program
- Wrote a prototype cloud-based restaurant review iOS app
- Designed and implemented a digital ten band stereo audio equalizer on hardware
- Developed and tested a prototype indoor positioning system using TelosB motes and TinyOS
- Created a simple web app using the MEAN stack and Facebook Graph API

09/2013 – 09/2015 **Electronics and Automation Team**, *Lunabotics Club, Washington University in St. Louis*.

- Developed a system to remotely control a robot and interface with hardware
- Co-authored a paper for the ASCE Earth/Space Conference 2014

01/2014 – 04/2014 **Robotic Bin Picking Research**, *Washington University in St. Louis*.

- Researched the integration of a Kinect sensor with a FANUC robotic arm
- Wrote MATLAB and LabVIEW code for automation, basic image processing, and 3D modelling

## Skills

**Programming:** C++, C, Python, **HDLs:** Verilog, **Operating Systems:** Linux, Windows  
VHDL **Web Development:** LAMP stack