

# Carter E. McCardwell

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## EDUCATION

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*Northeastern University*

Boston, MA

Major: Bachelor of Science, Computer Engineering with a minor in Economics

December 2018

GPA: 3.8 / In Major GPA: 4.0

Published Research:

- 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 (Northeastern).
- Hetero-Mark, A Benchmark Suite for CPU-GPU Collaborative Computing – Published at IEEE International Symposium on Workload Characterization, 2016
- Reproducing Vectorization of the Tersoff Multi-Body Potential on the NVIDIA V100 – Published in Journal Parallel Computing, 2018.

Other Research and Academic Activity:

- Completed Udacity Deep Learning Nanodegree covering multiple machine learning concepts.
- Wrote custom implementations of various encryption algorithms for other student's graduate research.
- Creation of major components of Hetero-Mark, an application funded by the HSA Foundation.
- Co-editor of the GPGPU-10 workshop, part of ACM's PPOPP Conference (University of Texas, 2011).

Honors and Activities:

- Vice President, IEEE Northeastern Chapter, 2016-2017 / Member of IEEE Eta Kappa Nu Honor Society.
- Captain, Northeastern High-Performance Computing Team, 2015, 2016, 2017. Award winner and participant in high performance computing competitions against university teams from across the globe.

## PROFESSIONAL EXPERIENCE

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*Intuit Inc.*

San Diego, CA

Software Engineering Internship

Jan. 2018 – July 2018

- Designed and implemented microservices to replace a legacy monolithic tax return filing system that is able to scale to support millions of TurboTax users.
- Created a system for managing database transactions across multiple data sources for robust and fault-tolerant operation.

*Amazon Robotics*

Boston, MA

Software Engineering Internship

Jan. 2017 – June 2017

- Invented and synthesized a novel gamification system to improve warehouse productivity across Amazon's distribution network.
- Scaled software to operate on Amazon's production fulfillment network using AWS infrastructure.
- Analyzed fulfillment technology spending to identify inefficiencies and to drive cost savings.

*United States Department of Defense*

Washington DC

Computer Engineering Internship

Jan. 2016 – Aug. 2016

- Conducted network, protocol, and cellular analysis to reverse-engineer a proprietary product.
- Collaborated across organizations and countries to develop a proprietary, common use product.
- Created a 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, July 2017 – Aug. 2017

- Transformed a bi-static radar processing application into a dynamic real-time dataflow framework using Apache Storm that improved usability and customization for non-engineers.

## ADDITIONAL

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Skills: Java, Python, C, C++, SQL, NoSQL, Git, OpenCL/CUDA, Linux, Embedded Systems, Distributed System Design, AWS, Information Security, Basic Deep Learning (TensorFlow, Keras), REST services, Spring, J2EE