

## Education

### Northeastern University

Boston, MA

*Bachelor of Science in Computer Engineering, minor in Economics*

*Sep. 2014 – Jun. 2019*

- **GPA 3.8**
- Key Courses: Embedded Design/Logic, Differential Equations and Linear Algebra, Physics II, Chemistry I, Circuits and Signals, Algorithms, Discrete Structures, Macroeconomic Theory, Money & Banking
- **Northeastern IEEE Chapter Vice President:** Administered IEEE events, talks, and programs

## Experience

### United States Department of Defense

Washington DC Area

*Electrical/Computer Engineer*

*Jan. 2016 – Aug. 2016*

- Led network, protocol, and cellular analysis to reverse engineer a proprietary product to write custom software to interface with the product
- Collaborated across different organizations and countries to develop a common use product
- Created a full software stack to automate an industrial-grade embedded printed asset production system
- Implemented an ASN.1 multi-use encoder from official specifications for custom use

### MITRE Corporation

Bedford, MA

*Computer Engineering Internship*

*May. 2015 – Sept. 2015*

- Transformed a bistatic radar processing application into a dynamic real-time dataflow framework that improved usability and customization for non-engineers
- Upgraded firmware of a test GPS satellite transmitter to allow for on-the-fly modification of test parameters
- Participated in a hackathon and developed an algorithm to count the number of candies in a jar using a single photo with computer vision techniques

### Northeastern University Computer Architecture Research Group

Boston, MA

*Undergraduate Researcher*

*Nov. 2014 – Present*

- Researching high performance computing applications and how to optimize OpenCL & CUDA code to run as quickly and efficiently as possible
- Implementing encryption algorithms into applications used by graduate students to write their theses
- Writing major components of Hetero-Mark, an application funded by the HSA Foundation

### Papers Published:

- *Exploring the Features of OpenCL 2.0* - Published at IWOCCL 2015 (Stanford University)
- *FIR Filtering and AES Encryption with OpenCL 2.0* - Published at BARC 2015 (Boston University)
- *CLIP: An IP-based GPGPU compute clustering framework* - Published at BARC 2016

## Skills

**Technologies:** C/C++, C#, Objective-C (iOS), Python, Bash, PHP, MySQL, Java, GDB, GIT, JSON, XML, GPS, OpenCL, CUDA, HPC Concepts, LAMP, Linux, Embedded Technologies, AES, Information Security

### Awards:

- Dean's List
- Microsoft & NVIDIA Award: HackUMass 2015: Built a self-driving racing-grade RC car that followed cones while avoiding obstacles using a Microsoft Kinect and NVIDIA Jetson development board

**Certifications:** Microsoft Certified Professional, International Baccalaureate Diploma

**Non-technical:** Outstanding communicator who is able to convey technical ideas clearly and efficiently  
Intellectually curious problem solver

## Extracurricular

**Student Cluster Competition 2015 (University of Texas):** Led an undergraduate team to create and optimize a custom supercomputer

**Other:** I enjoy music, handiwork, rowing, waterskiing, and am an avid exercise enthusiast