

Education

- **University of North Carolina at Chapel Hill** Chapel Hill, NC
M.S. in Computer Science Aug. 2013 – Aug. 2016
- **University of North Carolina at Chapel Hill** Chapel Hill, NC
B.S. in Computer Science Aug. 2009 – May 2013

Experience

- **Microsoft** Seattle, WA
Software Engineer Dec. 2017 – Sep. 2019
 - Ensure public SLA for the Azure Storage Resource Provider service (control plane for all storage offerings)
 - Develop/maintain migration scheduler service (responsible for all internal data movement) & replication code
 - Drive initiative to automate the decommissioning process for last gen storage arrays
- **Self-Employed** RTP, NC
Solutions Architect and Instructor Jan. 2017 – Nov. 2017
 - Subcontracted as a solutions architect for RedHat to deploy, administer and develop atop their offerings catalog including OpenShift, Ansible Tower, JBoss middleware, etc.
 - Taught Google's Data Engineering courseware as a Google Cloud Platform Authorized Trainer
 - Development of bespoke VR experiences
- **NetApp** RTP, NC
Software Engineer Apr. 2015 – Jan. 2017
 - Upstream API design and coding for Cinder (Block Storage) and Manila (Shared Filesystems)
 - Integrated NetApp hardware platforms into aforementioned OpenStack projects
 - Deployed and maintained internal CI/CD pipeline integrating NFS, iSCSI, and Fibre Channel systems
- **UNC-Chapel Hill** Chapel Hill, NC
Researcher and Teaching Assistant Aug. 2013 – Jul. 2015
 - Design of novel camera sensor, SPICE modeling of selected image sensor components, and behavioral synthesis of sensor network
 - Analysis of expected performance and establishment of worst case noise bounds
- **SpaceX** Hawthorne, CA
Security Engineer Intern May 2014 – Aug. 2014
 - Emulation of commercial grade network processing units using GPUs
 - Custom design of servers for real-time, in-line processing of very high bandwidth traffic
- **NVIDIA Corporation** Santa Clara, CA
Tegra Security Intern May 2013 – Aug. 2013
 - Digital architecture work to add Elliptic Curve Cryptography functionality to a dedicated coprocessor
 - Investigation into mitigating differential power analysis side-channel attacks
- **GAMMA Group** Chapel Hill, NC
Collaborator and Developer Aug. 2012 – Dec. 2012
 - Assisted in development of a multi-touch-enabled Android application that simulates virtual percussive instruments in real-time using physically-based sound synthesis
 - General research into interactive sound propagation using geometric and numerical methods
- **National Security Agency** Fort Meade, MD
Cryptologic Access Intern May 2012 – Aug. 2012
 - Developed custom analytics for large scale data processing
 - Employed MapReduce techniques for optimal parallelization
 - Produced critical workflows that queried disparate databases by automating the generation of complex selectors

Skills

Languages: Python, Rust, C-style C++, C#, Assembly (x86,MIPS,ARM), Javascript/HTML5/CSS3, Verilog, L^AT_EX

Software: Azure, Google Cloud Platform, Kubernetes, OpenStack, AWS, TensorFlow, Hadoop, CUDA, OpenMP, OpenGL, Wireshark, Nmap, LLVM&GCC, JVM, Xen, ROS, Xilinx Vivado, LTSpice, kiCAD

Hobbies

- Analog and Digital IC hacking
- Videogames (playing and making)
- Racing